

UNIVERSITY OF CAPE COAST

IMPACT OF DEPRESSION, ANXIETY AND SPIRITUALITY ON
QUALITY OF LIFE OF PROSTATE CANCER PATIENTS

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QUALITY OF LIFE OF PROSTATE CANCER PATIENTS

BY

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College of Education Studies, University of Cape Coast, in partial fulfilment
of the requirements for award of Master of Philosophy Degree in Clinical
Health Psychology

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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature:..... Date:.....

Name: Paul Asiedu Kumi

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature:..... Date.....

Name: Prof. Samuel A. Danquah

Co-supervisor's Signature:..... Date:.....

Name: Dr. Kofi Krafona

ABSTRACT

The research investigated the impact of depression, anxiety and spirituality on the quality of life of prostate cancer patients in Ghana. The Survey research design was employed and the simple random sampling technique was used in selecting twenty-nine (29) prostate cancer patients as participants. Four hypotheses were tested using the One-way analysis of variance (ANOVA), Pearson's Product Moment Correlation Coefficient and Multiple Regression Analysis. The research outcome indicated that, there was no significant difference in quality of life among prostate cancer patients with respect to their income levels. Also, it was found that there existed a negative correlation between anxiety and quality of life, depression and quality of life. However, there existed a positive correlation between spirituality and quality of life of prostate cancer patients. It was recommended that prostate cancer patients receive, as part of their medical treatment, psychological assessment and treatment to help improve their quality of life. It was also recommended that, life insurance policies as well as Ghana's health insurance scheme help augment the cost of treatment which is relevant in ensuring quality of life of prostate cancer patients.

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DEDICATION

To My Family, Friends and All Prostate Cancer Patients

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LIST OF ACRONYMS

ADT	Androgen Deprivation Therapy
APC	Advanced Prostate Cancer
DNA	Deoxyribonucleic acid
GNA	Ghana News Agency
HRQoL	Health Related Quality of Life
IOM	Institute of Medicine
QoL	Quality of Life
HRQoL	Health Related Quality of Life
ASCO	American Society of Clinical Oncology
ONS	Oncology of Nursing Society
AOSW	Association of Oncology Society Work
ACS	American Cancer Society
FACIT-Sp	Functional Assessment of Chronic Illness Therapy- Spiritual
FACT-P	Functional Assessment of Chronic Therapy- Prostate Cancer
BAI	Becks Anxiety Inventory
BDI	Becks Depression Inventory
PSA	Prostate Specific Antigen

CHAPTER ONE

INTRODUCTION

This chapter provides a detailed background information of prostate cancer, specifically, issues associated with prevalence, medical treatment methods and psychosocial influences pertaining to the condition from a global perspective and then a Ghanaian outlook. The background information primarily throws light on the various variables, namely; income, anxiety, depression, spirituality, masculinity and carer support being studied and how it has impacted the quality of life of patients as well as its influence on national and social outcomes. This is followed by the statement of the research problem, the purpose of the study, objectives of the study, the statement of hypotheses, the significance of the study, delimitations and limitations of the study, definition of terms and organization of the rest of the study.

Background to the Study

Prostate cancer has gained huge public attention as a result of its impact on men, both medically and psychologically. These cancerous cells take a different growth spurt, unlike normal cells which undergo growth, division and die in an orderly manner. This process ensures the normal growth of humans. As the ageing process takes its natural course, cell division occurs to replace worn-out or dying cells or to repair injuries. Cancer, however occurs when there is an abnormal growth of cells out of control. Cancerous cells, unlike the normal cells, do not die but continue to grow and form new abnormal cells. Often, these cells develop into tumors. Cancer cells possess the potential to grow into other

tissues which normal cells are unable to do. This significant feature is what defines a cell as cancerous. Cells become cancerous as a result of DNA damage. The DNA is a factor that directs the actions of all cells. In normal cells, a damage to the DNA leads to cellular repairs or death. However, with cancer cells, damage to the DNA leads to an abnormality in the cells' function. Cancer cells are able to move to other parts of the body where they grow and form new tumors that replace normal tissue. This process is referred to as metastasis. This happens when the cancer cells enter into the blood stream or lymph of the body (American Cancer Society, 2014).

Prostate is a small pea-like gland which is found at the base of the penis, below the bladder and anterior to the rectum. The size of the prostate remains stable at puberty when its growth begins to squirt as a result of the production of hormone. Until middle age, when it increases, also due to hormonal changes over time, its size remains the same. Some men may experience some difficulty in urination as a result of an enlarging prostate which could get quite bigger than usual and might result in an exertion of pressure on the urethra. This is referred to as Benign Prostatic Hyperplasia and might not be necessarily cancerous (Arthur, Yeboah, Adu-Frimpong, Sedudzi, & Boateng, 2005). When people develop Prostatic Intraepithelial Neoplasia, which is the formation of a new tissue membrane in the internal membranes of prostate gland tissues, they are likely to be predisposed to prostate cancer (American Cancer Society, 2014). Prostate cancer is the outgrowth of cancerous cells in the tiny glands in the prostate (American Cancer Society, 2014). In the earliest stage of prostate cancer, patients may show no symptoms. However, as the tumor grows, there might be signs of painful urination, painful ejaculation, blood in the urine and

frequent urination. Also, there might be a loss of appetite, weight loss, impotence and a swelling in the groin area. Observation of these symptoms is an indication of a progression of the tumor beyond the prostate gland and may have been caused by Benign Prostate Hyperplasia and Prostatitis (Arthur, Yeboah, Adu-Frimpong, Sedudzi & Boateng, 2005).

The American Cancer Society has estimated a total of about 220,800 prostate cancer incidences and about 27, 540 prostate cancer mortality in the year 2015. The society has also estimated that, about 1 man in 7 will be diagnosed with prostate cancer during their life time. Currently, prostate cancer is diagnosed in about 6 out of 10 men aged 65 or older. However, for men below the age of 40 years, the condition is quite rare. After skin cancer, prostate cancer is the second most common cancer among American men. It is also placed second behind lung cancer with respect to its cause of mortality in American men. It is estimated that about 1 in 38 men will die of prostate cancer (American Cancer Society, 2014).

Statement of the Problem

Although literature as regards the prevalence rate of prostate cancer over the years seem scanty, hence difficult to say emphatically the rate of incidence, treatment and morbidity among prostate cancer patients in Ghana, a few statistics could give an insight into the issue. According to estimate, each year, almost 1,000 Ghanaian men are diagnosed with prostate cancer, and about 750 die of prostate cancer while about 930 men are susceptible to lose their lives this year alone (Asante, 2015). The Ghana News Agency (GNA) (2007) reported that Ghana has exceeded global prostate limits as the country records 200 cases out of every 100,000 men as against 170 world-wide, a survey by the

Korle-Bu Teaching Hospital revealed. According to the GNA, Dr. Matthew Kyei, an Urologist said at a monthly programme organized by the Ghana Health Service that, the situation called for immediate attention from government and the public to reverse the trend. Speaking on the topic, Prostate Cancer Disorders in Ghana, he said in 2006, 60 percent of all cancers reported at the Korle-Bu Teaching Hospital were prostate cancers, adding that 27 people died from the disease in 2005 alone.

Physiological Consequences as Well as Confirmed Findings

Studies by Bacon, Giovannucci, Testa, Glass and Kawachi, (2002), (Clark et al., 2003 and Helgason et al., 1996) stand out since the samples are adequate and compared with controls. The Helgason team reported diminished sexual function for both but that a greater proportion of the men with prostate cancer were severely distressed by this. Both Clark's and Bacon's groups found patients more bothered by bowel, urinary and sexual symptoms than controls, but mental health scores were similar in the two groups (Bacon, Giovannucci, Testa, Glass & Kawachi, 2002). In essence, although affected by symptoms, patients did report more distress than did healthy men.

Cancer pain is a complex, multidimensional phenomenon composed of sensory, affective, cognitive, and behavioral components. It is resulted from a complex interaction between physiological, cognitive, social, and other factors (Porcelli et al., 2007). The incidence of cancer pain is between 51 percent to 70 percent. It is known that 40 percent to 50 percent of pain is moderate to severe; while 20 percent to 30 percent is very severe (Breitbart, 1989). Studies show that approximately 25 percent of cancer patients do not receive adequate pain relief (Portenoy & Foley, 1990). It is known that there is a strong association

between advanced stage of cancer and pain. Also, the onset of acute pain is associated with the effect of anxiety and signs of sympathetic nervous system hyperactivity whose aftermath is the development of chronic depression and vegetative signs, such as sleep disturbance, poor appetite, lassitude, poor concentration and diminished libido as the pain persist (Portenoy & Foley, 1990). Data show that 70 percent of patients with advanced cancer have significant pain in the course of their illness and pain may have a debilitating effect and could cause emotional and behavioural changes in a patient, especially when the patient is in a terminal condition (Portenoy & Foley, 1990). Cancer pain is often associated with high levels of psychological distress, including higher levels of depression, anxiety, fear, and negative mood (Zaza & Baine, 2002). The progression of cancer among patients could be determined by the persistence of pain experienced by the patients and this could culminate in a feeling of hopelessness since patients may begin to think that their lives are not worth continuing (Tavoli, Montazeri, Roshan, Tavoli & Melyani, 2008).

Currently, there is no medical or scientific consensus as to which therapeutic option best enhances the survival rate of men with prostate cancer (Eton & Lepore, 2002). Unfortunately, every form of treatment has its peculiar physical complications (Lintz et al., 2003) that come with it. For instance, erectile dysfunction and bowel and urinary incontinence are the most common side effects of prostate cancer treatment according to Litwin et al., (1998). Most men who receive treatment by way of radiotherapy or prostatectomy treatments report little control over these aspects of functioning (Fowler et al., 1995). It has been indicated by Helgason et al., (1997) that an estimated 86 percent of men treated with radical prostatectomy, for instance, experience sexual impotence.

Bowel urgency occurs as side effect for 34 percent of men electing external beam radiotherapy treatment (Shrader-Bogen, Kjellberg, McPherson & Murray, 1997). Similarly, urinary incontinence is reported as side effect in about 40 percent of men who receive treatment by radical prostatectomy (Litwin, McGuigan, Shpall & Dhanani, 1999). As a result of these side effects, men who are receiving prostate cancer treatment experience significant obstacles to positive mental health (Eton & Lepore, 2002).

Psychological Consequences as Well as Confirmed Findings

Patients with a diagnosis of cancer are at increased risk of having co-morbid depression. There is a 3 percent to 69 percent variability in the prevalence of depression in these patients according to research literature. This disparity in statistics is partly due to methodological differences between studies (Carroll, Kathol, Noyes, Wald & Clamon, 1993).

Depression is a significant contributor to the burden experienced by terminal care patients even as it also plays a role in the persistence of physical symptoms which sometimes become resistant to conventional treatments with improvement seen only as depression is appropriately treated (Lloyd-Williams, 1999). Going by such a broad spectrum of effects, it seems plausible that depression is a key player in terms of the extent of adverse impact it has on the health-related quality of life of palliative care patients. Depression is particularly common among cancer patients who suffer from pain and physical disability (Hopwood and Stephens, 2000) particularly amongst palliative care patients, including the threat of impending loss and separation that besets them during the terminal phases of their condition (Casey, 1998). Depression and

impaired quality of life have been confirmed to have an association going by the results obtained from studies that use formal assessment. (Payne, 1992).

Prostate cancer is highly prevalent in most Western countries (Parkin, Bray & Devesa, 2001). Prostate cancer can be detected early by Prostate-Specific Antigen (PSA) testing, a biologic tumor marker (Balderson & Towell, 2003). The most commonly used intentionally curative primary therapies are radical prostatectomy and external beam radiotherapy (Carlson et al, 2004). A diagnosis of prostate cancer could lead to anxiety, however the extent of anxiety may vary from patient to patient (Steginga, Occhipinti, Gardiner, Yaxley & Heathcote, 2004). About 30 percent of the participating prostate cancer patients in a study, met criteria for general distress in the clinical range (Carlson et al, 2004). In a retrospective, cross-sectional study, the prevalence of severe psychological distress was 37 percent between 35 and 94 year olds among men with prostate cancer who were seeking psychological support (Balderson & Towell, 2003). Although several longitudinal studies with more than a year follow up have reported on mental health or emotional well-being after prostate cancer treatment (Potosky et al, 2000), the impact of prostate cancer diagnosis and treatment on anxiety and feelings of depression in the long term remains unknown.

Clark et al (2003) discovered through their study that psychological adjustment was as affected as physical status. Questionnaires developed for their study unveiled greater complexity than had previously been perceived. For instance, certain treatments were associated with patients' confidence that the cancer was under control although they still felt a loss of intimacy and masculinity.

Depression has serious consequences pertaining to outcomes and recovery from prostate cancer as reflected in debilitating effects on health related quality of life, functional status, health resource utilization and cost (Weber, Roberts, Mills, Chumbler & Algood, 2008). Depression among patients with prostate cancer has been associated with suicide, unpleasant lifestyle changes, poorer adherence to treatment and poorer long-term outcomes (Bennett & Badger, 2005). Poorer long-term treatment outcomes could be attributable to depression in patients with prostate cancer though depression may usually be an unidentified factor in the variability in care (Jayadevappa, Malkowicz, Chhatre, Johnson & Gallo, 2011).

Current Medical Treatment Problems

Men with localized prostate cancer typically choose from among three types of treatments: surgical removal of the prostate (prostatectomy), external beam radiation therapy, or brachytherapy (implanting radioactive “seeds” into the prostate). Watchful waiting is an additional option for patients older than 70 years or with other major health problems. In a recent literature review, Eton and Lepore, (2002), found that prostate cancer and its treatments result in both disease-specific problems such as urinary and sexual dysfunction and general problems in Quality of Life with respect to diminished mental and physical functioning and reduced capacity to work. A meta-analysis by Robinson, Dufour, and Fung, (1997) of 40 studies showed that the likelihood of erectile dysfunction is 0.58 after prostatectomy and .31 after radiotherapy. Longitudinal studies by Lubeck, Litwin, Henning, Stoddard, Flanders and Carroll (1999) have shown that urinary problems generally subside within a year after treatment, whereas sexual problems tend to persist. Another form of medical

treatment received by those diagnosed with Advanced Prostate Cancer is Androgen Deprivation Therapy (ADT) which is associated with physical side effects of treatment such as fatigue, weight gain, nausea, hot flashes, pain, constipation, and urinary and sexual dysfunction (Potosky, et al., 2002). Mental health is also compromised as Advanced Prostate Cancer survivors who received Androgen Deprivation Therapy report greater levels of psychological distress up to 12 months post treatment when compared to those who did not (Northouse et al, 2006). Potosky et al. (2004) also mentioned that five years after treatment, 80 percent of radical prostatectomy and 64 percent of external beam radiotherapy patients were impotent, 29 percent of radical prostatectomy and 4 percent of external beam radiotherapy patients were using pads for urinary incontinence, and 20 percent of radical prostatectomy and 29 percent of external beam radiotherapy patients had bowel urgency.

Purpose of the Study

The purpose of the study was to:

Firstly, find out the psychological predictors of the quality of life of prostate cancer patients undergoing medical treatment.

Secondly, enquire about the impact of optimism on the outcome of the condition as regard the patient's quality of life.

Thirdly, find out if spirituality, absorption and depression will influence a patient's quality of life in relation to their condition.

Fourthly, to use the findings of this research as a guide in tailoring psychological treatment geared towards improving the quality of life of prostate cancer patients and decreasing mortality.

Fifthly, help clinical health psychologists determine which psychological difficulties among a range of disorders require prompt attention in the event that prostate cancer patients require urgent psychological attention.

Finally, serve as an eye-opener for society, especially, professionals and stakeholders involved in the management and treatment of prostate cancer as well as other chronic conditions to realise the psychological implications of such conditions and the need to involve clinical health psychologists in the management and treatment of such conditions.

Research Objectives

- I. To ascertain how income levels influence the quality of life of prostate cancer patients.
- II. To unearth the impact of anxiety on the quality of life of prostate cancer patients.
- III. To assess the impact of depression on the quality of life of prostate cancer patients.
- IV. To find out the influence of spirituality on the quality of life of prostate cancer patients.
- V. To determine the extent to which anxiety, depression and spirituality influence quality of life of prostate cancer patients.
- VI. To find out the extent to which age, educational level, income and duration of condition influence quality of life of prostate cancer patients.

Research Hypotheses

H₁: There will be a significant difference in the quality of life of patients as regard their respective income levels.

H₂: There will be a negative correlation between anxiety and quality of life of prostate cancer patients.

H₃: There will be a negative correlation between depression and quality of life of prostate cancer patients.

H₄: There will be a positive correlation between spirituality and quality of life of prostate cancer patients.

H₅: Anxiety, depression and spirituality will predict quality of life of prostate cancer patients.

H₆: Age, educational level, income and duration of condition will predict quality of life of prostate cancer patients.

Significance of the study

This research will be useful in unearthing the psychological difficulties patients with prostate cancer in Ghana encounter as a result of the condition as well as the impact of these difficulties on their treatment outcomes and quality of life. The findings of this research will also bring to the fore, the most pertinent psychological problems patients with prostate cancer experience and how this influences their quality of life. The research will afford patients the requisite insight into which steps to take to improve their quality of life. It will serve as an eye opener to clinical health psychologists and related health professionals as regard the psychological needs of patients with prostate cancer and which psychological factors to focus on in their treatment. Findings from this research will further direct clinical health psychologist as to which forms of psychological assessments to look at and therapies to consider in the treatment of patients with prostate cancer. Another significant impact of this research will be, to help future research to consider other psychological factors that may have

an influence on the quality of life and disease progression as well as possible interventions that could help reduce the prevalence of prostate cancer as well as prostate cancer related mortality.

Delimitations

The research was delimited to prostate cancer patients in Accra only, specifically to those receiving medical treatment at the Legon Hospital with the primary objective being to assess the quality of life of prostate cancer patients. Standardised questionnaires were administered to collect the necessary data. Hence the research considered only patients who had been diagnosed of prostate cancer and were receiving treatment whether in the form of prostatectomy, chemotherapy, radiotherapy and or psychotherapy. Also patients were to be outpatients whether or not they were married, divorced, separated or single; irrespective of their income levels, duration of the condition and level of education. Data gathering associated with the research was also done by way of assessing patients' depression, anxiety and spirituality.

Limitations

Given how novel this clinical research is and the experiential nature of the condition as well as the uniqueness in the expression of symptoms, a quantitative research could not unveil the unique experiences associated with symptom expression and the psychological demands it places on patients as a more in-depth research by way of qualitative research or better still mixed methods would have done. Hence, future research should consider a mixed method approach to enhance a more vivid view of the issues.

Also, it would have been much better if a more sizeable number of participants were considered. However, due to the challenge associated with

accessibility to patients coupled with the specificity of the condition, this was not feasible under the conditions within which this research was conducted. Hence, generalizability cannot be ascertained as would have been preferred. Therefore, future research should consider a more extensive period for data collection and also other medical facilities where patients could be accessed.

Some instruments had quite a large number of items and given the age and challenges associated with the condition, some participants got exhausted after a while responding to the items. Hence, some instruments had to be taken out for the sake of convenience to the participants and also to help obtain credible responses. Therefore, future research should consider using abridged versions of scales with good validity and reliability so as to be able to obtain responses to quite a good number of psychological variables which are relevant to ascertaining the quality of life of prostate cancer patients but were not looked at in this research.

Financial challenges, time constraint and accessibility to patients were significant barriers in this research especially with respect to transportation to the medical facility where the research was being conducted. Also, the bureaucratic challenges associated with obtaining ethical clearance and approval for the commencement of the research played a role in the low sample size of 29 patients used as participants in the research. These reasons constituted to why the research was limited to only the Legon hospital in the Greater Accra region of Ghana. Optimism and absorption, which are fundamental variables in determining quality of life of prostate cancer patients could not be studied in this research due to the low Cronbach's alpha score obtained for the former and the bulkiness of the latter after the pilot study.

Definition of terms

Prostate cancer: Prostate cancer is the outgrowth of cancerous cells in the tiny glands in the prostate (American Cancer Society, 2014)

Quality of Life: This is an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals and expectations, standards and concerns. It ranges from the person's physical health, psychological health and salient features of the environment.

Anxiety: A feeling of apprehension and fear, characterized by physical symptoms such as palpitations, sweating and feelings of stress.

Depression: This is the feeling of sadness, worthlessness, guilt and a loss of interest and pleasure in daily activities.

Spirituality: this is the extent of a person's belief in a supreme being.

Income: this is the income by way of allowance, salary, dividends or any form of monetary support that the patients receive monthly.

Oncology: the study of cancer

Organisation of the Study

Chapter one (1) provides as a general picture of a detailed background of the study, the research problem, purpose of the study, objectives of the study, hypotheses of the study, significance of the study, delimitations of the study, limitations of the study as well as definitions of terms. The hypotheses were formulated in consonance with the objectives of the research and its problem statement.

Chapter two (2) of the research brings to the fore a detailed review of theoretical underpinnings of the research and an empirical review of literature

based on the hypotheses formulated to be investigated in the research. A conceptual framework was also developed to help provide a simplified concept of the research and a summary of major findings of the reviewed empirical literature. The literature reviewed therefore provides an eye-opening experience into the relationship that exist between income and quality of life, anxiety and quality of life, depression and quality of life and spirituality and quality of life.

Chapter three (3) of the research captures all the aspects of the methodology used to conduct the study which include research design, population, sample and sampling procedure, instruments, data collection procedure and data analysis. The method used to determine the sample size is also clearly stated in this chapter.

Going by the research problem, its formulated hypotheses and objectives, survey design comprising a quantitative method was employed. In order not to flaw the research ethically, approval was sought from the management of Legon hospital and the resident Urologist who attended to the patients who were going to serve as participants. Also, the consent of participants was sought before the instruments were administered. Questionnaires were pretested and certain corrections were made before the final administration was done to collect the data. The sample size for the study was 29, which comprised of prostate cancer patients who were receiving treatment at the hospital.

Chapter four (4) of the research report shows a concise presentation of the research findings and a detailed discussion of each one of them. Therefore, findings associated with low income, anxiety, depression and spirituality correlated with the quality of life of prostate cancer patients were stipulated and

thoroughly discussed. Also, findings associated with the variability in quality of life of prostate cancer patients with respect to their income, anxiety, depression and spirituality were presented and thoroughly discussed. Furthermore, the variability in quality of life of prostate cancer patients with respect to their ages, level of education, duration of condition and respective income levels was explored and discussed in detail.

Chapter five (5) summarizes the key findings and conclusions drawn based on the outcome of the research. It also unveils the various recommendations made with respect to the need for patients receiving treatment for prostate cancer and for that matter every other type of cancer to receive psychological treatment as part of their medical treatment in order to enhance their quality of life which is a great predictor of their survivorship and also the need for the formulation and implementation of policies that would help patients to receive treatment at much lower costs.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter espouses the theoretical underpinnings of the research in order to give it a perspective from which its literature and findings could be examined and explained. In all, three theories or models will form the basis on which the psychosocial dimensions; income, anxiety, depression and spirituality as well as the constituents and nature of quality of life associated with prostate cancer will be presented. Empirical review of the various variables and their association with the independent variable; thus, income and quality of life, anxiety and quality of life, depression and quality of life and spirituality and quality of life will be thoroughly done to give a vivid idea of the outcomes of studies done and what must be critically considered to make this research useful by way of adding to existing knowledge. Also, the conceptual framework on which the research is built is also presented in the chapter. This is to give a summarized idea of the study and the hypothetical outcomes to be expected. It is first presented as a figure and then briefly explained.

Conceptual Framework of the Study

From the hypotheses stated above, the relationship between the various variables under investigation have been illustrated in a conceptual framework that is presented in figure one (1) below.

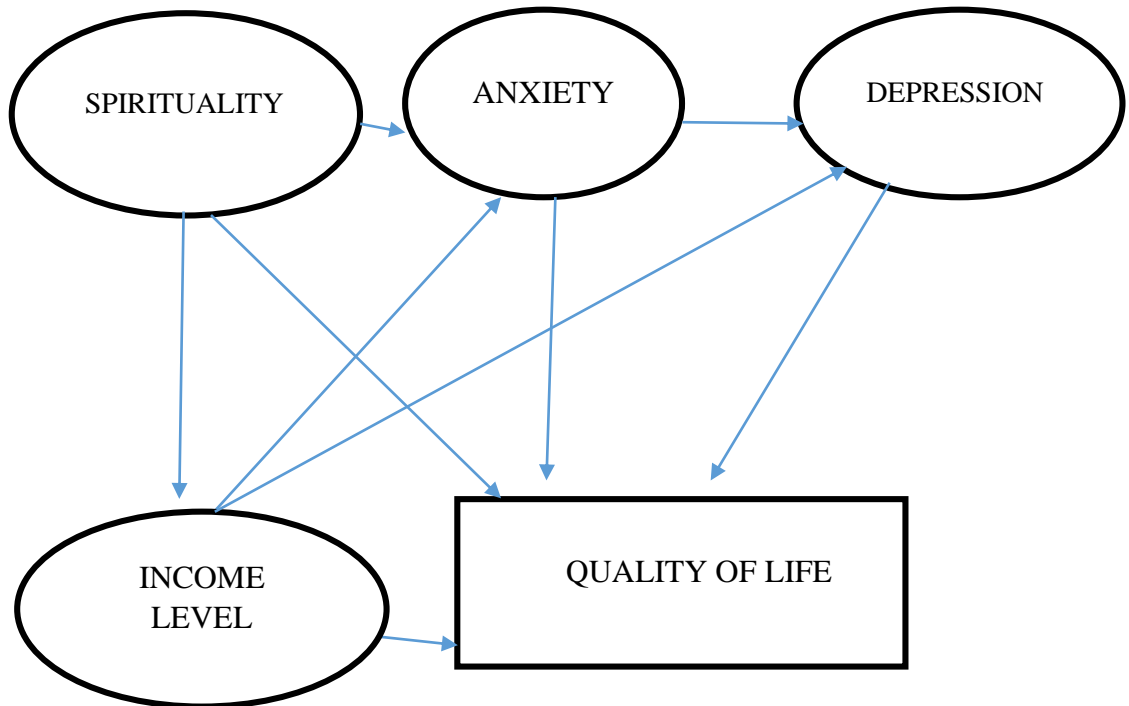


Figure 1: Conceptual Framework

Source: Author’s Own Construct

This figure is rendering the relationship between income levels and quality of life, anxiety and quality of life, depression and quality of life and spirituality and quality of life of prostate cancer patients.

It can be seen from figure one (1) that patients’ income levels expressed in terms of income range is likely to influence the quality of life of prostate cancer patients. Similarly, anxiety is also likely to influence the quality of life of prostate cancer patients negatively. Depression, like anxiety is also likely to lead to lower quality of life of prostate cancer patients. However, anxiety is likely to influence depression among prostate cancer patients and both variables are

likely to predict quality of life negatively. Spirituality is likely to relate positively with quality of life of prostate cancer patients. Also, income is likely to influence anxiety and depression respectively and also to be influenced by spirituality.

Theoretical review

Social Cognitive Theory: An Agentic Perspective

The capacity to exercise control over the nature and quality of one's life is the essence of humanness. Human agency is characterized by a number of core features that operate through phenomenal and functional consciousness. These include the temporal extension of agency through intentionality and forethought, self-regulation by self-reactive influence, and self-reflectiveness about one's capabilities, quality of functioning, and the meaning and purpose of one's life pursuits. Personal agency operates within a broad network of socio-structural influences. In these agentic transactions, people are producers as well as products of social systems. Social cognitive theory distinguishes among three modes of agency: direct personal agency, proxy agency that relies on others to act on one's behalf to secure desired outcomes, and collective agency exercised through socially coordinative and interdependent effort. Growing transnational embeddedness and interdependence are placing a premium on collective efficacy to exercise control over personal destinies and national life. To become an agent is to intentionally make things happen by one's actions. Agency embodies the endowments, belief systems, self-regulatory capabilities and distributed structures and functions through which personal influence is exercised, rather than residing as a discrete entity in a particular place. The

core features of agency enable people to play a part in their self-development, adaptation, and self-renewal with changing times (Bandura, 2001).

City of Hope Quality of Life Model

This model illustrated the influence of pain on the dimension of quality of life. The model supports that quality of life has four dimensions: physical well-being and symptoms, psychological well-being, social well-being and spiritual well-being. It explained that the domain for cancer survivors fell within four parameters: physical well-being which is the control or relief of symptoms and the ability to have physical independence and capability to do all the basic functions. Psychological well-being is the ability to sustain a sense of control in the face of life against illness characterized by altered life priorities, emotional distress, and fear of the unknown as well as positive life change. Social well-being is adjusted by the impact of cancer on individuals, their roles and relationships and how well they can deal with those factors. Spiritual well-being is dependent on how well an individual can control uncertainty that is created by the hope and derive from the cancer experience.

In addition, it must be taken into consideration that the perception of a person's quality of life differs from person to person. This means that people with different expectation will report a different quality of life, even when they have the same health status. Therefore, insight into a patient's quality of life can only be obtained by asking a patient's perspective (Lavdaniti & Tsitsis, 2015).

Restorative Model of Well-Being

The restorative model assumes that the process through which people typically maintain their sense of well-being may become destabilized when they

are confronted by problematic external events (e.g., health threats) or internal states (e.g., mood states, existential questions).

The emergence of problematic events ushers in a coping process that involves appraisal of the threats to one's health and utilization of coping strategies (e.g., problem-focused and emotion-focused coping, meaning making, shifts in life goals and roles) to protect and optimize one's wellbeing in the face of health threats. When confronted by a diagnosis of cancer, people typically engage in the cognitive process of appraising the nature of the stressor (e.g., threat, actual harm or loss) and whether they have the capabilities or resources to cope with it. The appraisal process often involves seeking information about treatment options and the likelihood of their success. Next, available resources such as financial, social support, and treatment access may be appraised to assess whether they are available and adequate to meet the threat. Appraisal of what cancer may mean post-treatment in terms of valued goals (e.g., having a biological child), life roles, self-image, and fundamental assumptions about one's life may also occur. This type of appraisal is often referred to as meaning-making. People implement strategies to cope with appraised stressors.

Personality traits and dispositional variables play important roles in people's reactions to negative events and traumas. Certain traits such as dispositional optimism, may for example, affect how people appraise life events, perceive their coping efficacy, and manage coping strategies. Environmental supports and resources offer key aids to emotional and physical coping. They come in a variety of forms and serve a variety of functions, such as emotional support, cognitive guidance, access to coping models, learning

new coping strategies, and social persuasion regarding one's coping efficacy (Hoffman, Lent & Raque-Bogdan, 2013).

Empirical Review of the Study

Income and Quality of Life

Montazeri et al. (2003) study on the role of socioeconomic status on quality of life of lung cancer patients was aimed at examining whether there were differences among patients' quality of life scores and their socioeconomic status. In this study, 129 lung cancer patients were used as participants, however data for 82 patients were completed. 57 percent of patients were of lower socioeconomic status and they had more health problems, less functioning, more symptoms as compared to the affluent patients. Findings further indicated that patients from lower socioeconomic backgrounds showed more problems with physical mobility, energy, role and physical functioning. The difference was even more significant at baseline. Hence it was established that patients should receive adequate attention in domains that are relevant to their quality of life, especially patients from lower social class. It was concluded in this study that quality of life is not only the outcome of disease and its treatment, but is also highly dependent on each patients' socioeconomic characteristics. Though this study sampled patients with lung cancer and not prostate cancer, the evidence provided is particularly relevant to patients with prostate cancer given the similarities in symptoms and impact of the cancer on common functionalities. Montazeri et al. (2003) suggested the need for more investigation on the topic and that buttressed the relevance of the concept of socioeconomic status in this research.

Fenn et al. (2014) study on the impact of financial burden of cancer on survivors' quality of life was aimed at examining the relationship between the financial burden of cancer and the physical and emotional health of cancer survivors. Their investigation was into the association between financial problems caused by cancer and reported quality of life in a sample of patients with cancer. The outcome of the study indicated that of the 2,108 patients who partook in the study, 8.6 percent reported that cancer had caused financial problems to them and their families a lot, whereas 69.6 percent reported no financial problems due to their condition. Patients who reported "a lot" of financial problems as a result of cancer care costs were more likely to rate physical health, mental health and satisfaction with social activities and relationship as poor compared to those with no financial hardship. The degree to which cancer caused financial problems was the strongest independent predictor of quality of life and this was evinced after the multivariate analysis was done. Patients who reported that cancer caused "a lot" of financial problems were four times less likely to rate their quality of life as "excellent", "very good," or "good". The strongest independent predictor of poor quality of life among cancer survivors was increased financial burden as a result of cancer care costs.

The impact of socioeconomic status and subjective social class on overall and health-related quality of life study conducted by Kim and Park (2015) which was aimed at investigating the impact of socioeconomic status and subjective social class on health-related quality of life (HRQOL) against overall quality of life (QOL). Their findings indicated that individuals with low household incomes and of low subjective social class had the highest probability

of reporting discrepant HRQOL and QOL scores whereas individuals with high household incomes and high subjective social class had the lowest probability of discrepant HRQOL and QOL. Similar trends were seen when education was used as a proxy for socioeconomic status.

Michelson et al. (2000) study titled; “Health-related Quality of Life Measured by the EORTC QLQ-C30” was aimed at providing normative data on the questionnaire and to investigate differences in health related quality of life with respect to age, gender, socio-demographic characteristics and reported chronic health problems. The findings of this study indicated that, women had lower scores than men on all but one of the EORTC QLQ-C30 subscales and reported more chronic health problems. The oldest respondents who were between 70 to 79 years had a greater degree of impaired health related quality of life than the other age groups, with one exception, ‘emotional functioning’, in which they scored higher. Unemployed respondents reported poorer health related quality of life than employed respondents. Higher income was associated with a more positive assessment of health related quality of life. The unemployed respondents scored lower on all functional scales (physical, role, cognitive, emotional and social functioning) compared to those in work. The difference in means was most apparent regarding emotional functioning and on the global quality of life. Financial restrictions scored significantly higher with the unemployed respondents and an association was found between higher income earners and more positive scoring across the scales and items. The means for physical functioning and global quality of life scores were lower in the lowest income category compared with those in the highest income category. The middle income category scored consistently between the other

two categories. The educational level demonstrated a similar trend for all scales and items with an exception for emotional functioning. Respondents in the lowest education category scored highest emotional functioning, although this was not significant. This study considered patients with chronic health problems instead of prostate cancer patients. However, the research could draw from this study since prostate cancer is also a chronic health condition which requires huge financial input to obtain effective treatment. Hence the relevance of this study to the research.

Zafar et al. (2015) indicated in their study, “population-based assessment of cancer survivors’ financial burden and quality of life” that among 1,000 participants enrolled from five geographic regions, five integrated health care systems, 15 Veterans Administration Hospitals, 89 percent were cancer-free, and 11 percent had advanced stages of cancer. The study was aimed at investigating the impact of financial burden among patients with cancer but has not yet been measured in a way that accounts for inter-relationships between quality of life, perceived quality of care, disease status, and socio-demographic characteristics. Overall, 48 percent reported difficulties living on their household income, and 41 percent believed their health care to be excellent. High financial burden was associated with lower household income. High financial burden was also associated with poorer quality of life and better quality of life was associated with fewer perceptions of poorer quality of care. In unadjusted analyses, lower education, worse quality of life, mild or moderate comorbidity, poor insurance outcomes, and difficulties living on household income were associated with greater likelihood to report poor quality of care. Also, worse perceived quality of care was associated with worse health-related

quality of life, lower level of education, and lower income. Financial burden is prevalent among cancer survivors and was related to patients' health-related quality of life. Participants for this study were patients with colorectal or lung cancer. However, the relevance of the findings cannot be overemphasized given the level of generalizability going by the sample size considered. This research will therefore fill the gap by investigating another type of cancer in a different geographical location though the instruments for measuring finance and quality of life are different. Future studies should consider interventions to improve patient education and engagement with regard to financial burden.

According to Jayadevappa et al. (2011), as regards clinical characteristics at the time of diagnosis of prostate cancer, men with depression had higher medical co-morbidity and were diagnosed at a later stage of cancer, compared with men without depression. Also, men with depression were more likely to have received radical prostatectomy than those without depression. This is suggestive of the enormous financial burden prostate cancer patients with co-morbidity, especially due to depression are likely to experience as a result of the cost involved in treating multiple diseases. Inpatient pharmacy costs, physical therapy costs and laboratory costs across all stages of prostate cancer care were higher for men with depression compared to those without depression. Also, medical and surgical supply costs were higher among those with depression during all phases of prostate cancer care, except for the terminal phase. Overall, costs of treatment were higher during the treatment phase compared to the pre-diagnosis phase and declined over follow-up phases. Furthermore, among men who died, the costs were highest during the terminal phase for those with a diagnosis of depression. Patients with prostate cancer

with a diagnosis of depression during treatment phase had higher costs in the treatment phase (Jayadevappa et al., 2011). It is quite evident that, prostate cancer patients with depression experience more physical challenges and treatment difficulties and hence higher treatment cost than those without depression. It is clear that, whether at treatment phase or terminal phase, patients who suffered depression had more cost to bear than those without depression. There is therefore the need to make treatment of depression a priority among prostate cancer patients with co-morbid depression in order to reduce complications and treatment cost.

Anxiety and Quality of Life

Namiki et al. (2007) study that aimed at determining the psychological distress in Japanese men with localized prostate cancer indicated that mean anxiety and depression scores were 4.0 and 4.7, respectively. On the anxiety section of HADS, 291 patients (85 percent) scored 7 points or less; and on the depression scale, 183 (54 percent) patients scored 4 points or less. Those 'cases' with psychological distress scored lower in all domains of the general and disease related health-related quality of life (HRQoL) than the 'non-cases' except for sexual domains. Logistic regression modeling suggested that the men who tended to experience moderate to high distress suffered from worse urinary and bowel symptoms. Most patients who underwent radical prostatectomy or external beam radiotherapy for localized prostate cancer experienced low levels of psychological distress after treatment. However, men who were experiencing urinary and bowel symptoms tended to suffer from moderate to higher distress compared with men reporting none.

Zenger et al. (2010) mentioned that, prostate cancer patients reported significantly worse levels of social and emotional functioning as well as more symptoms like insomnia, constipation and diarrhoea compared to the general population in their study titled; the relationship of quality of life and distress in prostate cancer patients compared to the general population. Patients and men of the general population with a total HADS score ≥ 15 reported lower quality of Life (QoL) in all sub-scales except for diarrhoea in comparison to people without distress. Psychological distress is accompanied by lower QoL and therefore should be taken into consideration when QoL is assessed.

Johanes, Monoarfa, Ismail and Umbas, (2013) study titled; anxiety level of early and late stage prostate cancer patients indicated that there were 34 subjects with early-stage prostate cancer and 34 subjects with advanced-stage prostate cancer. They found that the mean anxiety score was significantly lower in the early-stage prostate cancer group than in the advanced-stage prostate cancer group. Nine subjects had a pathological MAX-PC score (≥ 16), of whom 1 subject had early-stage disease and 8 subjects had advanced-stage disease. Furthermore, there were significant positive correlations between MAX-PC score.

Mehnerta, Lehmann, Schulte, & Kocha (2007) investigated the presence of symptom distress and prostate cancer-related anxiety in patients at the beginning of cancer rehabilitation. This study examined the frequency and character of cancer- and treatment-related problems and its association with symptom distress and prostate cancer-related anxiety in patients at the beginning of an oncological rehabilitation programme. Results of this study stated that 88 percent of patients reported cancer- or treatment-related problems

with a mean of 5 problems, and 104 patients (53 percent) experienced distress and/or prostate cancer-related anxiety. The most prevalent symptoms were changes in urination, sexual problems, difficulties moving, pain, fatigue and sleep problems. Emotional problems such as nervousness, worries, fears and sadness were prevalent in at least 53 percent of patients. Patients with distress and anxiety were confronted with a higher number and a wider range of problems and experienced significantly lower levels of quality of life.

Depression and Quality of Life

Smith, Gomm and Dickens (2003) in their study on assessing the independent contribution to quality of life from anxiety and depression in patients with advanced cancer found out that, 25 percent of patients showed symptoms of anxiety on the Hospital Anxiety and Depression Scale (HADS), while 22 percent showed symptoms of depression on the same scale. After controlling for the effects of pain and illness severity, anxiety and depression were independently associated with global health status, emotional and cognitive functioning, and fatigue. Anxiety further contributed significantly towards social functioning, nausea and vomiting. This study confirmed that pain, anxiety and depression were associated with impaired quality of life. Anxiety and depression contributed independently towards various dimensions of quality of life among cancer patients.

In another study by Jayadevappa et al. (2011) on the burden of depression in prostate cancer, whose objective was to analyze the prevalence and incremental burden of depression among the elderly with prostate cancer, the results indicated that of the 50,147 patients newly diagnosed with prostate cancer, 4285 (8.54 percent) had a diagnosis of depression. A diagnosis of

depression during treatment phase was associated with higher odds of emergency room visits, hospitalizations, outpatient visits and excess risk of death over the course of the follow-up interval. Health care costs associated with depression remained elevated compared with costs for men without depression, over the course of the follow-up. This study helped to draw the conclusion that depression during the treatment phase was associated with significant health resource utilization, costs and mortality among men with prostate cancer.

Korfage et al. (2006) published the outcome of their research titled: anxiety and depression after prostate cancer diagnosis and treatment; 5-year follow-up. The focus of the study was to assess, if baseline scores were predictive for anxiety and depression at 1-year follow-up. Respondents completed four assessments; pretreatment, at 6 and 12 months, and at 5-year follow-up, on anxiety, depression and mental health. Respondents were subdivided according to therapy (prostatectomy or radiotherapy) and high versus low-anxiety. 28 percent of all patients in the pretreatment group were classified as 'high-anxiety'; their average anxiety scores decreased significantly post-treatment, that is towards less anxiety. At all assessments, high anxiety men treated by prostatectomy reported less depression than high-anxiety men treated by radiotherapy. Of men treated by radiotherapy, 27 percent reported clinically significant levels of depression compared to an estimated 20 percent in the general population. The improvement in mental health at 6-months follow-up was statistically significant and clinically meaningful in all respondent groups. Sensitivity of anxiety at baseline as a screening tool was 71 percent for anxiety and 60 percent for symptoms of depression. The researcher recommended that clinicians attempt an early detection of patients at risk of

high levels of anxiety and depression after prostate cancer diagnosis since prevalence is high.

Another study by Stommel, Given and Given, (2002) gave much reason to the need for detection of depression and anxiety among cancer and for that matter prostate cancer patients. This study examined the extent to which depression and functional limitations contribute to the mortality of newly diagnosed cancer patients. The analysis focused on differences in survival times among cancer patients with new experiences of depressive symptoms and functional limitations and patients with a history of such limitations. The study revealed that, cancer patients who, after diagnosis, report only new depressive symptoms or functional limitations, have the same survival chances as those who report none. Cancer patients with either previous emotional problems or previous physical limitations face, within the first 19 months after diagnosis, a 2.6 times greater hazard of dying than patients without prior problems. Patients with both previous emotional problems and physical limitations before diagnosis have a 7.6 times greater hazard of dying within that time frame. This study concluded that, cancer patients with prior limitations and emotional problems have worse survival chances than would be expected on the basis of their cancer diagnosis alone. While depressive symptoms and functional limitations are common short-run responses to a cancer diagnosis and initial treatment, patients with no prior history of such problems appear to be more resilient.

Bennett and Badger, (2005) also researched into depression in men with prostate cancer. The purpose of their study was to summarize the current empirical knowledge base on depression in men with prostate cancer to inform

psychosocial supportive care interventions and chart directions for future research. The findings of their research indicated that, men with prostate cancer who are most at risk for depressive symptoms include those with advanced disease, prominent cancer symptoms and side effects of treatment, and a history of clinical depression. Prostate cancer pain appeared to be associated strongly with depressive symptoms, whereas fatigue induced by radiation therapy or hormonal therapy was associated consistently with increasing depression. Rather, findings indicated that being older, being married, having high social support, being optimistic, and having less impairment in physical functioning were associated with decreased risk of depression.

Prostate cancer patients in advanced-stage condition as well as those with significant pain symptoms, side effects of treatment and a previous history of clinical depression are at risk for depression (Cliff & McDonagh, 2000). Anxiety about cancer as a diagnosis, lack of awareness, medical complications that happen, the fear of death and financial burdens are some of the factors that result in depression among prostate cancer patients. Unfortunately, there is often a delay in diagnosis of this depression, which eventually reduce the chances of long-term cancer survival by 10-20 percent (Pasquini & Biondi, 2007). Depression has been strongly associated with fatigue and pain as symptoms in prostate cancer (Heim & Oei, 1993). Prostate cancer pain appears to be strongly related to depressive symptoms, whereas fatigue induced by radiation therapy or hormonal therapy has not been related consistently with increasing depression (Breitbart et al., 2000). On the contrary, significant findings from these studies indicate that being older, being married, having high social support, being optimistic and having less impairment in physical functioning

are associated with decreased risk of depression (Pirl & Mello, 2002). The research on informational interventions and comprehensive reviews of psychosocial cancer intervention research in prostate cancer indicate that the state of the science for supportive care interventions directed toward men with prostate cancer is scanty (Pirl, Greer, Goode & Smith, 2008). The cause of prostate cancer has been observed to be greatly affected by effective psychotherapeutic treatment for depression, along with antidepressant therapy. Psychotherapy results in reduced anxiety and depression, and often pain reduction even as it also leads to longer survival time for the patients (Carlson, Speca, Patel & Goodey 2003). The physiological or neurobiological mechanism for these findings is yet to be known, but health maintenance behaviour, health-care utilization, endocrine and hormonal changes and positive changes in immune function are the possible effects psychotherapy could have on the physiology of patients. Thus, effective treatment of depression culminates in better patient adjustment, reduced symptoms, reduced cost of care and may influence disease course (Holden, Pakula, & Mooney, 1998). A combined evaluation and treatment approach where the urologist and psychotherapist or psychiatrist work out an effective treatment plan considering psychological and urological perspectives on the etiology of depression is best for the patient (de Sousa, Sonavane & Mehta, 2012).

Spirituality and Quality of Life

Brady et al. (1999) conducted a study titled: a case for including spirituality in quality of life measurement in oncology. This study used a large ($n=1610$) and ethnically diverse sample to address three questions relevant to including spirituality in quality of life measurement. The first question the study

sought to answer was; does spirituality demonstrate a positive association with quality of life? Secondly, is this association unique? Thirdly, is there clinical utility in including spirituality in quality of life measurement? Spirituality, as measured by the Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being (FACIT-Sp), was found to be associated with Quality of Life to the same degree as physical well-being, a domain unquestioned in its importance to Quality of Life. The significant association between spirituality and quality of life was unique, remaining after controlling for core quality of life domains as well as other possible confounding variables. Furthermore, spiritual well-being was found to be related to the ability to enjoy life even in the midst of symptoms, making this domain a potentially important clinical target. The study concluded that, these results support the move to the bio-psychosocial spiritual model for quality of life measurement in oncology. Furthermore, ‘contentment with quality of life’ was observed to have nearly identical correlations with spiritual well-being, physical well-being and emotional well-being, the latter two generally being unquestioned in their importance to quality of life. Additionally, associations between quality of life and total spiritual well-being, the peace subscale and the faith subscale, remained significant even when a number of disease and demographic variables were controlled. Furthermore, peace was found to be the best predictor of ‘contentment with quality of life’, compared to other domains, further demonstrating the importance of the spiritual domain.

Walton and Sullivan (2004) also researched into the topic; Men of Prayer: Spirituality of Men with Prostate Cancer. In their study, prayer was vitally important to each participant and provided each with assurance, comfort, and inner strength. “Men of prayer” was the metaphor given to describe

spirituality for men with prostate cancer. The depth of the participant's relationship with God and spiritual development was reflected by various levels of praying. The following were examples of the levels of prayer described by study participants: praying in time of need, talking to God, listening to God's voice, worshiping and thanking God, trusting and being guided by God, and having eyes to see God in all experiences. Participants who prayed in the time of need said they did not feel God communicating back with them, whereas others would listen for the voice of God through prayer, meditation, and reflection. Prayer helped participants to cope with cancer and gave them hope and inner strength. Participants who listened for God's voice when praying and meditating were more aware of their spirituality and personal spiritual growth.

Jafari et al.'s (2013) study titled: Spiritual well-being and quality of life in Iranian women with breast cancer undergoing radiation therapy indicated that there was a significant positive correlation between general QOL and total spiritual well-being scores. Also, spiritual wellbeing, social functioning, pain, and arm symptoms were significant predictors of global QOL indicating that psychosocial-spiritual support should be considered in caring for patients with breast cancer.

Visser et al.'s (2009) meta-analytical studies on spirituality and well-being in cancer patients which aimed at determining the relationship between spirituality and emotional well-being indicated that, majority of the cross-sectional studies (31 of 36) found a positive association between spirituality and well-being. Twenty-three cross sectional studies found a positive relationship between spirituality and well-being, which means that more spiritual

involvement was associated with improvement in their wellbeing. Fifteen of these studies controlled for socio-demographic factors and cancer-related factors and reported that the relationship persisted. This suggests that the relationship between spirituality and wellbeing is not dependent on a third factor such as age or physical symptoms. Three studies failed to find a relationship between spirituality and well-being. One of these did identify an indirect positive effect of spirituality on psychological well-being through increased hope, but spirituality was not directly associated with psychological well-being.

Peteet and Balboni (2013) in their study; spirituality and religion in oncology mentioned that despite the difficulty in clearly defining and measuring spirituality, a growing literature describes its importance in oncology and survivorship. Religious and spiritual beliefs influence patients' decision-making with respect to both complementary therapies and aggressive care at the end of life. Measures of spirituality and spiritual well-being correlate with quality of life in cancer patients, cancer survivors, and caregivers. Spiritual needs, reflective of existential concerns in several domains, are a source of significant distress, and care for these needs has been correlated with better psychological and spiritual adjustment as well as with less aggressive care at the end of life.

Spirituality has been defined in many ways, such as a search for connectedness and meaning (Girardin, 2000) and a subjective experience of the sacred (Saucier & Skrzypinska, 2006). Spirituality could be differentiated from religion on the basis that religion places spirituality within the context of the beliefs, values, and practices of an organized institution (Belzen, 2004). Therefore, religion can be considered a specific form of spirituality. In line with the definition of Girardin, spirituality could be defined as one's striving for and

experience of a connection with the essence of life of which the experiences of meaning in life and connectedness are central elements. Spirituality enables cancer patients to cope with their disease, positively evaluate their life, and confront possible death (Thomas & Retsas, 1999). Spirituality significantly contributes to the health-related quality of life of men with prostate cancer and other malignancies by allowing men to enjoy life, even while they may be experiencing bothersome symptoms (Whitford et al., 2008). Brady and colleagues showed that patients who obtained high scores on spirituality reported high levels of excitement in life, irrespective of the extent of pain or lassitude they may be experiencing. On the other hand, patients who obtained low scores on spirituality did so because joy in their lives appeared to be dependent much on their level of somatic symptoms (Brady, Peterman & Fitchett, 1999). McClain, Rosenfeld and Breitbart, (2003) indicated that depression did not influence patients' desire for hastened death among palliative care patients who scored high on spirituality, whereas depression was indicated with the desire for hastened death among patients who scored low on spirituality.

Marital Status and Prostate Cancer

The difficulties that come with prostate cancer seem not only to affect the individual's Quality of Life but also puts a strain on the quality of the relationship between married survivors and their spousal caregivers (Langer, Abrams & Syrjala, 2003). For prostate cancer survivor-caregiver dyads, a decrease in marital satisfaction may be of greater concern for female cancer caregivers since they appear to be at greater risk for decreases in marital satisfaction than male caregivers (Langer, Abrams & Syrjala, 2003). Research

indicates that being in a satisfying marital relationship may be an important predictor of positive adjustment (Weihs, Enright, Howe and Siemens, 1999) and has been correlated with longer median survival times in prostate cancer survivors (Krongrad, Lai, Burke, Goodkin & Lai, 1996).

Masculinity and Prostate Cancer

The social and cultural elements such as peers, teachers, parents and media environment within which males and females lives tend to cause them to adopt certain gender-specific roles. This process is referred to as the gender socialization. (Gilbert & Scher, 1999; Mintz & O'Neil, 1990). The gender script, thus, people's way of thinking, feeling and acting based on society's prescription of masculinity is one of the factors that is likely to influence men's adjustment to treatment for prostate cancer. This is referred to as the gender scripts (Helgeson & Lepore, 1997). The ability to be independent, unemotional, and to limit one's perception of worth to sexual potency, per the socio-culturally determined scripts of masculinity, if adhered to by men, may exacerbate their adjustment to treatments for prostate cancer by depriving them of essential sources of social and emotional support and enhance the salience of losses in sexual function (Helgeson & Lepore, 1997). For men recovering from prostate cancer treatment, self-reliance might be a haven due to the nature of the complications men experience. Moreover, for many men, the reason for their shame and poor outlook of themselves is the urinary leakage, poor bowel control, and sexual dysfunction resulting from these treatments they go through (Gray, Fitch, Fergus, Mykhalovskiy & Church, 2002; Powel & Clark, 2005). In order to deal with the feelings associated with the symptoms they experience, men suffering prostate carcinoma usually go a long way to single handedly

manage these symptoms (Lintz, et al. 2003). “Etu to a, esi obarima bo”, an adage in Akan, one of the local dialects in Ghana, literally suggests that strong men face the bullet, is a typical example of the masculine script. Self-reliance is a traditional masculine script that encourages men to “do it themselves”, be courageous enough to face challenges alone and be independent. In the United States, this script has particular resonance, as rugged individualism is a highly valued personal characteristic (Kimmel, 1996). Due to the demands associated with this script, men are often unwilling to ask others for help for disabling physical or psychological conditions (Boehm, et al. 1993).

For many men, these ailments are a source of shame to them and will therefore prefer to deal with them independently or through self-reliant behaviors (Addis & Mahalik, 2003). For men who adhere to this script, reliance on health care providers may suggest vulnerability or submission to another individual (Mahalik, Good, & Englar-Carlson, 2003). For example, visiting a physician may be perceived as a weakness, as these visits may require going through uncomfortable or humiliating medical procedures, following directions, and sacrificing control over the decision-making process (Addis & Mahalik, 2003). For men who do attend medical and psychiatric appointments, feelings of powerlessness, and failure are not rare (Gray, Fitch, Fergus, Mykhalovskiy & Church, 2002). Furthermore, men mentioned that they had a strong desire to cope autonomously and concealed their erectile dysfunction and incontinence from medical personnel in a study conducted by Gray, Fitch, Phillips, Labrecque and Fergus (2000). In an investigation by Chapple and Ziebland (2002), men reported being extremely reluctant to seek help from others as a result of their feeling of embarrassment about the symptoms they experience. In

a similar research, Dunn, Steginga, and Occhipinti (1999) indicated that men who suffered prostate cancer were significantly less likely compared to women with breast cancer to acknowledge psychological difficulties, agree to psychiatric evaluation, or use medical and mental health services. In as much as being self-reliant may enhance feelings of self-worth (Solomon, Greenberg, and Pyszczynski, 1991), men who define their masculine identities by handling their problems independently often suffer much difficulties than they seem to bare. Although few studies have examined this relationship for men with prostate cancer, the evidence reveals that men who cope independently with their illness evince poorer psychological adjustment and well-being. They portray less life and marital satisfaction (Helgason, Dickman, Adolfsson & Steineck, 2001). Emotional control is a masculine script suggesting that “boys don’t cry” and that men should not show vulnerable feelings. As a result of these injunctions, strong emotions for many men are signs of weakness and should be avoided (Cochran & Rabinowitz, 2000). Mahalik, Good and Englar-Carlson (2003) mentioned that, the likelihood that this tendency erupts from the social expectations that men be fearless, tough, and stoic is very high. From an early age, boys are oriented not to cry when in pain and that the expression of emotion is a feminine script (Levant, 1998). As a result, men are often unwilling to voice feelings that could make support available to them (Addis & Mahalik, 2003). Discussing fears about mortality or symptoms of depression, for instance, may be a source of great stress and shame for men who adhere to this script (Shepard, 2002). Consequently, men bear much of their emotional distress in silence (Kornblith, Herr, Ofman, Scher & Holland, 1994).

Male sexual potency is a masculine script that emphasizes the relevance of male sexuality as a pivotal element of masculinity (Helgeson & Lepore, 1997). Boys also typically learn that men initiate sexual activity (Lee and Owens, 2002) and that males should possess and show insatiable sexual desire (Edgar, 1997). To be perceived as a powerful, prestigious, and competent man, men must be thought of as having sexually achieved and in complete control of their sexual functions (Edgar, 1997). Indeed, inability to initiate sex because of low desire or poor erectile capacity is construed as unmasculine (Kimmel, 1996) and culminates in feelings of shame and despair (Lee & Owens, 2002). For many men, erectile difficulties also precipitate depression (Hatzichristou et al., 2005) likely due to the feeling of shame, decreased self-worth, anger, low self-confidence, and poor self-esteem associated with erectile dysfunction.

In a study by Gray, Fitch, Fergus, Mykhalovskiy and Church (2002), for example, men who underwent orchiectomy, thus surgical removal of the testicles, felt that a central component of their identities had been removed. In research by Powel and Clark (2005), men experiencing erectile dysfunction following radical prostatectomy reported feeling “unmanly” (p. 831). Other men feel “old,” “invisible,” “worthless” (Oliffe, 2004, p. 2254), and depressed (Ramsawh, Morgentaler, Covino, Barlow & DeWolf, 2005).

Although no prior study tests these contentions, Bjorck, Hopp, and Jones, (1999) mentioned that research indicates that men with prostate cancer who perceive great potential loss to their masculine identity evince poor mental health. Similarly, men who fail to alter their gender schemas following treatment for prostate cancer have poor physical health (Stansbury, Mathewson-Chapman & Grant, 2003).

Carer Support and Prostate Cancer

Another factor which could influence the quality of life of prostate cancer patients is the kind and quality of support they may receive from their carers. Support from oncologist and oncology nurses, thus, medical practitioners who have specialized in the treatment and management of cancer may be as important as the support they receive from family and friends.

High levels of stress are reported amongst oncologists (Whippen and Canellos, 1991) and oncology nursing staff (National Breast Cancer Centre and National Cancer Control Initiative, 2003). Levels are higher among staff who are younger, and those who feel less supported in the ward and more recent graduates (Wilkinson, 1994). Common among the sources of stress are; informing patients of the diagnosis of cancer, and providing emotional support for patients and their families (Catalan et al., 1996) yet these areas of training have been largely neglected until recently (National Breast Cancer Centre and National Cancer Control Initiative, 2003).

Family members also have psychological needs (Lederberg, 1998). The diagnosis of a life-threatening illness of a family member creates fear of losing the loved one and the suffering he or she may have to endure is an issue of great concern for the family. Furthermore, psychological distress of family members' can be as severe as that of the patient. Spouses, who are typically the primary caregivers of prostate cancer survivors are also affected by the condition of their ailing spouses (Nijboer et al., 1998). The physical health of cancer caregivers, according to report is much worse than age-matched controls (Haley, LaMonde, Han, Narramore & Schonwetter, 2001). Additionally, the levels of psychological distress among care givers can be parallel, or higher than, that of

the survivors. The levels of clinical symptoms of anxiety and depression among spousal caregivers of Advanced Prostate Cancer (APC) patients were two times higher than the population norm and slightly higher than that of APC survivors according to Couper et al. (2006).

A meta-analysis of studies by Hodges, Humphris and Macfarlane (2005) on psychological distress experienced by both patients and their informal caregivers (predominantly spouses or partners) revealed that the psychological distress of patients and their informal caregivers generally was equal over time, although when the patient received treatment, caregivers experienced more distress than the patient. Thus, providing psychological interventions for family members to manage their distress may have a beneficial effect on the distress level of patients and on themselves since most of them become victims of the condition they want to help treat. Studies have consistently shown that parents experience higher rates of Post-Traumatic Stress Disorder and Post Traumatic Stress Syndrome than either their children or adult cancer survivors, suggesting that the experience of parenting a child with cancer may be more traumatic than actually having the illness (Bruce, 2006). On the other hand, children of cancer patients also are a vulnerable group, who experience frequent psychological problems, acting-out behaviors, and problems in school (Lederberg, 1998). Moreover, fears and anxieties are peculiar symptoms that siblings of pediatric cancer patients experience and may also receive less attention from parents while their brother or sister is in treatment. Cancer patients also receive some substantial amounts of emotional and logistical support and practical personal and nursing care from family members predominantly as well as from friends (Kotkamp- Mothes, Slawinsky, Hindermann & Strauss, 2005). Cancer patients

whose loved ones experience an acute or long-term inability to care are likely to incur an estimated non-reimbursed cost of over \$1 billion annually in care and support (Hayman et al., 2001).

Prostate Cancer and Optimism

Dispositional optimism, an important finding in recent studies is a strong predictor of long-term positive outcomes in patients with cancer during the earlier phase of the cancer trajectory (Schou, Ekeberg, Sandvik, Hjerstad & Ruland, 2005). Longitudinal studies have found that when measured at the time of diagnosis or treatment, dispositional optimism was a significant predictor of better emotional and social functioning one year after surgery in women with breast cancer and better HRQoL three months after treatment in patients with head and neck cancer (Allison, Guichard, & Gilain, 2000). Baseline scores for optimism that were taken the year following after surgery for 163 early stage breast cancer patients predicted well-being 5-13 years after treatment as indicated by less distress, less depression, and better Health Related Quality of Life (HRQoL) (Carver et al., 2005). These results emphasize the relevance of thorough initial psychosocial assessments in patients beginning cancer treatment, which include exploration of dispositional optimism. Identification of patients at risk for poor adjustment early enough may direct the use of interventions targeted at enhancing a sense of optimism and ultimately improve HRQoL during survivorship.

Prostate Cancer and Treatment Funds

In 2003, nearly one in five (12.3 million) people with chronic conditions lived in families that had challenges paying medical bills (Tu, 2004). 63 percent of these individuals also reported challenges in paying for rent, mortgage,

transportation, and food as a result of medical debt (May & Cunningham, 2004). Consistent with these findings, cancer care, a nonprofit agency that provides varied support for individuals with cancer in the United States, reported that, of those to whom it provides financial grants to pay for transportation, 18 percent and 11 percent, respectively, cited skipping medications or canceling a medical appointment in the past 3 months because of financial problems (US Today et al., 2006). The 2006 National Survey of U.S. Households Affected by Cancer also found that one in four families in which a member of the household had cancer in the past 5 years said the experience caused the patient to spend all or most of his or her savings while 13 percent had to borrow money from their relatives to pay bills, and 10 percent were unable to pay for basic necessities such as food, heat, or housing. 7 percent took out another mortgage on their home or borrowed money, 3 percent declared bankruptcy while 8 percent delayed or did not receive care because of the cost (USA Today et al., 2006). Obvious as it may seem, the financial repercussions were worse for those without health insurance. Thus more than one in four delayed or decided not to get treatment because of its cost, 46 percent used all or most of their savings to pay for treatment, 41 percent were unable to pay for basic necessities, and 6 percent filed for bankruptcy (USA Today et al., 2006). About 5 percent of the 1.5 million American families who filed for bankruptcy in 2001 reported that medical costs that came with cancer treatment contributed to their financial problems (Himmelstein, Warren, Woolhandler & Thorne, 2005). Not surprisingly, members of the American Society of Clinical Oncology (ASCO), the Oncology Nursing Society (ONS), and the Association of Oncology Social

Work (AOSW) report financial needs as a frequent subject of patient inquiries (Matthew, Simmons, Lane & Paulus, 2004).

The American Cancer Society (ACS) (2014) and Cancer Care both receive and respond to a large number of patients' requests for financial assistance. In fiscal year 2006, 3,482 patients contacting Cancer Care received \$1,812,206 for unmet financial needs such as child care, home care, and living expenses. In the first 8 months of fiscal year 2007, 2,069 received \$727,745 in such financial assistance. In fiscal year 2006, the ACS responded to 41,378 requests for financial assistance to help patients manage the costs of durable medical equipment, medications, prosthetics, rent, scholarships, utilities, wigs, other medical expenses and needs. Both agencies report that requests for financial assistance are one of the most common reasons people contact them, and often there are not enough resources to meet these needs. According to Institute of Medicine (IOM) (2008), financial needs can arise from the high costs of medical treatment, drugs, and other health support needs, such as medical supplies that are not covered by insurance and or are beyond an individual's income level. This financial stress is compounded when a patient suffers a job loss, is not working during periods of treatment, or lacks health insurance.

Prostate Cancer and Employment

In its review of studies of cancer and employment, the 2006 Institute of Medicine (IOM) report on, *From Cancer Patient to Cancer Survivor: Lost in Transition*, found that the effect of having cancer on employment has not been well studied across all types of cancer. Nevertheless, studies across different types of cancers and populations have consistently shown that significant

portions of individuals; 7 percent to 70 percent across studies according to Spelten, Sprangers and Verbeek, (2002) stop working or experience a change in employment such as reduction in work hours, interruption of work, change in place of employment after being diagnosed or treated for cancer (Institute of Medicine and National Research Council, 2006), with implications for their income. Data from the 2000 National Health Interview Survey (NHIS) revealed that in the United States, adults aged 18 years and older who had previously been diagnosed of cancer were less likely than individuals of similar age, sex, and educational levels to have had a job in the past month. They were also more likely to have limitations in the amount or type of work they could do because of health problems, and those with jobs had fewer days of work in the past year (Yabroff, Lawrence, Clauser, Davis & Brown, 2004). In another analysis of NHIS data from 1998 to 2000, 17 percent of individuals with a history of cancer reported being unable to work, compared with 5 percent of those without such a history (Hewitt, Rowland, & Yancik, 2003). A retrospective cohort study carried out in five medical centers in Pennsylvania and Maryland with 1,435 cancer survivors aged 25 to 62 years who happen to be working at the time of their diagnosis in 1997 to 1999 found 41 percent and 39 percent of males and females, respectively, stopped working during cancer treatment. Although most 84 percent returned to work within the 4 years after diagnosis, 73 percent within the first 12 months after diagnosis and significant minority of 16 percent did not do so. Among the number who returned to work in the first year, 11 percent quit for cancer-related reasons within the next 3 years. Overall, 13 percent quit working for cancer-related reasons within 4 years of diagnosis (Short, Vasey, & Tunceli, 2005). Individuals whose jobs are physically demanding and those with

head and neck cancers, cancers of the central nervous system, and stage IV blood and lymphatic cancers appear to be especially at risk for reductions in employment (Spelten, Sprangers & Verbeek, 2002). The late effects of the illness or treatment in survivors of childhood cancer can also deter many from working (de Boer, Verbeek & van Dijk, 2006).

Prostate Cancer and Social Support

Evidence that the perception of the availability of social support protects individuals under stress from psychological distress, anxiety, and depression (Wills and Fegan, 2001), in part by buffering them. Epidemiological studies across a variety of illnesses have found that when individuals have low levels of social support, they experience worse outcomes, including higher mortality rates (IOM, 2001). Consistent with this evidence, greater social integration has been linked with reduced mortality in multiple prospective community-based studies (Wills & Fegan, 2001). Conversely, well-designed studies have indicated that social isolation is a potent risk factor for mortality across all causes of death including cancer, as well as death due to specific conditions such as heart disease and stroke (Berkman & Glass, 2000). Indeed, the relative risk of death related to social isolation is comparable to that associated with high cholesterol, mild hypertension, and smoking (IOM, 2001). The mechanisms by which these effects occur are not fully known, but there is evidence that social relationships that are stressful, weak, or absent can lead to diminished ability to cope with illness, negative emotions such as depression or anxiety, and immune and endocrine system dysfunction (Uchino, Cacioppo & Kiecolt-Glaser, 1996). The impact of social support on health outcomes have been found specifically among individuals with cancer (Patenaude & Kupst, 2005). A recent study

following 2,800 women with breast cancer for a median of 6 years, for example, found that women who were socially isolated before their diagnosis had a 66% higher risk of dying from all causes during the observation period compared with women who were socially integrated. They were also twice as likely to die from breast cancer during this period (Kroenke, Kubzansky, Schernhammer, Holmes, & Kawachi, 2006).

A patient's perception of stiffened support from family and friends may be associated with greater psychological distress (Raleigh, 1992). Furthermore, patients' adjustment to living with cancer can be influenced by the reactions of their family and intimate others. Descriptive data suggest that adjustment by patients with cancer is enabled by support from their family and partners, (Morse and Fife, 1998) while criticism and overprotection by a spouse leads to negative mood and stress (Kuijer, Ybema, Buunk, DeJong, Thijs-Boer & Sanderman, 2000). Not only the type of support offered by the partner, but also qualities of the relationship and the couple as a unit, are relevant predictors of survival (Ben-Zur, 2001). Men with cancer have been found to hardly discuss cancer-related issues with their partners (Gray, Fitch, Phillips, Labrecque and Fergus, 2000) and difficulties in communicating with their spouses about cancer may be a negative factor in men's adjustment (Gray, Klotz, Iscoe, Fitch, Franssen & Johnson, 1997). For instance, studies of men with prostate cancer and their spouses have revealed that some patients have challenges with respect to speaking to their spouses about issues that bother on their emotions, worries, fears and responses to changes in physical and sexual functioning (Boehmer & Clark, 2001).

Summary

The literature gave an explicit insight into how income, whether personal or family income could influence the quality of life of prostate cancer patients. Going by the literature which span varied ethnicities and geographical locations and considered different forms of cancers including prostate cancer, the influence of finance on the quality of life of prostate cancer patients cannot be over-emphasised. All the literature reviewed indicated a positive association between income and quality of life of the cancer patients studied. Though all the studies measured income using different markers and tools, and also measured various forms of quality of life, the impact of income on these different forms of quality of life measured, irrespective of the nature gave an impression of its influence on patient's well being measured in terms of their quality of life. For instance, Montazeri et al. (2003) measured income by using social class as a marker just as Michelson et al. (2000). However, the former did so on quality of life of prostate cancer patients while the latter on global quality of life. Also, Michelson et al. (2000) considered other indicators of finance such as employment status and educational status. Incidentally, all these markers revealed a positive association between income including all its markers and quality of life. Again, Kim et al. (2015) measured income by social class just as Montazeri et al. (2003). However, the former did so with the aim of determining its impact on two forms of quality of life; health related quality of life and global quality of life. Yet, both markers of income had positive correlations with the various forms of quality of life measured. Fenn et al. (2014) reported in affirmation of previous studies that patients who reported a lot of financial problems as a result of cancer care costs were more likely to rate physical health, mental health and satisfaction with social activities and relationship as poor

compared to those with no financial hardship. Again, Zafar et al. (2015) concluded their study by stating that, high financial burden was also associated with poorer quality of life and better quality of life was associated with fewer perceptions of poorer quality of care.

Anxiety has been a major concern for most patients with prostate cancer going by the literature reviewed. On the most part, anxiety has been measured in relation to the extent of distress that patients complained about. The literature available gives a vivid indication of how the stage of the condition as well as the type of carcinoma, whether localized or metastatic could influence the patient's anxiety level. Namiki et al. (2007) gave an idea based on the results of their study that the kind of treatment patients receive as well as the type of carcinoma they have could all contribute to their feelings of anxiety. Again the forms of symptoms patients experienced could also be a predictor of patients' anxiety level and its subsequent influence on quality of life. Zenger et al. (2010) re-echoed the impact that physical symptoms as elements of quality of life could make on patient's development of anxiety. Though the literature reviewed used different instruments in assessing anxiety and measured different aspects of quality of life, the impact of anxiety on quality of life remained significant whether or not it was measured in terms of physical distress. Again, studies by Mehnerta et al. (2007) indicated that, patients with distress and anxiety are confronted with a higher number and a wider range of problems and experience significantly lower levels of quality of life.

Depression has been found to be very critical in determining the extent, duration, severity and cost of treatment of prostate cancer. According to Smith et al. (2013), depression had a significant impact on various aspects of quality

of life measured in the expression of physical symptoms. Again, Jayadevappa et al. (2011) brought to the fore how depression could influence mortality and the frequency of hospitalisations. Consequentially, mortality and frequency of hospitalisations are predictors of quality-of-life though they are not full measures of it. In as much as this research is not aimed at measuring these individual elements of quality-of-life, the literature will serve as an opener to specific domains of quality-of-life that require attention once quality of life associated with prostate cancer is found to be low. Korfage et al. (2005) aimed their study at determining how depression will affect quality of life of patients receiving different forms of treatment for prostate cancer. The impact of depression in predicting quality of life was evident in their outcome. The literature echoed the essence of detecting depression among prostate cancer patients even before their treatment due to its impact on determining the prognosis of the condition irrespective of the treatment being received. According to Stommel et al. (2002), cancer patients with either previous emotional problems or previous physical limitations face, within the first 19 months after diagnosis, a 2.6 times greater hazard of dying than patients without prior problems. This research seeks to unravel the efficacy of the findings already made, especially among Ghanaian men with the condition in order to inform clinician intervention. It will enable the researcher unearth the period during treatment where patients experience clinical depression, when and which intervention will be essential in enhancing patients' quality of life. Furthermore, this research will fill the gap by limiting the study to Ghanaians, for that matter Africans, which other studies did not consider in their sampling such as the

study conducted by Bennett and Badger (2005) perhaps due to the fact that most of the researches were conducted in Europe and America.

Spirituality is considered one of the most important variables in determining the quality of life among prostate cancer patients. However, how much it impacts quality of life as well as which aspects of spirituality has the most influence on quality of life will be a major focus of this study, given the diverse religious and spiritual beliefs and high spiritual sense among the Ghanaian populace. Also because previous studies such as was conducted by Walton and Sullivan (2004) were qualitatively conducted, varied dimensions of spirituality such as peace and forgiveness were not considered as was prayer. Walton et al. (2004) gave a vivid picture of how much spirituality influenced quality of life and an impression of how much impact prayer as a component of spirituality had in determining the quality of life of cancer patients. Visser et al. (2009) as well as Peteet and Balboni (2013) accented to the role that spirituality plays in ensuring quality of life of oncology patients. Though the literature did not capture quality of life of prostate cancer patients, its relevance to the study of oncology irrespective of the type still holds. Jafari et al. found out that, there was a significant positive correlation between general QoL and total spiritual well-being scores. Brady et al. (1999) mentioned as a finding of their study that, the significant association between spirituality and quality of life was unique, remaining after controlling for core quality of life domains as well as other possible confounding variables

CHAPTER THREE

METHODOLOGY

Introduction

This chapter explains the research design appropriate for the study as well as the target population, sample size, sampling technique, instruments used in gathering the data and the procedure followed in conducting the research. The ethical consideration on which the research hinges has been presented and the data analysis per hypothesis has also been presented.

The appropriate methodology that was employed to facilitate the scientific process with respect to the aim of the research has been presented in this chapter.

Research design

The researcher employed the survey research design for data gathering. The survey research design gave the researcher the opportunity to learn about the larger population from which the sample is drawn. This method was aimed at collecting detailed and factual information that would describe the existing phenomenon within the target population. The survey design was considered the most appropriate method due to the researcher's intention to achieve external validity and to adapt findings of the study to other similar populations. This design was also to enable the researcher authenticate any observations and suggestions that may be considered useful for future research, policy formulation and implementation. The survey design was also preferred due to the researcher's intention to use findings of the research to enhance psycho-

education and psychological therapeutic treatments. This design was to enable the researcher achieve these due to its methodological appropriateness in evincing the characteristics of the population under study. However, the survey research design, though will enhance generalizability, will not help explore the phenomenon to a greater depth like would have been ideal.

Population

The target population for the research was 30 patients, medically diagnosed and undergoing Prostate Cancer treatment at the Legon Hospital Ghana. This target population was useful in determining the appropriate participants to be considered since members of the population from which the sample was drawn were a medically diagnosed one, hence ascertaining the veracity of the representative sample. The target population enabled the researcher control for certain characteristics such as socioeconomic status, educational level, sociocultural disparities and religious and spiritual variability. This is due to the diverse background of the participants since they were not selected from a particular sociocultural environment.

Sampling Procedure

Going by Krejcie and Morgan (1970) who developed a formula for determining sample size, the research used a sample size of 29 participants since it targeted a population size of about 30. This size, though low, was considered feasible because of the challenge of accessibility to a sizeable number of participants given the specificity of the condition under study, the sensitivity of the condition, the age and physical strength of the participants. The sample was drawn from the Genitourinary Unit of the Legon hospital in Accra. The demographic data of the sample included participants' age, marital status,

profession, and educational level, duration of condition, monthly income or allowance, degree of condition and type of treatment they were receiving. Each participant was given an equal chance of being selected for the study. The purposive sampling technique was used since the participants were selected based on an equal opportunity of selection. The purposive sampling technique was the most relevant sampling for the study since participants were selected based on the purpose of the study.

Inclusion Criteria

Participants must:

1. Be 40 years and above.
2. Have been clinically diagnosed of Prostate Cancer for at least 1 month.
3. Be receiving treatment; whether chemotherapy, radiotherapy and or recovering from prostatectomy.
4. Be receiving outpatient treatment.

Exclusion Criteria

1. Participants must not have a comorbid.

Data Collection Instruments

A set of standardized questionnaires were used in measuring patients' level of depression, anxiety, spirituality as well as their quality of life. Section A of the questionnaire was to solicit demographic information of participants. The Beck Anxiety Inventory was also used to measure participants' level of anxiety while their level of depression was measured with the Beck Depression Inventory. Participants' level of spirituality was measured with the Functional Assessment of Chronic Illness Therapy (FACIT-Sp-12) version 4 while their

Health Related Quality of Life was measured with the Functional Assessment of Chronic Therapy for Prostate Cancer (FACT-P).

Beck Anxiety Inventory (BAI)

Beck Anxiety Inventory is a 21 item scale with a 4 point Likert scale that measures the severity of anxiety symptoms. This scale has an internal consistency of 0.92 (Cronbach's alpha = 0.92) and a test-retest reliability over a week of $[r(81) = 0.75]$ (Beck, Epstein, Brown & Steer 1988).

Beck Depression Inventory (BDI)

Beck Depression Inventory (BDI) is a 21 item self-report rating inventory that measures characteristic attitudes and symptoms of depression (Beck, Ward, Mendelson, Mock & Erbaugh, 1961). The BDI has an internal consistency ranging from 0.73 to 0.92 with a mean of 0.86 (Beck, Steer & Garbin, 1988).

Functional Assessment of Chronic Illness Therapy (FACIT-Sp-12)

Functional Assessment of Chronic Illness Therapy (FACIT-Sp-12) version 4 is a 12 item scale with a 5 point Likert Scale. This scale has a high internal consistency and ranges from 0.81 to 0.91 between subscales (Noguchi et al., 2004).

Functional Assessment of Chronic Therapy for Prostate Cancer (FACT-P)

Functional Assessment of Chronic Therapy for Prostate Cancer (FACT-P) is a 27 item scale on a five point Likert scale designed to measure the quality of life of prostate cancer patients. The FACT-P has a Cronbach's alpha coefficient for the individual subscales ranging from 0.73 to 0.89. The test-retest reliability showed a high correlation (intraclass coefficients ranged from

0.72 to 0.93). The FACT-P scale discriminates reliably between the cancer patients and controls in most subscales (Hong et al., 2006).

Table 1: *Questionnaires and their Respective Cronbach's Alpha*

Questionnaire	Cronbach's Alpha
Beck Anxiety Inventory	0.92
Beck Depression Inventory	0.73-0.92
Functional Assessment of Chronic Illness Therapy (FACIT-Sp)	0.81-0.91
Functional Assessment of Chronic Therapy for Prostate Cancer (FACT-P)	0.75-0.89

Data Collection Procedures

An ethical clearance letter from the University of Cape Coast, Department of Educational Foundations, a copy of the research proposal and a sample of the questionnaire were presented to the Director of Medical Services of the Legon Hospital from where the sample was drawn on the 24th of March, 2016 in order to make the directorate officially aware of the researcher's intention to use patients from their facility as participants. A temporary approval was obtained and data gathering was scheduled to begin on the 30th of March, 2016. The purpose of the study had been discussed with the Medical Director and his deputy including the Urologist two months earlier after which they requested an ethical clearance letter before granting an approval.

Data was gathered on Wednesdays and Thursdays which were the clinic days for Prostate Cancer patients. The researcher personally administered the questionnaires to the participants in the consulting room of the Urologist in

order to ensure less distraction and enhance privacy and also ascertain a higher response rate. However, for participants who required assistance in comprehension of items, the items were administered outside in order to avoid distractions from other patients being attended to by the Urologist. Instructions regarding how the items were to be responded to were clearly stated on the questionnaire. These instructions were also explained to the participants so as to ensure that participants had appreciated what was required of them as regards how they were to indicate their response choices. Participants' consent was sought so that the researcher could be assured of their full indulgence and participation. Participants were allowed to seek any clarification they required so as to ensure appropriate responses. The questionnaires were collected as and when participants finished responding to them. It took an average of 18 minutes for a participant to complete a questionnaire because majority of the participants were over 70 years, hence were quite slow in reading and responding by ticking or circling. Participants who required any form of assistance pertaining to how to respond or difficulty to understand an item were given as much insight into the questions as possible without hinting a response. Participants were assured of confidentiality of their information and the fact that the report of the study would be based on group data.

Before the commencement of the main data collection, a pilot study was carried out to ascertain the reliability of the scales to be used in the study. This was done by administering the questionnaires to 10 prostate cancer patients receiving outpatient care at Legon Hospital.

During the pilot study, the Telliger's Absorption Scale was found to be quite lengthy hence it took a long time in being responded to. It was omitted

after the pilot because majority of the participants complained about the length of the scale and the complexity of the items. Also, the Life Orientation Test Revised was omitted after the pilot study because its Cronbach's alpha (0.42) was not significant enough to enable its use in the research.

Table 2: *Questionnaires and their Respective Cronbach's Alpha after Pre-testing*

Questionnaire	Cronbach's Alpha
Life Orientation Test- Revised	0.42
Beck Anxiety Inventory	0.95
Beck Depression Inventory	0.86
Functional Assessment of Chronic Illness Therapy	0.71
Functional Assessment of Chronic Therapy for Prostate Cancer	0.89
Physical Wellbeing Subscale of FACT-P	0.89
Social/Family Wellbeing Subscale of FACT-P	0.79
Emotional Wellbeing Subscale of FACT-P	0.72
Functional Wellbeing Subscale of FACT-P	0.75

Participants were assured of confidentiality of their responses. Participants were also assured that their identities would remain anonymous in order to obtain accurate information from them. In addition, participants were given the freedom to withdraw at any point of the study if they so desired. Participants' consent was sought after the purpose of the research had been disclosed to them in order to ensure complete participation.

Data Processing and Analysis

The demographic data was scored based on the responses of participants. Section B, which comprised of Functional Assessment of Chronic Illness Therapy (FACIT-Sp) test that measures Spirituality was scored on a 5-point Likert Scale with “Very Much” obtaining a score of 5 while “Not At All” obtained a score of 1. Section C, which comprised of Beck’s Depression Inventory was scored based on a self-report rating scale with a score of 3 suggesting a depressive symptom while a score of 0 suggest asymptomatic. Section D comprised of the Beck’s Anxiety Inventory which measured symptoms of Anxiety and was scored on a 4-point Likert scale with “Severely” taking a score of 4 while “Not at All” took a score of 1. Section E comprised of the Functional Assessment of Chronic Therapy for Prostate Cancer (FACT-P) which measured the Quality of Life of Prostate Cancer patients and was scored on a 5-point Likert scale with “Not at All” taking a score of 1 while “Very Much” took a score of 5.

Considering the purpose of the research and the kind of investigation being done, the following statistical analysis methods were used; One-Way Analysis of Variance, Pearson’s Product Moment Correlation Coefficient and Multiple Regression Analysis.

One-Way Analysis of Variance

Hypothesis one (H_1), which states that there will be a significant difference in the quality of life of patients as regard the amount of income participants receive was analysed using the One-Way Analysis of Variance (ANOVA) since the researcher sought to determine the significant difference that exist among seven

different income levels and how they independently influence the quality of life of the participants.

Pearson's Product Moment Correlation Coefficient

Hypothesis two (H_2) states that there will be a significant negative correlation between anxiety and quality of life of prostate cancer patients and was analysed using the Pearson's product moment correlation coefficient since the researcher sought to determine the type and strength of relationship between anxiety and quality of life of prostate cancer patients.

Hypothesis three (H_3) which states that there will be a significant negative correlation between depression and quality of life of prostate cancer patients was analysed using the Pearson's product moment correlation coefficient since the researcher sought to determine the form and strength of association between depression and quality of life of prostate cancer patients.

Hypothesis four (H_4) states that there will be a significant positive correlation between spirituality and quality of life of prostate cancer patients. This hypothesis was analysed using the Pearson's product moment correlation coefficient. Pearson's product moment correlation coefficient was used because the researcher intended to determine if spirituality could adequately predict the quality of life of prostate cancer patients. According to Gravetter and Wallnau (2005), the Pearson's product moment correlation coefficient is an analytical procedure which helps determine the degree and direction of a linear relationship and hence was considered the most appropriate analytical tool in measuring these hypotheses.

Multiple Regression Analysis

Hypothesis five (H₅) which states that anxiety, depression and spirituality will predict quality of life of prostate cancer patients was analysed by using the multiple regression. This was done to understand the extent to which anxiety, depression and spirituality would predict variability in quality of life among prostate cancer patients.

Hypothesis six (H₆) which states that age, educational level, income level and duration of condition will predict quality of life of prostate cancer patients was analysed by using the multiple regression. This was done to understand the extent to which age, educational levels, income levels and duration of condition would predict variability in quality of life among prostate cancer patients.

Summary

The researcher employed the survey research design for data gathering. The target population comprised of 30 prostate cancer patients with 29 of them constituting the sample size. This sample was obtained using the purposive sampling method. Data was collected from the Legon hospital. Four standardised questionnaires were used in soliciting responses. Namely; Becks Depression Inventory, Becks Anxiety Inventory, Functional Assessment of Chronic Therapy-Prostate Cancer and Functional Assessment of Chronic Illness Therapy (FACIT-Sp). Six hypotheses were formulated. H₁ was analysed using the One Way Analysis of Variance. H₂, H₃ and H₄ were analysed using the Pearson's product moment correlation coefficient. H₅ and H₆ were analysed using the multiple regression analysis.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This research was aimed at investigating the influence that depression, anxiety and spirituality will have on the quality of life of prostate cancer patients as well as their income. A set of standardized questionnaires were used in soliciting participants' responses in line with the research objectives. Descriptive statistics was used to illustrate the demographic characteristics of the participants. Namely; their age, duration of condition, marital status, level of education and monthly income. Pearson's product moment correlation coefficient was used to analyse the hypotheses. However, a multiple regression analysis was done to predict the extent to which age, the duration of their treatment, level of education and income level could influence quality of life of prostate cancer patients as well as anxiety, depression and spirituality.

Demographic Background of Participants

Findings on the demographic background of participants are presented in Table

3.

Table 3: *Demographic Background of Participants*

PCa Patients (n=29)		
Variables	Frequency	Percent
Age		
51-60	2	6.9
61-70	11	37.9
71-80	11	37.9
81-90	5	17.2
Duration		
1-3months	1	3.4
4-6months	2	6.9
7-12months	1	3.4
1-2years	2	6.9
3-4years	10	34.5
5years and above	10	34.5
Marital Status		
Married	25	86.2
Divorced	2	6.9
Widowed	2	6.9
Level of Education		
Basic education	1	3.4
S.H.S	3	10.3
O-Level	6	20.7
A-Level	3	10.3
Tertiary	13	44.8
Postgraduate	3	10.3
Salary Bracket(Monthly)		
Below 200	4	13.8
201-500	8	27.6
501-800	10	34.5
801-1200	3	10.3
1201-1600	1	3.4
1601-2000	2	6.9
2000 and above	1	3.4

Source: Field Survey (2016)

Table 3 revealed that, patients who fell between the ages of 61 and 70 and between 71 and 80 constituted the greatest number of prostate cancer patients [37.9%]. This indicated that men between the ages of 61 and 80 are more likely to be living with the condition than those who were between 81 and 90 years since those between this age category was lesser [17.2%]. This is likely to be due to high mortality rate of men between 81 and 90 years. However, those between 51 and 60 were found to be the lowest age group living with the condition. This suggests that, middle aged men were at a less risk of having the condition. Even though the tendency for them to develop the condition at late adulthood was quite high.

Again, with respect to duration of the condition, patients who had been living with the condition for 3 to 4 years were as much as those who had for more than 5 years [34.5%]. They also constituted the largest group of the participants. This might be because those who had been diagnosed with the condition for a much longer period were more likely to experience more significant clinical symptoms of the condition than those who had been for a lesser duration. Hence, may have been more consistent in their sought for medical reviews and treatment. However, those who had been living with the condition between 4 to 6 months and 1 to 2 years also constituted the second largest group [6.9%] though not any much greater than those who had been living with the condition between a month and 3 months [3.4%].

The greatest proportions of the patients were married [86.2%]. However, those who had divorced and widowed constituted an equal insignificant proportion [6.9%] compared to the married category of patients. This is likely

to be because, most of the patients were in their late adulthood and were likely to have their wives being active since they are more likely to be younger.

Patients who had been educated up to tertiary level constituted the greatest number [44.8%]. This might have been because the hospital where the data was gathered was a university hospital and therefore had majority of the patients being staff, former staff or workers of the university. Hence, were likely to have been educated, given the fact that, university employed staff were likely to have a minimum of a tertiary education to qualify for employment. Those who had received education up to O-level certification [20.7%] came second to the majority. However, the lower proportion of the patients [10.3%] had either received lower education (senior high and A-level) or much higher education (postgraduate). The lowest proportion of the patients [3.4%] had received the lowest form of education; basic education.

Patients who received a monthly income or allowance between 501 and 800 Ghanaian cedis were the largest proportion of the participants [34.5%] compared to those who received between 201 and 500 Ghanaian cedis [27.6%]. However, those who received income below 200 Ghanaian cedis [13.8%] were more than those who received income between 801 and 1200 [10.3%]. However, the proportion reduced among higher income earners with those receiving 1601 and 2000 [6.9%] being more than those who received 1201 to 1600 and above 2000 Ghanaian cedis. This category was of equal proportion [3.4%]. This variability in income levels is likely to be due to the different amount of remuneration patients may have been receiving. In that, some patients may have been in active service since they may not have retired while others may have been pensioned. Varied pension returns patients may have been

receiving as well as the tendency for some to be working on contract, while others who remained unemployed after retirement may have contributed to the variability.

Testing of hypotheses

The first hypothesis (H_1) which states “There will be a significant difference in the quality of life of patients as regard their respective income levels” was tested with the One-Way Analysis of Variance. Relevant information on this is presented in Table 4.

Table 4: *One-Way ANOVA of Income Levels and Quality of Life*

PCa Patients (n=29)					
Variables	M	SD	df	F	Sig
Below 200	1.043	30.956			
201-500	80.500	18.699			
501-800	80.111	22.178			
801-1200	99.333	26.727			
1201-1600	65.000				
1601-2000	81.000				
Above 2000	1.380				
	88.783		22	1.519	.235

* $p < .05$; ** $p < .01$. Source: Field survey (2016)

Results in Table 4, shows that, One-Way analysis of variance revealed that no significant difference exists among the mean scores of income level [$F_{(22)}=1.519$, $P= .235$] with regard to the quality of life of prostate cancer patients. However, the differences in means reveal the extent of influence the various income levels have on quality of life. Thus, those whose income levels

fell between 801 and 1200 had obtained higher means [M=99.333] compared to those whose income levels fell between 1601 and 2000, [M=81.000]. Also, those whose income levels fell between 201 and 500 had a higher mean [M=80.500] which reflect a higher quality of life with respect to their income levels than those with income levels between 501 and 800. This implies that hypothesis one was not supported by the results of the findings. Those whose income levels fell between 501 and 800 also had a higher quality of life telling from their mean [M= 80.111] compared to those whose income levels fell between 1201-1600 [M=65.000].

This could have been because, though participants have different levels of income as salary, they may also be receiving financial assistance from family especially their children, since majority of them are aged and are expected to have working class children who could assist them financially. Hence, they may not have any peculiar financial challenges that could influence their quality of life significantly. Fenn et al. (2014) refuted the research result by asserting that patients who reported “a lot” of financial problems as a result of cancer care costs were more likely to rate physical health, mental health and satisfaction with social activities and relationship as poor compared to those with no financial hardship. It was re-echoed that the strongest independent predictor of poor quality of life among cancer survivors was increased financial burden as a result of cancer care costs.

Also, Montazeri, Hole, Milroy, McEwen and Gillis (2003) study on the role of socioeconomic status on quality of life of lung cancer patients does not support the findings of the research by indicating that, patients from lower socioeconomic backgrounds showed more problems with physical mobility,

energy, role and physical functioning which are all significant aspects of quality of life. Again, the findings of Kim and Park (2015) de-emphasized the findings of the research by mentioning that, individuals with low household incomes and of low subjective social class had the highest probability of reporting discrepant HRQoL and QoL scores whereas individuals with high household incomes and high subjective social class had the lowest probability of discrepant HRQoL and QoL. According to Michelson, Bolund, Nilsson and Brandberg (2000) whose findings did not support the results revealed that, unemployed respondents reported poorer health related quality of life than employed respondents. Higher income was associated with a more positive assessment of health related quality of life. The unemployed respondents scored lower on all functional scales (physical, role, cognitive, emotional and social functioning) compared to those in work. Zafar et al. (2015) also indicated by their findings that high financial burden was also associated with poorer quality of life. Better quality of life was associated with fewer perceptions of poorer quality of care and this also does not support the findings of this research. Therefore, the place of income in ensuring optimal quality of life among prostate cancer patients cannot be over emphasised.

However, the outcome of the research may have been that, in spite of patients' tendency to be obtaining some form of financial support, the fact that all of them were outpatients, hence may not have been incurring more cost compared to those hospitalized and with advanced-stage conditions could also be a reason for the outcome of the research. Again, the socio-demographics of participants indicate that majority of the participants fell within income levels which were quite good enough to support them in the purchase of medication.

This research's outcome therefore defied an American survey (US Today et al., 2000), which indicated that 18 percent and 11 percent, respectively, cited skipping medications or canceling a medical appointment in the past 3 months because of financial problems which obviously culminated in low quality of life.

The second hypothesis (H_2) which states "There will be a negative correlation between anxiety and quality of life of prostate cancer patients" was tested with the Pearson's Product Moment Correlation Coefficient. Relevant information on this is presented in Table 5.

Table 5: *Correlation between Anxiety and Quality of Life*

PCa Patients (n=29)				
Variables	M	SD	r	Sig
Anxiety	26.40	8.32		
Quality of Life	88.78	25.74		
			-.184	.424

* $p < .05$; ** $p < .01$. Source: Field survey (2016)

Results in Table 5, revealed that, the average anxiety level [$M = 26.40$, $SD = 8.32$] of the sampled participants was indicative of a mild level of anxiety in terms of severity of anxiety symptoms of the patients. These means were subjected to correlation analysis and results indicated that a negative correlation existed between the two variables [$r_{(20)} = -.184$, $p = .424$]. However, this correlation is not significant. This implies that the third hypothesis was supported by the results of the analysis. This finding may have been as a result of the impact that anxiety could have on a person physically, emotionally and socially. For instance, patients who were more anxious may have shown more

physical symptoms such as dizziness, indigestion, numbness and hand trembling. This may have compounded their distress and caused their quality of life to fall.

Also, prostate cancer patients may develop anxiety due to the unpredictability of the disease cause and severity especially in the face of fluctuating or rising prostate specific antigen (PSA) levels. PSA is a protein produced by cells in the normal prostate and when cancer is present there are many more prostate cells, therefore the PSA level usually increases. PSA is a good measure of how many prostate cancer cells remain in the body and the PSA test can then be used to measure the effectiveness of treatments. It follows therefore that, the PSA level can give quite an idea of cancer stage (Australian Cancer Network and Australian Prostate Cancer, 2009). Again, patients could lead themselves into anxiety in their quest to find out more about the condition when they find out certain discouraging facts about the condition such as the tendency for it to worsen. Patients who are unable to remedy the symptoms of the condition as well as the side effects of treatment may be forced to try many things to help alleviate the discomfort they may be experiencing and while at that may be drawn into anxiety once they are unable to lay their hands on any good remedy or have their condition worsened by them. For those who may not be financially sound to support themselves, anxiety may be provoked whenever they are due for any clinical review as they wonder how they may pay for treatment and purchase new medications even as they hope to have their condition improve. Anxiety about cancer as a diagnosis, lack of awareness, medical complications, the fear of death and financial burdens are some of the factors that result in depression among prostate cancer patients. On the other

hand, those who experience less anxiety may have less distressful symptoms and perhaps be in a better frame of mind to even deal with the distress associated with condition. Those with less anxiety are also more likely to engage in activities that could redirect their attention to other things and reduce the observation and impact of the symptoms of the condition. A study by Namiki et al. (2007) revealed the impact of psychological distress which could have anxiety provoking consequences on quality of life by indicating that those patients with psychological distress scored lower in all domains of the general and disease related health-related quality of life (HRQOL) than the non-patients. Zenger et al., (2010) also supported the finding by indicating that psychological distress is accompanied by lower quality of life. Again a study by Johaness et al., (2013) also supported the finding that anxiety score was significantly lower in the early-stage prostate cancer group than in the advanced-stage prostate cancer group. However, its presence among the cancer group and its association in determining quality of life is evident. Mehnerta et al., (2007) had their study echoing the negative association between anxiety and quality of life of prostate cancer patients. They revealed that, patients with distress and anxiety were confronted with a higher number and a wider range of problems as well as experienced significantly lower levels of quality of life. The third hypothesis (H_3) which states “There will be a negative correlation between depression and quality of life of prostate cancer patients” was tested with the Pearson’s Product Moment Correlation Coefficient. Relevant information on this is presented in Table 6.

Table 6: *Correlation between Depression and Quality of Life*

PCa Patients (n=29)				
Variables	M	SD	r	Sig
Depression	6.22	5.45		
Quality of Life	88.78	25.74		
			-.135	.550

* $p < .05$; ** $p < .01$. Source: Field survey (2016)

Results in Table 6, revealed that the average level of depression [M= 6.22, SD=5.45] of the sampled participants was indicative of a low level of severity of depressive symptoms among patients. These means were subjected to correlation analysis and results indicated that, a negative correlation existed between the two variables [$r_{(21)} = -.135$, $p = .550$]. However, the correlation was not significant. This implies that the fourth hypothesis was supported by the results of the analysis. Depression may have had such a negative association with quality of life because of the debilitating impact of depression on people in this case, prostate cancer patients. Depressed patients may be emotionally absorbed with their condition such that it begins to affect their behaviour and physical characteristics. Prostate cancer patients in advanced stage condition as well as significant pain symptoms, side effects of treatment and a previous history of clinical depression are at risk for depression (Cliff & McDonagh, 2000). Depression has been strongly associated with fatigue and pain as symptoms in prostate cancer (Heim & Oei, 1993). Prostate cancer pain appears to be strongly related to depressive symptoms, whereas fatigue induced by radiation therapy or hormonal therapy has not been related consistently with increasing depression (Breitbart et al., 2000).

Again depression is likely to make a patient lose appetite, experience insomnia, lose weight and experience extreme sadness such that the patient is left distressed. Once these symptoms, among many others persist in patients, a patient is likely to experience more distress and have a low quality of life. Lack of social support, social isolation, hopelessness and unstable financial status have also been found to contribute to the risk of depression in cancer patients (Balboni et al., 2007). For most patients who are not in active service due to retirement, having nothing to do could be very devastating, having spent the greatest part of their lives in active service. The absence of a good social support for such people is likely to make them attend more to the challenges associated with the condition as well the discomfort in ageing such as aches and pains, fatigue and functional inability. Once these persist, the patient is likely to deteriorate with respect to their quality of life. Again, patients burdened by family challenges which seem unresolvable may begin to entertain negative thoughts which could impair their sleep, appetite and sense of harmony. Once these persist, patients' quality of life is likely to take a downward spurt. When depression is usually diagnosed later, it eventually reduces the chances of long-term cancer survival by 10-20 percent (Pasquini & Biondi, 2007).

A study by Smith, Gomm and Dickens (2003) confirmed this finding by indicating that pain, anxiety and depression were associated with impaired quality of life. Anxiety and depression contributed independently towards various dimensions of quality of life among cancer patient. Jayadevappa et al., (2011) study on the burden of depression on prostate cancer supported the findings by indicating that health care costs associated with depression remained elevated compared with costs for men without depression, over the

course of the follow-up. This study drew the conclusion that depression during the treatment phase was associated with significant health resource utilization, costs and mortality among men with prostate cancer. The researcher recommended that clinicians attempt an early detection of patients at risk of high levels of anxiety and depression after prostate cancer diagnosis since prevalence is high. According to Stommel, Given and Given, (2002) whose study also supported findings of the research indicated that, cancer patients with either previous emotional problems or physical limitations, face within the first 19 months after diagnosis, a 2.6 times greater hazard of dying than patients without prior problems. Patients with both previous emotional problems and physical limitations before diagnosis have a 7.6 times greater hazard of dying within that time frame. Another study which also supported the finding was that by Bennett and Badger (2005) which found that prostate cancer pain appeared to be associated strongly with depressive symptoms. Studies have indicated that being older, being married, having high social support, being optimistic and having less impairment in physical functioning are associated with decreased risk of depression (Pirl & Mello, 2002). However, anxiety about cancer as a diagnosis, lack of awareness, medical complications that happen, the fear of death and financial burden are some of the factors that result in depression among prostate cancer patients. Unfortunately, there is often a delay in diagnosis of this depression, which eventually reduce the chances of long-term cancer survival by 10-20% (Pasquini & Biondi, 2007).

Another research on informational interventions and comprehensive reviews of psychosocial cancer intervention research in prostate cancer indicates that the state of the science for supportive care interventions directed

toward men with prostate cancer is scanty (Pirl, Greer, Goode & Smith, 2008). Though, the course of prostate cancer has been observed to be greatly affected by effective psychotherapeutic treatment for depression, along with antidepressant therapy. Psychotherapy results in reduced anxiety and depression, and often pain reduction even as it also leads to longer survival time for the patients (Carlson, Speca, Patel & Goodey, 2003). The physiological or neurobiological mechanism for these findings is yet to be known, but health maintenance behaviour, health-care utilization, endocrine and hormonal changes and positive changes in immune function are the possible effects psychotherapy could have on the physiology of patients. Thus, effective treatment of depression culminates in better patient adjustment, reduced symptoms, reduced cost of care and may influence disease course (Holden, Pakula, & Mooney, 1998). A combined evaluation and treatment approach where the urologist and psychotherapist or psychiatrist work out an effective treatment plan considering psychological and urological perspectives on the etiology of depression is best for the patient (de Sousa, Sonavane & Mehta, 2012).

The fourth hypothesis (H₄) which states “There will be a positive correlation between spirituality and quality of life of prostate cancer patients” was tested with the Pearson’s Product Moment Correlation Coefficient. Relevant information on this is presented in Table 7.

Table 7: *Correlation between Spirituality and Quality of Life*

PCa Patients (n=29)				
Variables	M	SD	r	Sig
Spirituality	36.52	5.94		
Quality of Life	88.78	25.74		
			.396	.062

* $p < .05$; ** $p < .01$. Source: Field survey (2016)

Results in Table 7, revealed that the average level of spirituality of the participants [M= 36.52, SD= 5.94] was indicative of an above average level of spirituality among the patients. These means were subjected to correlation analysis and results indicate a positive correlation between the two variables though not significant [$r_{(22)}=.396$, $p=.062$]. This implies that the fourth hypothesis was supported by the results of the analysis. Spirituality is that aspect of a person's life which defines their relationship with a deity and its influence on their person. This variable may have influenced quality of life positively due to its inherent capacity to help a patient draw strength from within. Spirituality plays a significant role in quality of life and recovery from cancer (Brady et al., 1999).

Spirituality has been defined in many ways, such as a search for connectedness and meaning (Girardin, 2000) and a subjective experience of the sacred (Saucier & Skrzypinska, 2006). Spirituality could be differentiated from religion on the basis that religion places spirituality within the context of the beliefs, values, and practices of an organized institution (Belzen, 2004). Spirituality enables cancer patients to cope with their disease, positively evaluate their life, and confront possible death (Thomas & Retsas, 1999).

Spirituality significantly contributes to the health-related quality of life of men with prostate cancer and other malignancies by allowing men to enjoy life, even while they may be experiencing bothersome symptoms (Whitford, Olver, & Peterson, 2008).

Spirituality is important in treatment and recovery from illness, enhancing well-being, coping skills, personal comfort, and a sense of peace (Chiu, 2000). Emotional and spiritual discomfort, tension, inner turmoil, and feelings of isolation are often related to cancer, and spirituality can buffer those negative feelings (Boudreaux, O’Hea, & Chasuk, 2002). Taylor and Outlaw (2002) described how patients used prayer to ease the emotional, spiritual, and physical distresses of illness and cope with cancer. Therefore, the place of spirituality in enhancing the quality of life of prostate cancer patients cannot be undermined.

Bradya, Petermana, Fitchettc, Mod, and Cella (1999) indicated that, significant association between spirituality and quality of life was unique, remaining after controlling for core quality of life domains as well as other possible confounding variables. Furthermore, spiritual well-being was found to be related to the ability to enjoy life even in the midst of symptoms, making this domain a potentially important clinical target. Furthermore, peace was found to be the best predictor of ‘contentment with quality of life’, compared to other domains, further demonstrating the importance of the spiritual domain. Jafari, et al., (2013) also gave an indication of the place of spirituality in predicting quality of life and their findings also supported the findings of the research. There was a significant positive correlation between general QoL and total spiritual well-being scores. Also, spiritual wellbeing, social functioning, pain,

and arm symptoms were significant predictors of global QoL indicating that psychosocial–spiritual support should be considered in caring for patients with breast cancer. Visser, Garssen, and Vingerhoets (2009) confirmed the findings of the research by indicating that majority of the cross-sectional studies (31 of 36) found a positive association between spirituality and well-being which means that more spiritual involvement was associated with more wellbeing. Again, Peteet and Balboni (2013) study revealed that measures of spirituality and spiritual well-being correlate with quality of life in cancer patients, cancer survivors, and caregivers. Spiritual needs, reflective of existential concerns in several domains, are a source of significant distress, and care for these needs has been correlated with better psychological and spiritual adjustment as well as with less aggressive care at the end of life. This study also supported the findings of the research. McClain, Rosenfeld and Breitbart, (2003) indicated that depression did not influence patients’ desire for hastened death among palliative care patients who scored high on spirituality.

The fifth hypothesis (H₅) which states “anxiety, depression and spirituality will predict quality of life of prostate cancer patients” was tested with the Multiple Regression Analysis. Relevant information on this is presented in Table 10.

Standard Multiple Regression Analysis on Relationship between Anxiety, Depression, Spirituality and Quality of Life.

Table 8: *Model Summary (Anxiety, Depression, Spirituality and Quality of Life)*

Variables	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square change	F change	df1	df2	Sig F Change
Anxiety	.184	.034	-.017	25.959	.034	.667	1	19	.424
Depression	.135	.018	-.031	26.136	.018	.370	1	20	.550
Spirituality	.396	.157	.116	24.197	.157	3.899	1	21	.062

Table 9: *ANOVA Table (Anxiety, Depression, Spirituality and Quality of Life)*

Variables	Model	Sum of Squares	df	Mean Square	F	Sig
Anxiety	Regression	449.159	1	449.159	.667	.424
	Residual	12803.490	19	673.868		
	Total	13252.648	20			
Depression	Regression	253.001	1	253.001	.370	.550
	Residual	13662.280	20	683.114		
	Total	13915.281	21			
Spirituality	Regression	2282.594	1	2282.594	3.899	.062
	Residual	12295.319	21	585.491		
	Total	14577.913	22			

Table 10: *Coefficients (Anxiety, Depression, Spirituality and Quality of Life)*

PCa Patients (n=29)				
Variables	B	Beta	t	Sig
Quality of Life	-	-	-	-
Anxiety	-.569	-.184	-.816	.424
Depression	-.637	-.135	-.609	.550
Spirituality	1.715	.396	1.974	.062

* $p < .05$; ** $p < .01$. Source: Field survey (2016)

Results in Table 10 indicated that anxiety negatively correlates with the quality of life of prostate cancer patients [$t = -.816$, $p = .424$]. This means that patients with high anxiety levels have low quality of life. Also, anxiety controls 18.4 percent variations in quality of life of prostate cancer patients [$\text{Beta} = .184$]. Therefore, a unit change in anxiety could result in about 18.4 percent variation in the quality of life of prostate cancer patients. The table also shows that a negative correlation exists between depression and quality of life of prostate cancer patients [$t = -.609$, $p = .550$]. Therefore, 13.5 percent variability in quality of life of prostate cancer patients is determined by depression [$\text{Beta} = -.135$]. Therefore, a unit change in depression will result in 13.5 percent variability in quality of life. The findings of the analysis indicate that, spirituality had a positive correlation with quality of life of prostate cancer patients, though not significantly [$t = 1.974$, $p = .062$]. This implies that patients with higher spirituality will have better quality of life. Thus, spirituality controls for 39.6 percent of variability in quality of life of prostate cancer patients [$\text{Beta} = .396$]. Hence, a unit change in spirituality would result in 39.6 percent variability in quality of life. Therefore, spirituality was the highest predictor of quality of life among prostate cancer patients compared to anxiety. However, depression was the least predictor of quality of life of prostate cancer patients. This outcome may have been as a result of the place that spirituality has within the African context and for that matter the Ghanaian sociocultural environment where the power of a deity in averting or improving an unfortunate, discomfoting situation such as prostate cancer is well accepted and believed in. Spirituality enhances optimism and health related self-efficacy which is likely to positively improve quality of life. Personal prayer and the prayers of others provide

patients with comfort and peace and give them courage to release their anxieties and fears (Walton & Sullivan, 2004) and consequently help in enhancing quality of life. Due to the tendency for optimism to avert anxiety and to enhance positive health seeking behaviour which eventually will result in better quality of life, once spirituality is high among patients, given its capacity to provoke optimism, quality of life is likely to rise on account of spirituality. Therefore, the variability in quality of life with reference to spirituality is quite definite going by the findings of the research, given spirituality's positive influence in reducing anxiety and depressive symptoms and is confirmed by its high predictive value with respect to quality of life of prostate cancer patients compared to anxiety and depression according to the findings of the research. It will be prudent therefore, for clinicians to consider investigating components of a prostate cancer patient's spirituality and to select psychotherapeutic treatment models which could adequately enhance a patient's sense of spirituality while they consider exploring factors which may be provoking feelings of anxiety associated with the condition among patients.

Anxiety may have predicted variability in quality of life more than depression because of the uncertainties associated with the condition, coupled with its impact on functionality and the side effects of the treatment forms may. Qualitative investigation in a prostate cancer population showed that incontinence and loss of the erectile function had a strong impact on the men's sex life, intimacy and emotional well-being (Hedestig, Sandman, Tomic & Widmark, 2005). On the most part, it's quite difficult to say whether or not the prostate cancer condition may become worse or even develop into a metastatic cancer. Prostate Specific Antigen (PSA) levels which must periodically be

checked determines whether or not the condition is improving. Thus, a consistently high PSA indicates a worsening condition while a low PSA represents a normal or ideal state of the condition. A study by Roth et al. (2006) focused on aspects of anxiety specifically related to prostate cancer and found that anxiety related to PSA levels and fear of cancer recurrence. Anxiety was not associated with PSA levels, but was significantly associated with instability in PSA levels. This for many patients, makes them sit on the urge about the condition, as they possibly ran against the thought of how they would fund and support themselves when the undesired happens. Furthermore, for many patients, the fear that death is imminent as their functionality worsen and the symptoms become more distressful could escalate their anxiety level especially when they are bedeviled with many side effects amidst the thought of being a burden to their caregivers. Again, clinicians must consider assessing the anxiety levels of patients in order to know whether or not there will be need for treatment of anxiety since it also determines the course and outcome of their quality of life. Depression, however, was found to be the least predictor of variability in quality of life of prostate cancer patients. This must have been because most patients may not have had their condition worsened to the point of developing significant symptoms of clinical depression.

The feeling of helplessness when the symptoms multiply and become devastating coupled with the aches and pains of ageing could result in the development of depression. Hopwood and Stephens (2000) mentioned that since pain and physical disability become increasingly common in the terminal phases of cancer, together with the threat of impending loss and separation, depression is particularly common amongst palliative care patients (Casey,

1998). Also, the absence of a good social support and quality health care could make patients feel they are losing the fight against the illness and eventually be plunged into a depression. However, this research considered patients who were receiving out-patient treatment and therefore may have been less dependent on caregivers and must have had better social support which could serve as a strong buffer for enhancing quality of life while reducing clinical depression tendencies. In spite of this, depression showed its control over the variability of quality of life of prostate cancer patients and therefore requires equal clinical attention during treatment.

The sixth hypothesis (H₆) which states “age, educational level, income levels and duration of condition will predict quality of life of prostate cancer patients” was tested with the Multiple Regression Analysis. Relevant information on this is presented in Table 13.

Standard Multiple Regression Analysis on Relationship between Age, Educational Level, Income Level and Duration of the Condition and Quality of Life

Table 11: *Model Summary (Age, Education level, Income and Duration of condition and Quality of Life)*

Variables	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square change	F change	df1	df2	Sig F Change
Age	.191	.036	-.010	25.865	.036	.791	1	21	.384
Education level	.225	.051	.006	25.670	.051	1.122	1	21	.301
Income	.077	.006	-.041	26.269	.006	.125	1	21	.727
Duration of condition	.031	.001	-.055	26.434	.001	.017	1	18	.897

Table 12: ANOVA (Age, Educational level, Income and Duration of condition and Quality of Life)

Variables	Model	Sum of Squares	df	Mean Square	F	Sig
Age	Regression	529.204	1	529.204	.791	.384
	Residual	14048.709	21	668.968		
	Total	14577.913	22			
Education level	Regression	739.520	1	739.520	1.122	.301
	Residual	13838.393	21	658.971		
	Total	14577.913	22			
Income Level	Regression	86.327	1	86.327	.125	.727
	Residual	14491.586	21	690.076		
	Total	14577.913	22			
Duration of Condition	Regression	12.007	1	12.007	.017	.897
	Residual	12578.009	18	698.778		
	Total	12590.016	19			

Table 13: Coefficients (Age, Education level, Income, Duration of condition and Quality of Life)

PCa Patients (n=29)				
Variables	B	Beta	t	Sig
Quality of Life	-	-	-	-
Age	-5.725	-.191	-.889	.384
Educational level	-4.277	-.225	-1.059	.301
Income	1.300	.077	.354	.727
Duration	-.566	-.031	-.131	.897

* $p < .05$; ** $p < .01$. Source: Field survey (2016)

Results from Table 13 indicates that there is an insignificant negative correlation between age and quality of life [$t = -.889$, $p = .384$]. This means that

as patients with prostate cancer age, they experience lower quality of life. Age, however controls for 19.1 percent of variability in quality of life of prostate cancer patients [Beta= -.191]. This implies that, as patients age each year, they are likely to experience a variability in their quality of life by 19.1 percent. This might be because, in spite of the difficulties associated with prostate cancer, the challenges associated with ageing could worsen a patient's experiences pertaining to the condition and therefore result in a fall in quality of life as the years go by. As the patient ages, their physical strength begins to fall and this is likely to affect functionality to a great extent. However, patients who have very strong social supports are more likely to experience better quality of life even as they age. Ageing persons more frequently interact with their families, especially their spouses (Steverink et al., 2001). Their quality of life may therefore be closely related to how well they maintain those close relationships. Demands of cancer, treatment-related side effects, and age-related chronic health problems (Harden, 2005) limit couples' physical interactions and leisure activities. In the event that these demands high, quality of life is likely to fall as prostate cancer patients age.

Results further indicate that educational level has an insignificant negative correlation with quality of life [$t = -1.059$, $p = .301$]. This means that patients with higher education level will have lower quality of life. Also, educational level controls 22.5 percent variations in quality of life of prostate cancer patients [Beta = -.225]. This implies that, an advancement in education is likely to result in 22.5 percent variability in quality of life of prostate cancer patients. This is likely to be because, most educated patients are likely to feel more distressed by the condition especially when it affects their daily activities. Given, the

tendency for the more educated class of patients to be in active service serving as consultants or experts in specific areas, even after they have been pensioned, they are more likely to feel discomforted by the pain, frequent urination and a lack of energy associated with the condition compared to the less educated ones. Also, most educated patients are likely to read more about the condition and once they chance on its numerous and untreatable symptoms, they are likely to get more anxious than they would have which would eventually lead to a fall in their quality of life. On the contrary, patients with low educational status may experience a fall in quality of life in the event that they are unable to understand their condition and therefore be able to help themselves even as they receive treatment. On the most part, the less educated are more likely to fall prey to all manner of treatment methods which are likely to aggravate their condition in their quest for treatment. Again, they may be less knowledgeable about other treatment methods they could sought to help augment their treatment and hence positively affect their quality of life. Song et al (2011) mentioned in confirmation of the findings of their research that, better patients' quality of life was associated with less education. However, Knight et al. (2007) mentioned that patients with lower levels of education tended to be younger, nonwhite, and have lower incomes. Men with less formal education, compared with those with more, had worse functioning in the physical, role physical, role emotional, vitality, mental health, social function, and general health domains and worse urinary and sexual side effects after age, ethnicity, income, year of diagnosis, and site were controlled.

Income correlates positively with quality of life [$t = .354, p = .727$]. This means that quality of life will be high for prostate cancer patients who have high

income. Furthermore, income controls 7.7 percent variations in quality of life of prostate cancer patients [Beta = .077]. This implies that for every unit increase in income, there is likely to be about 7.7 percent variation in the quality of life of prostate cancer patients. Hence, patients who receive some periodic remuneration are likely to show more positive symptoms of quality of life. This amplifies the need for a good pension scheme which would relieve patients of the burden associated with seeking quality comprehensive treatment and also anxiety associated with obtaining funds to purchase medications. Social support which is financially rewarding could also help patients' survival by enhancing their quality of life. Several studies reported associations between baseline income and patients' QoL at baseline and over time (Penson et al., 2001). According to Song et al, (2011) higher family income predicted better QoL in both patients and partners. Financial concerns are prevalent among cancer patients and family members (Devins, Bezjak, Mah, Loblaw & Gotowiec, 2006). More income allows couples to afford materials and human resources to better manage cancer and caregiving and thus gives couples a sense of security that reduces stress and improves QoL.

How long a patient has had the condition, thus duration of the condition, was found to have a negative correlation with quality of life of prostate cancer patients. [t= -.131, p= .897]. This means that the longer the patient's condition, the lower the patient's quality of life. It was found that patient's quality of life would experience a variability of 3.1 percent in terms of the duration of the condition [Beta= -.031]. Thus, for every yearly persistence in the condition, quality of life is likely to experience a variability of about 3.1 percent. This is likely to be because of the discomfort that comes with the condition such as

persistent pain and challenges in urination, coupled with the side effects of medical treatments such as erectile dysfunction for patients undergoing chemotherapy. Also, the lack of energy associated with aging and the experience of musculoskeletal stiffness and pain associated could compound patient's anxiety in relation with their health as the years go by and eventually negatively influence patient's quality of life. Therefore, of the four demographic characteristics analyzed, it was found that variability on quality of life of prostate cancer patients was highly predicted by the patient's education status. Also, age was found to predict patient's quality of life, in that, the older a patient gets, the lower their quality of life. Income was more predictive of quality of life among prostate cancer patients than duration of condition was. Educational level may control quality of life more than age because, the possibility for the literate community of prostate cancer patients to read themselves into anxiety is high; given the fact that, they may be more research oriented and therefore, will be tempted to read more on the condition. If the information they chance on is encouraging and propels them into optimism associated with the possible outcome of the condition, patients are likely to have a positive spurt in their quality of life. However, they are more likely to plunge into pessimism, which is likely to reduce their quality of life drastically once the information they chance on is discouraging and predicts a possibly negative outcome.

Again, patient's age may have predicted variability more after educational level because, the challenges associated with aging, coupled with the negative experiences associated with the condition could be overwhelming. Hence, as patients age, difficulty in functionality, a lack of energy and hormonal changes which influence emotional and physical changes is likely to affect the

overall quality of life of patients. The challenges associated with prostate cancer as a condition such as lack of energy, feeling of nausea, urinary incontinence and erectile dysfunction among others may double patients' difficulty and eventually influence their quality of life more than the duration of the condition after diagnosis as well as income. Duration of condition may not influence quality of life as educational level and age does as has been found in this research because, as patients receive quality comprehensive care, the tendency for the condition to remain stable increases and will therefore not affect quality of life that much. This finding may have been due to the fact that, patients' condition had not reached an advanced stage, as they were receiving consistent, quality, less sophisticated out-patient treatment and the fact that their cancers were localized and therefore not evasive. Against this backdrop, duration of the cancer seems to be significant but not more than income. Income predicts more variability in quality of life compared to duration of the condition due to the subsidized treatment most patients receive due to their positions as former staff of the University of Ghana which has oversight responsibility over the hospital as well as the possibility of receiving some form of financial support from their children and close kinsmen including friends. Therefore, the burden that comes with seeking quality treatment with respect to income may not have been as high as to influence patients' quality of life variability compared to educational level and age.

Hence, elderly men must be given comprehensive treatment and adequate support the best way they could be helped while those who have had the condition for years be given adequate medical and psychological attention so their condition will be more stable over the years.

A study by Song et al (2011) titled assessing longitudinal quality of life in prostate cancer patients and their spouses aimed at examining the relationship between quality of life (QoL) in prostate cancer (PCa) patients and partners and how baseline demographics, cancer-related factors, and time varying psychosocial and symptom covariates affect their QoL over time. Findings of the study indicated that, patients' lower education level, partners' older age, higher family income, and localized cancer at baseline were associated with better QoL. Though findings of this study with respect to education level is contrary to findings to this research, the place of education in predicting quality of life of prostate cancer patients cannot be overemphasized. However, this study confirmed that income indeed predicted quality of life of prostate cancer patients and hence were vital in the management and treatment of prostate cancer patients.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter recaptures the study problem and the hypotheses it sought to test as well as the methodology followed. The theoretical basis on which this research was done was summarized. Based on the findings of the research, recommendations and conclusions were drawn to bring the study to its finality.

Summary

This research is significant especially at this time when the prevalence rate of prostate cancer among men in their middle to late adulthood in Ghana and across the world is high. If 750 men die due to the condition and as much as 930 are susceptible to it, according to Asante (2015), then the earlier the quality of life of those living with the condition is assessed and treatment augmented in order to improve their quality of life, the better. Since quality of life is a determinant of advancement and motility. For instance, Zaza and Baine, (2002) mentioned that cancer pain is often associated with high levels of psychological distress, including higher levels of depression, anxiety, fear, and negative mood. Moreover, the progression of cancer among patients could be determined by the persistence of pain experienced by the patients and this could culminate in a feeling of hopelessness, since patients may begin to think that their lives are not worth continuing (Tavoli, Montazeri, Roshan, Tavoli & Melyani, 2008). Obviously the need to investigate the psychological implications of the condition cannot be overemphasized giving the literature

available which brings to the fore the challenges that those with the condition have to endure even under the most sophisticated medical treatment.

The relevance of this research was provoked by a hypothetical eye-opening question which is that, given all the treatments available, could it be that prostate cancer patients' survival and wellbeing may have a psychological basis and if that is true, then which psychopathology could be associated with the quality of life of the patients, whether positively or negatively? Once this question is answered in affirmation of the hypothesis through empirical study, patients may benefit from a compensatory treatment model by way of psychotherapy which they hitherto may have not been exposed to. Again, health policies associated with the prevention, management and treatment of prostate cancer will have a new perspective to ensuring patients' wellbeing.

In order to answer the question, the following hypotheses were formulated and investigated:

H₁: There will be a significant difference in the quality of life of patients as regard their respective income levels.

H₂: There will be a negative correlation between anxiety and quality of life of prostate cancer patients.

H₃: There will be a negative correlation between depression and quality of life of prostate cancer patients.

H₄: There will be a positive correlation between spirituality and quality of life of prostate cancer patients.

H₅: Anxiety, depression and spirituality will predict quality of life of prostate cancer patients.

H₆: Age, educational level, income level and duration of condition will predict quality of life of prostate cancer patients.

The study was underpinned by the Agentic Perspective of the Social Learning Theory propounded by Bandura (2001). The capacity to exercise control over the nature and quality of one's life is the essence of humanness. Human agency is characterized by a number of core features that operate through phenomenal and functional consciousness. These include the temporal extension of agency through intentionality and forethought, self-regulation by self-reactive influence, and self-reflectiveness about one's capabilities, quality of functioning, and the meaning and purpose of one's life pursuits (Bandura, 2001).

According to Bandura (2001), when the quality of a person's life and their nature lies in their domain and influence, their sense of meaning as humans is enhanced. Furthermore, a person's capacity to exercise control over their life is referred to as agency and this is framed within their consciousness and played out in their ability to intentionally think and act in a manner that causes them to regulate their lives, influence their environment and to consciously reflect on the capabilities and its impact on the quality of their functioning, the meaning and purpose of their life's pursuit. Once they are able to do these, then their quality of life will take a positive spurt and an inability to do so will result in a negative quality of life. In the case of this research, prostate cancer patients whose agency has not been deteriorated by depression, anxiety, poor social support or a lack of spirituality are expected to have better quality of life.

City of Hope Quality of Life Model

This model illustrated the influence of pain on the dimension of quality of life. The model supports that quality of life has four dimensions: physical well-being and symptoms, psychological well-being, social well-being and spiritual well-being.

This model espouses the various domains of quality of life that cancer patients experience and which aspects of their lives and wellbeing may be influenced by the condition. These domains of wellbeing give an impression of which areas of the patients' lives must be focused on in terms of assessing, providing management and treatment for the condition. Again, the model puts in perspective, the impact that pain associated with the condition has on these domains of quality of life with its consequent symptoms.

Restorative Model of Wellbeing

The restorative model assumes that the process through which people typically maintain their sense of well-being may become destabilized when they are confronted by problematic external events (e.g., health threats) or internal states (e.g., mood states, existential questions).

The emergence of problematic events ushers in a coping process that involves appraisal of the threats to one's health and utilization of coping strategies (e.g., problem-focused and emotion-focused coping, meaning making, shifts in life goals and roles) to protect and optimize one's wellbeing in the face of health threats.

This model explains that, wellbeing is destabilized when a person experiences a problematic situation, in this case prostate cancer. However, the patients' capacity to cope using one or both of the model's styles of coping

determines whether not wellbeing will be enhanced or not. Problem focused coping, emotion focused coping, meaning making and shifts in life goals, once these are duly employed, will enhance quality of life of prostate cancer patients. Hence, the need for prostate cancer patients to be helped through psychotherapy to enable improve their quality of life.

Summary of Significant Findings

This aspect of the research summarises the significant findings in consonance with the five hypothesis earlier outlined.

H₁: There will be a significant difference in the quality of life of patients as regard their respective income levels.

The research found out that there was no significant difference in the quality of life of prostate cancer patients with respect to their respective income levels contrary to the hypothesis.

H₂: There will be a negative correlation between anxiety and quality of life of prostate cancer patients.

This hypothesis was confirmed by the findings of the research which indicated that there was a negative relationship between anxiety and quality of life of prostate cancer patients such that once a patient began showing symptoms of anxiety, it should be expected that there will be a corresponding decline in their quality of life. More so, once anxiety symptoms go untreated, though the patient may be receiving medical treatment, their quality of life will continue to decline. This finding has also been supported by a number of empirical studies as well.

H₃: There will be a negative correlation between depression and quality of life of prostate cancer patients.

The research found a negative correlation between depression and quality of life of prostate cancer patients just as was hypothesized. Empirical evidence showed that depression among prostate cancer patients is a predictor of low quality of life just as was confirmed by the findings of the research. Therefore, prostate cancer patients with high depression are likely to have significantly low quality of life while those with little or no depressive symptoms are likely to have high quality of life.

H₄: There will be a positive correlation between spirituality and quality of life of prostate cancer patients.

Findings of the research indicate that, there indeed exist a positive relationship between the level of spirituality of prostate cancer patients and their quality of life. This finding confirmed the postulated hypothesis and was supported by other empirical studies. Therefore, patients' spirituality is significant in determining the outcome of their quality of life. The higher their spirituality or spiritual wellbeing, the better their quality of life.

H₅: Relationship between Anxiety, Depression, Spirituality and Quality of Life of Prostate Cancer Patients.

Findings of the research indicate that anxiety influenced variability in quality of life of prostate cancer patients by 18.4 percent. Depression influenced variability in quality of life of prostate cancer patients by 13.5 percent while spirituality did same by 39.6 percent. Therefore, spirituality and anxiety play quite an enormous role in determining predictively, a patients' quality of life. Anxiety also influenced quality of life among patients and more significantly than depression but not spirituality. Therefore, patients' level of spirituality and anxiety must be given a keener look at compared to depression, going by the

findings of the research due to the extent to which they dictate the variability in a patient's quality of life. Hence, in order to ascertain the variability in quality of life in the face of anxiety, depression and spirituality, a patient's sense of spirituality must be primarily considered before their anxiety levels, then their depression levels.

H₆: Relationship between Age, Educational Level, Income Level and Duration of Condition and Quality of Life of Prostate Cancer Patients.

The research found that with respect to age, the variability in quality of life of prostate cancer patients is 19.1 percent while educational level influenced variability in quality of life of prostate cancer patients by 22.5 percent. Income influenced variability in quality of life of prostate cancer patients by 7.7 percent while duration of condition influenced variability in quality of life of prostate cancer patients by 3.1 percent. Therefore, educational level has quite an enormous predictive significance on patients' quality of life. Income also influenced quality of life among patients but not as significantly as age. Therefore, it is expected that patients' educational level predict more of the differences in the quality of their lives than age is, going by the findings. However, age also happens to be more predictive of the differences in quality of life of prostate cancer patients than income. However, income predicted more variability in quality of life of patients than the duration of condition. Hence, in considering how varied patients are or may be in the extent of the quality of their lives, their educational levels must be considered first.

Conclusion

The research was conducted based on the problem identified and the hypotheses formulated in a methodological manner. It was primarily hinged on

three theoretical perspectives; Bandura's (2001) social learning theory from an agentic perspective which gave an insight into human agency and its significance in determining the nature and quality of one's life. The city of hope quality of life model (Lavdaniti and Tsitsis, 2015) illustrated the influence of pain on the dimension of quality of life. The model supports that quality of life has four dimensions: physical well-being and symptoms, psychological well-being, social well-being and spiritual well-being. Also the restorative model (Hoffman, Lent, and Raque-Bogdan, 2013) of well-being holds that the process through which people typically maintain their sense of well-being may become destabilized when they are confronted by problematic external events such as health threats or internal states such as mood states and existential questions.

Furthermore, the aim of the research was to find out how the quality of life of prostate cancer patients could be influenced by specific psychological variables. It was found that patients' income discrepancies had no significant influence on their quality of life. Anxiety had a negative relationship with patient's quality of life. Depression also had a negative relationship with the quality of life of prostate cancer patients. Spirituality correlated positively but not significantly with quality of life prostate cancer patients. Among, anxiety, depression and spirituality; spirituality was the highest predictor of variations in quality of life of prostate cancer patients followed by anxiety and then depression.

Furthermore, educational level was the highest predictor of variability in patients' quality of life, then age before income and then duration of condition after diagnosis when these three variables were measured in the light of the quality of life of prostate cancer patients. Going by the findings, patients'

psychological wellbeing is significant in determining the quality of their lives. Moreover, patients' spirituality and educational level must be well considered and explored in the face of treatment seeking after diagnosis since they are the highest predictors of variability in quality of life of prostate cancer patients. However, duration of the condition after diagnosis as well as income levels were the lowest predictors of variability in quality of life of patients.

Recommendations

Findings of the research and its conclusion provide an appropriate basis on which significant recommendations could be hanged including the most relevant insight for policy makers as they formulate policies that are geared toward the provision of quality health care for prostate cancer patients. Again, recommendations are tailored to be beneficial to regulatory bodies within the health sector as well as all health workers especially in the area of oncology and to patients with prostate cancer condition.

Prostate cancer patients are challenged in many ways primarily because majority of them are aged, on pension and secondarily because the condition comes with it peculiar difficulties such as chronic pain, urinary incontinence and erectile dysfunction to name a few. Hence the need for a comprehensive approach to treatment that will enhance the quality of life of prostate cancer patients.

The study therefore makes the following recommendations:

1. Health care policy makers must include in their policies, the need for frequent awareness creation and education on the condition, especially among men who are approaching middle age. This is because majority of the people diagnosed with the condition fall within this age bracket

and usually seem naïve about it so much that it creates a feeling of anxiety which could eventually affect their quality of life. Hence the need for awareness of the condition with all the necessary information and resources (educational materials and funds) to help in an effective awareness creation exercise.

2. The Ghana Health Service through health facilities must partner other agencies to provide periodic free prostate screening for the public especially in rural areas and also among the less privileged communities. This will ensure early detection of the condition whether as a cancer or benign prostate hyperplasia and prompt management of the condition. By so doing many complications will be avoided and patients' quality of life will be enhanced while cost of treatment will be reduced to the lowest minimum.
3. Funding should be allocated for research into the prostate cancer condition especially in Ghana, giving the prevalence rate of the condition among blacks and for that matter Ghanaian men as well as the rate of mortality associated with the condition. This will help reduce the rate of morbidity and mortality. Some of those who suffer the condition also fall within the most experienced category of the citizenry who could have served in various capacities per their training and area of expertise. Again, through research, the cause of the condition may be found and situations or behaviours which trigger its occurrence as well as things to be done which could improve the present treatment and enhance quality of life may be discovered.

4. More professionals such as clinical health psychologists, medical doctors and nurses who desire to specialize in the area of oncology should be sponsored to train in that area.
5. A well-equipped specialised unit for the treatment of prostate cancer and other oncology conditions must be set up in all regional and district hospitals across the nation with the right human capacity to man these facilities. These centres if well managed, could also serve as research centres for oncology research and specialist training centres for those who desire to specialize in oncology. By so doing, funds could be generated from the facility and channeled into augmenting treatment cost of patients and furthering research.
6. The national health insurance policy as well as private life insurance policies should consider providing life insurance products pertaining to quite prevalent, chronic medical and psychological conditions. This will help reduce any financial burden associated with the condition which is likely to arise in many men. Given the fact that, the absence of any form of financial security could influence the development of anxiety associated with the condition which will eventually result in lower quality of life of the patients.

Suggestions for Further Research

1. Future research should consider a much sizeable sample in order for generalizability to be enhanced given the prevalence of the condition among men from all walks of life and its relevance to predicting the outcome of patients who suffer it. How significant a

psychological component has on patients' quality of life cannot be clearly and strongly ascertained without this.

2. Future studies should focus on patients receiving in-patient treatment due to the condition since that will bring to the fore the psychosocial nuances associated with in-patient treatment and its impact on the quality of life of prostate cancer patients. The possibility that patient receiving in-patient treatment may be suffering an advanced stage condition or a comorbid is high and the impact of these states could be well appreciated after such a study.
3. Any researcher who would want to attempt any study pertaining to quality of life of prostate cancer patients from a psychological perspective should also factor in the various stages patients may be in and how each stage influences their quality of life. This will help know when patients suffering from the condition require intensive treatment. This aspect of their psychological wellbeing must be focused on in order to enhance their quality of life at each stage of the condition.
4. Prostate cancer patients receiving varied forms of treatment be investigated in future studies in order to provide insight into the influence that the various forms of treatment especially, prostatectomy, radiotherapy and chemotherapy individually has on quality of life and the extent to which each one of them does. This will help clinical health psychologists to structure and tailor their treatments towards alleviating the challenges that come with specific medical treatments patients may be receiving in order to better enhance their quality of life.

5. Future studies could consider a longitudinal research which will help in determining how various treatment methods and cancer progression over a period of time may affect the quality of life of prostate cancer patients. This will facilitate clinicians' prognosis and enable them to identify the best treatment, medical, psychological and social support system to help in the management of the condition.

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APPENDICES

APPENDIX A

RESEARCH QUESTIONNAIRES

FACIT-Sp-12 (Version 4)

Below is a list of statements that other people with your illness have said are important. Please circle or mark one number per line to indicate your response as it applies to the past 7 days.

	Not at all	A little bit	Some-what	Quite a bit	Very much
Sp1 I feel peaceful.....	0	1	2	3	4
Sp2 I have a reason for living.....	0	1	2	3	4
Sp3 My life has been productive.....	0	1	2	3	4
Sp4 I have trouble feeling peace of mind.....	0	1	2	3	4
Sp5 I feel a sense of purpose in my life.....	0	1	2	3	4
Sp6 I am able to reach down deep into myself for comfort.....	0	1	2	3	4
Sp7 I feel a sense of harmony within myself.....	0	1	2	3	4
Sp8 My life lacks meaning and purpose.....	0	1	2	3	4
Sp9 I find comfort in my faith or spiritual beliefs.....	0	1	2	3	4
Sp10 I find strength in my faith or spiritual beliefs.....	0	1	2	3	4
Sp11 My illness has strengthened my faith or spiritual beliefs....	0	1	2	3	4
Sp12 I know that whatever happens with my illness, things will be okay.....	0	1	2	3	4

Beck's Depression Inventory

This depression inventory can be self-scored. The scoring scale is at the end of the questionnaire.

1.
 - 0 I do not feel sad.
 - 1 I feel sad
 - 2 I am sad all the time and I can't snap out of it.
 - 3 I am so sad and unhappy that I can't stand it.
2.
 - 0 I am not particularly discouraged about the future.
 - 1 I feel discouraged about the future.
 - 2 I feel I have nothing to look forward to.
 - 3 I feel the future is hopeless and that things cannot improve.
3.
 - 0 I do not feel like a failure.
 - 1 I feel I have failed more than the average person.
 - 2 As I look back on my life, all I can see is a lot of failures.
 - 3 I feel I am a complete failure as a person.
4.
 - 0 I get as much satisfaction out of things as I used to.
 - 1 I don't enjoy things the way I used to.
 - 2 I don't get real satisfaction out of anything anymore.
 - 3 I am dissatisfied or bored with everything.
5.
 - 0 I don't feel particularly guilty
 - 1 I feel guilty a good part of the time.
 - 2 I feel quite guilty most of the time.
 - 3 I feel guilty all of the time.
6.
 - 0 I don't feel I am being punished.
 - 1 I feel I may be punished.
 - 2 I expect to be punished.
 - 3 I feel I am being punished.
7.
 - 0 I don't feel disappointed in myself.
 - 1 I am disappointed in myself.
 - 2 I am disgusted with myself.
 - 3 I hate myself.
8.
 - 0 I don't feel I am any worse than anybody else.
 - 1 I am critical of myself for my weaknesses or mistakes.
 - 2 I blame myself all the time for my faults.
 - 3 I blame myself for everything bad that happens.
9.
 - 0 I don't have any thoughts of killing myself.
 - 1 I have thoughts of killing myself, but I would not carry them out.
 - 2 I would like to kill myself.
 - 3 I would kill myself if I had the chance.
10.
 - 0 I don't cry any more than usual.
 - 1 I cry more now than I used to.
 - 2 I cry all the time now.
 - 3 I used to be able to cry, but now I can't cry even though I want to.

11. 0 I am no more irritated by things than I ever was.
1 I am slightly more irritated now than usual.
2 I am quite annoyed or irritated a good deal of the time.
3 I feel irritated all the time.
12. 0 I have not lost interest in other people.
1 I am less interested in other people than I used to be.
2 I have lost most of my interest in other people.
3 I have lost all of my interest in other people.
13. 0 I make decisions about as well as I ever could.
1 I put off making decisions more than I used to.
2 I have greater difficulty in making decisions more than I used to.
3 I can't make decisions at all anymore.
14. 0 I don't feel that I look any worse than I used to.
1 I am worried that I am looking old or unattractive.
2 I feel there are permanent changes in my appearance that make me look unattractive.
3 I believe that I look ugly.
15. 0 I can work about as well as before.
1 It takes an extra effort to get started at doing something.
2 I have to push myself very hard to do anything.
3 I can't do any work at all.
16. 0 I can sleep as well as usual.
1 I don't sleep as well as I used to.
2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
3 I wake up several hours earlier than I used to and cannot get back to sleep.
17. 0 I don't get more tired than usual.
1 I get tired more easily than I used to.
2 I get tired from doing almost anything.
3 I am too tired to do anything.
18. 0 My appetite is no worse than usual.
1 My appetite is not as good as it used to be.
2 My appetite is much worse now.
3 I have no appetite at all anymore.
19. 0 I haven't lost much weight, if any, lately.
1 I have lost more than five pounds.
2 I have lost more than ten pounds.
3 I have lost more than fifteen pounds.

- 20.
- 0 I am no more worried about my health than usual.
 - 1 I am worried about physical problems like aches, pains, upset stomach, or constipation.
 - 2 I am very worried about physical problems and it's hard to think of much else.
 - 3 I am so worried about my physical problems that I cannot think of anything else.
- 21.
- 0 I have not noticed any recent change in my interest in sex.
 - 1 I am less interested in sex than I used to be.
 - 2 I have almost no interest in sex.
 - 3 I have lost interest in sex completely.

INTERPRETING THE BECK DEPRESSION INVENTORY

Now that you have completed the questionnaire, add up the score for each of the twenty-one questions by counting the number to the right of each question you marked. The highest possible total for the whole test would be sixty-three. This would mean you circled number three on all twenty-one questions. Since the lowest possible score for each question is zero, the lowest possible score for the test would be zero. This would mean you circled zero on each question. You can evaluate your depression according to the Table below.

Total Score _____ Levels of Depression

1-10	_____	These ups and downs are considered normal
11-16	_____	Mild mood disturbance
17-20	_____	Borderline clinical depression
21-30	_____	Moderate depression
31-40	_____	Severe depression
over 40	_____	Extreme depression

Beck Anxiety Inventory

Below is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by that symptom during the past month, including today, by ticking the space in the column next to each symptom.

	Not At All	Mildly but it didn't bother me much.	Moderately - it wasn't pleasant at times	Severely - it bothered me a lot
Numbness or tingling				
Feeling hot				
Wobbliness in legs				
Unable to relax				
Fear of worst happening				
Dizzy or lightheaded				
Heart pounding/racing				
Unsteady				
Terrified or afraid				
Nervous				
Feeling of choking				
Hands trembling				
Shaky / unsteady				
Fear of losing control				
Difficulty in breathing				
Fear of dying				
Scared				
Indigestion				
Faint / lightheaded				
Face flushed				
Hot/cold sweats				

FACT-P (Version 4)

Below is a list of statements that other people with your illness have said are important. Please circle or mark one number per line to indicate your response as it applies to the past 7 days.

<u>PHYSICAL WELL-BEING</u>		Not at all	A little bit	Somewhat	Quite a bit	Very much
GP1	I have a lack of energy	0	1	2	3	4
GP2	I have nausea	0	1	2	3	4
GP3	Because of my physical condition, I have trouble meeting the needs of my family	0	1	2	3	4
GP4	I have pain	0	1	2	3	4
GP5	I am bothered by side effects of treatment	0	1	2	3	4
GP6	I feel ill	0	1	2	3	4
GP7	I am forced to spend time in bed	0	1	2	3	4

<u>SOCIAL/FAMILY WELL-BEING</u>		Not at all	A little bit	Somewhat	Quite a bit	Very much
GS1	I feel close to my friends	0	1	2	3	4
GS2	I get emotional support from my family	0	1	2	3	4
GS3	I get support from my friends	0	1	2	3	4
GS4	My family has accepted my illness	0	1	2	3	4
GS5	I am satisfied with family communication about my illness	0	1	2	3	4
GS6	I feel close to my partner (or the person who is my main support)	0	1	2	3	4
Q1	<i>Regardless of your current level of sexual activity, please answer the following question. If you prefer not to answer it, please mark this box <input type="checkbox"/> and go to the next section.</i>					
GS7	I am satisfied with my sex life	0	1	2	3	4

FACT-P (Version 4)

Please circle or mark one number per line to indicate your response as it applies to the past 7 days.

<u>EMOTIONAL WELL-BEING</u>		Not at all	A little bit	Somewhat	Quite a bit	Very much
GE1	I feel sad	0	1	2	3	4
GE2	I am satisfied with how I am coping with my illness.....	0	1	2	3	4
GE3	I am losing hope in the fight against my illness.....	0	1	2	3	4
GE4	I feel nervous.....	0	1	2	3	4
GE5	I worry about dying.....	0	1	2	3	4
GE6	I worry that my condition will get worse.....	0	1	2	3	4

<u>FUNCTIONAL WELL-BEING</u>		Not at all	A little bit	Somewhat	Quite a bit	Very much
GF1	I am able to work (include work at home).....	0	1	2	3	4
GF2	My work (include work at home) is fulfilling.....	0	1	2	3	4
GF3	I am able to enjoy life.....	0	1	2	3	4
GF4	I have accepted my illness.....	0	1	2	3	4
GF5	I am sleeping well	0	1	2	3	4
GF6	I am enjoying the things I usually do for fun	0	1	2	3	4
GF7	I am content with the quality of my life right now.....	0	1	2	3	4

FACT-P (Version 4)

Please circle or mark one number per line to indicate your response as it applies to the past 7 days.

<u>ADDITIONAL CONCERNS</u>		Not at all	A little bit	Some-what	Quite a bit	Very much
C2	I am losing weight.....	0	1	2	3	4
C6	I have a good appetite	0	1	2	3	4
P1	I have aches and pains that bother me.....	0	1	2	3	4
P2	I have certain parts of my body where I experience pain....	0	1	2	3	4
P3	My pain keeps me from doing things I want to do	0	1	2	3	4
P4	I am satisfied with my present comfort level.....	0	1	2	3	4
P5	I am able to feel like a man	0	1	2	3	4
P6	I have trouble moving my bowels	0	1	2	3	4
P7	I have difficulty urinating.....	0	1	2	3	4
BL2	I urinate more frequently than usual	0	1	2	3	4
P8	My problems with urinating limit my activities.....	0	1	2	3	4
BL5	I am able to have and maintain an erection.....	0	1	2	3	4

APPENDIX B

INTRODUCTORY LETTER

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
DEPARTMENT OF EDUCATIONAL FOUNDATIONS

Telephone: 32440/4 & 32480/3 Direct: 03321 36037

TELEX: 2552, UCC, GH

Telegrams & Cables: University, Cape Coast

Our Ref:

University Post Office
Cape Coast, Ghana



Your Ref:

23/11/15

THESIS WORK

Letter of Introduction

We introduce to you Mr. /Mrs. /Miss Paul Asiedu Kumi a student from the University of Cape Coast, Department of Educational Foundations. He/ She is pursuing Doctorate/Master of Philosophy degree in Clinical Health Psychology

As part of his/her requirements, he/she is expected to work on a thesis titled:

Effect of Optimism, absorption, depression and spirituality on quality of life of prostate cancer patients in Ghana.

He/ She has opted to make a study at your institution/establishment for the project. We would be most grateful if you could provide the opportunity for the study. Any information provided will be treated as strictly confidential.

Thank you.

(Georgina Nyantakyi Waa Thompson)
for: HEAD

APPENDIX C

ETHICAL REVIEW BOARD CLEARANCE LETTER

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
ETHICAL REVIEW BOARD



UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref: CES-ERB/CR/1072/014

Your Ref:

Date: 01.03.2016

Director of Medical Services
Legon Hospital
Accra.

Chairman, CES-ERB
Prof. J. A. Omotosho
jomotosho@ucc.edu.gh
0243784739

Dear Sir/Madam,

**ETHICAL REQUIREMENTS CLEARANCE FOR RESEARCH
STUDY**

Vice-Chairman, CES-ERB
Prof. K. Edjah
kedjah@ucc.edu.gh
0244742357

The bearer, Paul Asiedu Kumi..... Reg. No ED/CH/PH/11/0011 is an M.Phil/Ph.D student in the Department of Educational Foundations..... College of Education Studies, University of Cape Coast, Cape Coast, Ghana. He/She wishes to undertake a research study on the topic Impact of Optimism, Absorption, Depression, Anxiety and Spirituality on the Quality of life of Prostate Cancer Patients

Secretary, CES-ERB
Dr. (Mrs.) L. D. Forde
lforde@ucc.edu.gh
0244786680

The Ethical Review Board (ERB) of the College of Education Studies (CES) has assessed the proposal submitted by the bearer. The said proposal satisfies the College's ethical requirements for the conduct of the study.

In view of the above, the researcher has been cleared and given approval to commence his/her study. The ERB would be grateful if you would give him/her the necessary assistance that may be needed to facilitate the conduct of the said research.

Thank you.
Yours sincerely,

Dr. (Mrs.) Linda Dzama Forde
(Secretary, CES-ERB)

APPENDIX D

LEGON HOSPITAL ACCEPTANCE LETTER

**UNIVERSITY HOSPITAL
UNIVERSITY OF GHANA**

Telephone: (0)30 7030184 (0)302 513890 / 513891 / 513834 / 500052
Fax: (0)302 500052



P. O. Box LG 79
LEGON, GHANA

Our Ref No.:.....UHL/ER.1.....

Telegram & Cables: UNIVERSITY OF GHANA

Your Ref No. **CES-ERB/CR/VOL**.....

E-mail: ughosp@ug.edu.gh

24th March, 2016

**DR. (MRS) LINNDA DZAMA FORDE
SECRETARY, CES-ERB
ETHICAL REVIEW BOARD
COLLEGE OF EDUCATION STUDIES
UNIVERSITY OF CAPE COAST**

Dear Madam,

RE: ETHICAL REQUIREMENTS CLEARANCE FOR RESEARCH STUDY

Reference to your letter dated 1st March, 2016 on the above, approval will be given to you to work with the University of Ghana Hospital subject to the following:

1. Your willingness to work in collaboration with the Research Unit of the University Health Services/University Hospital.
2. The Institution should be informed should there be any change in protocol in the course of the research for which ethical review/clearance is obtained.
3. A Copy of the research findings should be submitted to the Director's Office of the University Hospital, Legon.

Thank you.

Yours faithfully,

**(DR. C.K. AMENUVEVE)
DIRECTOR
UNIVERSITY HEALTH SERVICES**

APPENDIX E

INFORMATION SHEET FOR PARTICIPANTS

Participant Information Leaflet

Title of Research:

Impact of Depression, Anxiety and Spirituality on Quality of Life of Prostate Cancer patients.

Name(s) and affiliation(s) of researcher(s):

This study is being conducted by Paul Asiedu Kumi of University of Cape Coast, Cape Coast.

Background (Please explain simply and briefly what the study is about):

This study is being conducted to unearth the emotional and psychological challenges that prostate cancer patients endure and how these challenges may be influencing their quality of life. Given the evidence that a patient's emotional and psychological well-being influences the quality of life of prostate cancer patients which is also a predictor of patient survivorship, the researcher considers it prudent to ascertain the veracity of these evidence among Ghanaian prostate cancer patients.

Purpose(s) of research:

The purpose of this research is to find out if the level of optimism, absorption, depression, anxiety and sense of spirituality of prostate cancer patients in treatment would influence their quality of life.

Procedure of the research, what shall be required of each participant and approximate total number of participants that would be involved in the research:

The simple random sampling technique will be used in selecting participants for the study. This implies that all prostate cancer patients who are seeking

treatment at the cancer unit will be given an equal chances of selection. Therefore, patients who meet the inclusion criteria and consent to participation in the study will be given a set of questionnaires and will be required to respond to all the items on them. They will also be provided with pencils and erasers to enable them fill them out with relative ease. Participants will be allowed to respond to items at their own pace as they wait to be attended to by the medical doctor. The researcher will be readily available to explain and interpret items that participants may have difficulty comprehending.

The researcher intends to use a total of 30 or more participants for the research.

Risk(s):

Participants are likely to be inconvenienced for a short period as they respond to the items on the questionnaire because they may have to do something (respond to items) which is not part of their usual schedule for the day or moment.

Benefit(s):

They will gain insight into their psychological states and their sense of quality of life and perhaps recognise the need to seek psychotherapy in that regard if they deem necessary.

Confidentiality:

Participants will not have to be identified in anyway; whether by name or a particular number because the results will be analysed in group terms. Also, publication of results of the study will be based on the collective outcomes without reference to specific responses or identities of individual participants.

Voluntariness:

Participants have the freedom to determine their participation; whether or not they would want to be involved in the study as participants. Participation is solely voluntary.

Alternatives to participation:

Declining participation will not influence the treatment a client receives in anyway. Patients who refuse to be participants of this study will be entitled to every form of medical attention they require and deserve just as every other patient.

Withdrawal from the research:

Participants may choose to withdraw from the research at any time without having to explain themselves to anyone. They may also choose not to answer any question they find uncomfortable or private.

Consequence of Withdrawal:

Participants will not suffer any negative consequence for choosing to withdraw at any point in time in the study.

Costs/Compensation:

Participants will be compensated with a pen and a note pad for their time spent and any inconvenience the process may cause to them.

Contacts: Participants are free to contact Paul Asiedu Kumi on 020 7128180, if they have any questions about the study and their participation in the study.

APPENDIX F
INFORMED CONSENT
CONSENT FORM

Statement of person obtaining informed consent:

I have fully explained this research to _____
and have given sufficient information about the study, including that on
procedures, risks and benefits, to enable the prospective participant make an
informed decision to or not to participate.

DATE: _____ NAME: _____

Statement of person giving consent:

I have read the information on this study/research or have had it translated into
a language I understand. I have also talked it over with the interviewer to my
satisfaction.

I understand that my participation is voluntary (not compulsory).

I know enough about the purpose, methods, risks and benefits of the research
study to decide that I want to take part in it.

I understand that I may freely stop being part of this study at any time without
having to explain myself.

I have received a copy of this information leaflet and consent form to keep for myself.

NAME: _____

DATE: _____ SIGNATURE/THUMB PRINT: _____

Statement of person witnessing consent (Process for Non-Literate Participants):

I _____ (Name of Witness) certify that information given to _____ (Name of Participant), in the local language, is a true reflection of what I have read from the study Participant Information Leaflet, attached.

WITNESS' SIGNATURE (maintain if participant is non-literate):

MOTHER'S SIGNATURE (maintain if participant is under 18 years):

MOTHER'S NAME: _____

FATHER'S SIGNATURE (maintain if participant is under 18 years):

FATHER'S NAME: _____

APPENDIX G

KREJCIE AND MORGAN SAMPLE TABLE

The ever increasing need for a representative statistical sample in empirical research has created the demand for an effective method of determining sample size. To address the existing gap, Krejcie & Morgan (1970) came up with a table for determining sample size for a given population for easy reference.

Table 1: Table for Determining Sample Size for a Finite

Population

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970

The Table is constructed using the following formula for determining sample

Formula for determining sample size

$$s = X^2 NP(1 - P) + d^2(N - 1) + X^2 P(1 - P)$$

s = required sample size.

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841).

N = the population size.

P = the population proportion (assumed to be .50 since this would provide the maximum sample size).

d = the degree of accuracy expressed as a proportion (.05).

Source: Krejcie & Morgan, 1970