UNIVERSITY OF GHANA

PSYCHOLOGICAL HEALTH, COPING AND CULTURAL VALUES AMONG HAEMODIALYSIS PATIENTS IN A NATIONAL HOSPITAL IN GHANA

BY

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DECLARATION

I declare that this thesis work is the result of a study I carried out for the award of Master of Philosophy Degree in Clinical Psychology in the Department of Psychology, University of Ghana, Legon, supervised by Professor C. Charles Mate-Kole and Dr. Annabella Osei-Tutu. This work has not been presented either in part or full in this university or elsewhere except the references to other peoples' works which have been accordingly acknowledged.

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Abstract

Coping with chronic health conditions has been attributed to numerous factors including spiritual/religious, collective and ritual behaviours of people with varied cultural backgrounds. The study examined psychological health, coping and cultural values among Ghanaians living with chronic kidney disease (CKD) and undergoing haemodialysis therapy. 125 respondents were recruited from the Dialysis Unit of the Korle-Bu Teaching Hospital in Accra, Ghana. The study adopted the sequential mixed method design which comprised a cross-sectional survey and a semi-structured interview. Tests administered assessed coping, religiosity/spirituality and psychological health. The results indicated a significant positive correlation between psychological symptoms (depression, anxiety and somatization) and religiosity/spirituality among haemodialysis patients. Cognitive/emotional debriefing of the Africultural Coping Systems Inventory is the most useful coping method for CKD patients. Furthermore, the results revealed that CKD patients who have spent four years or more on dialysis showed significantly fewer psychological symptoms than those who have been on the treatment for less than one year. Moreover, findings from the interviews showed that initial experiences of haemodialysis patients at the time of diagnosis included sadness/depression, uncertainty about the future, worries about how to deal with high cost of treatment, discomfort with restrictions and stigmatization.

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DEDICATION

I dedicate this thesis work to my wife, Miss Perfect Dzakpasu, for her immense support and our little daughter, Vanechka Maadey Kisseih-Kwao, my father Mr. Godfried Kabute-Kwao and to the memory of Professor Kofi Buenor Hadjor, who bequeathed to me the spirit of perseverance.

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LIST OF ABBREVIATIONS

ACSI - Africultural Coping Systems Inventory

ANOVA-Analysis of Variance

BDI- Beck Depression Inventory

BSI - Brief Symptom Inventory

CDCP - Centers for Disease Control and Prevention

CKD-Chronic Kidney Disease

ECH- Ethics Committee for the Humanities

GNKF- Ghana National Kidney Foundation

GSS- Ghana Statistical Service

HD- Haemodialysis

HRQoL- Health-Related Quality of Life

HSS- Haemodialysis Stressor Scale

IRB- Institutional Review Board

KBTH- Korle-Bu Teaching Hospital

KT- Kidney Transplant

MMPI- Minnesota Multiphasic Personality Inventory

NHIS- National Health Insurance Scheme

PD- Peritoneal Dialysis

SCSRFQ- Santa Clara strength of religious faith questionnaire

SPSS-Statistical Package for the Social Sciences

CHAPTER ONE

INTRODUCTION

Background to the study

Psychological health forms an integral component of well-being and quality of life of people suffering from chronic and potentially life-threatening conditions such as chronic kidney disease (CKD). Many domains of the individual play a key part in the individual's psychological health including the person's happiness with life, emotional state, cultural and individual belief systems, cognitive functioning and effectively managing stressful disease conditions (Bohra & Novak, 2015). However, CKD produces an illness experience which encompasses confronting the characteristics of the condition such as impairment in functioning, emotional difficulties and a dilemma of how to adjust with the changes brought about by the condition (Bohra & Novak, 2015). The problem of how to deal with the various losses associated with the condition invariably leads to the search for meaning of life (Chilcot, Hudson, Moss-Morris, Caroll & Hotopf, 2018).

CKD is a devastating non-communicable disease that requires artificial means of excretion of toxic substances and excessive fluids from the body for survival and preservation of life (Finnegan-John &Thomas, 2012; Rees, Chilcot, Donnellan, & Soulsby, 2017). It is further explained by Vivekanand et al. (2013) as a condition whereby the kidneys have lost about 90% of their ability to function resulting in a reduction in glomerular filtration rate and increased urinary albumin excretion. CKD is an irreversible and life-threatening global public health problem which has profound influence on the psychological health of patients and has attracted considerable attention from health researchers due to an increase in prevalence (Ahmad& Al Nazly, 2014; Gerogianni et al., 2014). The condition had been ranked the 18th highest cause of death globally in 2010 (Stanifer et al., 2014). Moreover, the 2015 Global Burden of Disease Study, ranked CKD as the 12thcommonest cause of death accounting for 1.1 million deaths annually worldwide (Wang, Naghavi, & Allen et al., 2015). Vivekanand et al. (2013) estimated that pervasiveness ranges from 8 to 16% globally, and occurrence is high in developed and developing countries. The authors further postulated that the incidence and prevalence of CKD vary considerably across countries with more than 80% of all clients undertaking treatment for CKD projected to be in wealthy countries. However, the study further stated that estimated global population changes suggest a possible disproportionate rise in CKD in developing countries, such as China and India of which Ghana is no exception. About ten percent (10%) of the world's adult population is afflicted by CKD (World Kidney Day, 2015).

Researches in the United States, Europe, Asia, as well as Australia indicate that the incidence of CKD is increasing dramatically and affects between 5% and 15% of the adult population (Chadban et al., 2003). For instance, in the United States alone, 485,000 new CKD cases were recorded in 2008 with over 90% receiving haemodialysis treatment (Kimmel & Peterson, 2005). This figure has sharply risen to 30 million people representing 15% of the adult population of the United States of America (Center for Disease Control and Prevention [CDCP], 2017).In sub-Saharan Africa; there is an escalating and high vulnerability rate of CKD posing a huge challenge for the sub-region. This is because the condition affects relatively young adult population between the ages of 20-50 years. Even more worrying in our part of the world is that, the condition is mostly identified at the later stage where dialysis and kidney transplant interventions are the only options left to health practitioners and patients (Stanifer, 2014;

Naicker, 2013).In Ghana, there is a steady rise in CKD. Statistics from the Ghana National Kidney Foundation (GNKF) and the Korle-Bu Teaching Hospital show alarming proportions (Osafo, 2012; Korle-Bu Annual Report, 2016). For instance, in 2010, the total reported cases nationwide stood at 2593, this figure increased slightly to 2687 in 2011 and in 2012, the figure shot up to 3612 while in 2016, the Korle-Bu Teaching Hospital alone recorded 2509 new cases (Osafo, 2012; Korle-Bu Annual Report, 2016). The exact burden of CKD in Ghana is not known but a study amongst hypertensive adults in four polyclinics in Accra showed a prevalence rate of 46.9% (Osafo, Mate-Kole, Affram, & Adu, 2011). This paints quite a disturbing and troubling picture that requires serious attention from health researchers.

It is imperative to note that when the kidneys are malfunctioning, patients with stage-five CKD have three options of treatment (Mayo Clinic, 2018). These treatment choices include haemodialysis (HD), peritoneal dialysis (PD), or kidney transplantation (KT) but haemodialysis is the preferred choice of treatment because most nephrologists come into practice with no prior experience in peritoneal dialysis (Kimmel & Peterson, 2005; Mayo Clinic, 2018). Haemodialysis is a treatment method for people with CKD which helps in supporting renal function through removal of toxic substances and excessive fluids from the body in order to preserve life (Karkar, 2012). Another treatment option is peritoneal dialysis (PD). PD is a treatment modality for kidney failure in which special sterile fluid is introduced into the peritoneal cavity to remove impurities from the surrounding blood vessels from the body (Mayo Clinic, 2018). Lastly, kidney transplant (KT) as a treatment modality is “a surgical procedure to place a healthy kidney from either a living or deceased donor into a person whose kidneys are no longer functioning properly” (Mayo Clinic, 2018). Although haemodialysis treatment increases the life expectancy of the patient, it also causes physical, emotional, social and spiritual losses because it leads to impairment in mobility, recreational activities, and independence (Mayo Clinic, 2018).

Globally, haemodialysis patients are exposed to a variety of psychosocial and physiological stressors which threaten several potential losses and lifestyle changes (Ghane, Farahani, Sydfatemi, & Hagani, 2016). These psychological and physical stressors cause depressed mood, anxiety problems, suicidal ideations, sexual dysfunction, and psychosis among CKD patients (Ghane et al., 2016). Mok, Lai and Zhang (2004) explained stressors as situations which are evaluated as stressful and exceed the existing resources to deal with the stress situation confronted by the individual. Patients with CKD inevitably experience high psychological distress which has been reported to contribute largely to their illness, and even to early death in the CKD population and expose these patients to numerous changes in their lives as routine haemodialysis treatment is initiated (Bapat & Kedlaya, 2009).

Amongst the numerous chronic conditions, patients with CKD and receiving haemodialysis therapy believe that their lives are dependent upon the haemodialysis machine, which is linked with several physiological and psychosocial difficulties (AlNazly, Ahmad, Musil, & Nabolsi, 2013). Most frequently, psychological effects of CKD comprise depressed mood, anxiety problems and rise in thoughts of suicide (Chen et al., 2010). Furthermore, some physiological stressors impose restrictions on these patients. These restrictions produce stress and changes in their daily lives. These restrictions include fluid and diet limitations, restriction in movement, frequently taking medications, exhaustion, and complications associated with the treatment such as vascular access surgeries and length of treatment (Bezerra & Santos, 2008).

Even though haemodialysis therapy is a medical treatment that sustains the life of clients diagnosed with CKD, the chronic nature of the condition and the procedure of haemodialysis management have longstanding stressors that cause alterations in the patients' wellbeing and daily life (Herlin & Wann-Hansson, 2010). For instance, Kochuthre (2006) reported that CKD patients experience a lot of psychological and physiological stressors and therefore need to go through various adjustments in their lives in order to cope with the condition. Although haemodialysis increases survival rate, it is connected with psychological effects which place patients in a painful and untenable circumstance that leads to stress throughout the period of treatment (Kumar, Amalraj, & Soundarajan, 2003). The general effects of continuous treatment cause alterations in patients' family roles and psychological state (Chilcot, Wellsted, & Farrington, 2011)

Psychological well-being contributes significantly to the individual's capability to deal with stressful conditions (Vázquez, Hervás, Rahona, & Gómez, 2009). Psychological well-being is explained as social, psychological, and physical factors that contribute to an individual's happiness and contentment (Seifert, 2005). However, CKD patients undergoing haemodialysis experience many physiological and psychosocial stressors which create many losses and lifestyle changes which negatively impact their psychological health (Bezerra & Santos, 2008). These tangible psychological consequences of treating the condition largely have an effect on the survival rate of CKD individuals (Chilcot et al., 2011; Kimmel & Peterson, 2005). It is therefore essential to continually examine the psychological health, stressors faced by these patients and how they deal with the condition in order to devise very effective treatment modalities for them. Unfortunately, not much research has been done to examine the psychological health, stressors, and coping methods of haemodialysis patients in Ghana and how these factors impact on their treatment outcomes. Therefore, the essence of this study is to investigate the psychological health and coping methods used by CKD patients receiving haemodialysis in the Ghanaian setting and to ascertain how they deal with their condition.

Statement of the problem

In other parts of the world, especially Asia and the west, religiosity and spirituality are said to correlate positively with well-being. It is therefore essential to find out whether this association also exists in the Ghanaian context by focusing on CKD patients receiving haemodialysis therapy in a national hospital. Chronic kidney disease (CKD) is a worldwide public health problem with different features in different parts of the world (Cinar, Barlas, & Alpar, 2009). WHO's announcement of World Kidney Day in 2006 observable annually sends a strong signal to the public, health practitioners and governments around the world that CKD is widespread and dangerous (Levey & Andreoli, 2007). The problem of CKD is increasing globally. This is due to the fact that the population of CKD is growing at the fastest rate in the poorest countries across the world (Vivekanand et al., 2013). The condition is more frequent in the sub-Saharan Africa though little data exits on the prevalence (Osafo, Mate-Kole, Affram, & Adu, 2011).

Ghana is a sub-Saharan tropical country with a population of over 28 million people (Ghana Statistical Service [GSS], 2018).It is worth noting that there is a steady rise in CKD cases in the country with statistics from the Ghana National Kidney Foundation (GNKF) and the Korle-Bu Teaching Hospital showing alarming proportions. For instance, in 2010, the total reported cases nationwide stood at 2593, this figure increased slightly to 2687 in 2011 and in 2012, the figure shot up to 3612 while in 2016, the Korle-Bu Teaching Hospital alone recorded 2509 new cases (Osafo, 2012; Korle-Bu Annual Report, 2016). The exact burden of CKD in

Ghana is not known but a study amongst hypertensive adults in four polyclinics in Accra showed a prevalence rate of 46.9% (Osafo, Mate-Kole, Affram, &Adu, 2011). This paints quite a disturbing and troubling picture that requires serious attention from health researchers. Additionally, data from the Dialysis Service Foundation (DSF, 2018) indicate that 12,000 kidney failure cases are diagnosed among Ghanaian patients every year. According to Amoako et al. (2014), 10 percent of all death cases at medical wards of the Korle-Bu Teaching Hospital are attributable to CKD. They further reported that as the population grows older and the occurrence of non-communicable diseases such as diabetes and hypertension increase, development of CKD also increases dramatically.

Another concern is that the form of CKD found in Africa and Ghana is more severe than the one found in developed countries (Naicker, 2013; Osafo, 2012). The relatively young adult population afflicted by the condition in Ghana puts the economically active population under serious threat which calls for concern. Persons with CKD are mostly confronted with a myriad of difficulties and stressors including pain and feeling of uncertainty about the future since the condition cannot be cured. These stressors lead to alterations in psychological health, spiritual distress and compel victims to ask the basic existential questions of “what is the meaning of life” (Ekelund & Anderson, 2010). Across the globe, a large volume of empirical evidence exists on stressors experienced by haemodialysis patients, how they cope with the condition and their psychological health (Chan, Steel, Brooks, Heung & Suranvi, 2011).

However, empirical evidence on psychological health, stressors experienced by haemodialysis patients and how they cope with the disease in Ghana is virtually non-existent. Thus, assessing the experience of stresses, coping and psychological health is a phenomenon worth investigating. Again, Africans in general and Ghanaians in particular, have a unique system of living and coping with problems in the environment as suggested by Utsey, Adams and Bolden (2000), yet its effect on managing CKD and haemodialysis treatment stress has not been examined in Ghana. Some studies around the world indicated that adjusting to haemodialysis treatment is a challenging process which causes adverse psychological distresses including psychotic episodes such as major depression and suicide attempts (Pompili et al., 2013). The present study therefore seeks to find out how CKD patients in the Ghanaian context deal and cope with their condition

Relevance of the Study

First, findings of the current study will inform core health practitioners such as doctors, nurses and clinical psychologists about the role of religiosity and spirituality in dealing with chronic conditions. This will help health practitioners to incorporate the religious and spiritual needs of patients when planning intervention programs for patients with chronic conditions in the Ghanaian setting. Again, the outcome of this study will assist health care providers to understand how Ghanaian cultural values of religiosity and spirituality facilitate patients suffering from chronic conditions such as CKD cope with their conditions. Also, the study will make an empirical contribution to existing literature on religiosity/spirituality, coping and psychological health among chronic kidney disease patients in relation to other personal psychosocial factors. Lastly, the study will propel more studies in the field of religiosity/spirituality and its role in coping amongst chronic patients in the Ghanaian context.

Aims and Objectives of the Study

The main aim of this study was to investigate the relationship amongst psychological health, coping, and cultural values of CKD patients undergoing haemodialysis treatment in a national hospital in Ghana. The specific objectives were to:

1. Investigate the relationship among haemodialysis stressors, religiosity/spirituality, coping and psychological health of CKD patients undergoing haemodialysis treatment.
2. Determine which dimension of the Africultural Coping Systems Inventory is mostly useful to Ghanaian CKD patients in coping with their condition.
3. Find out the role demographic variables such as gender, education, marital status, and length of dialysis treatment play in psychological health of Ghanaian haemodialysis patients.
4. Explore the lived experiences of Ghanaian CKD patients.

Organization of the Thesis

This study is in two parts and structured into five chapters. Chapter one comprises the introduction which covers background to the study, statement of the problem, aims and objectives, justification and relevance of the study. Chapter two contains the theoretical underpinnings of the study and the review of empirical related literature. It also deals with the conceptual framework, statement of study hypotheses, specific qualitative research questions, and operational definition of terms. It also explains the basis for adopting the mixed method approach. Chapter three reports the methodology of study one and analysis of data of study I. Chapter four contains methodology of study II, thematic analysis of results of study II, and discussions of study II. Chapter five presents general discussion of the two findings. Both quantitative and qualitative findings are discussed while addressing the research objectives and problems listed in chapter one. Additionally, implications of the findings, limitations of the study and future directions/recommendations for future studies and conclusion are stated.

CHAPTER TWO

LITERATUREREVIEW

Introduction

This study investigated the stress experiences, coping and the role cultural values, specifically spirituality/religiosity play in the psychological health outcomes of chronic kidney disease (CKD) patients receiving haemodialysis therapy in Ghana. The chapter presents the theoretical frameworks supporting the study and related literature review. Two theories underpinned this study. They include the Religious moderator-deterrent theory by Pargament (1997) and the Africultural Social Ethos Framework (Utsey, Adams & Bolden, 2000). This is accompanied by review of related empirical literature on the various variables in the study. The theoretical and empirical literature review is consequently followed by weaknesses and gaps in the studies reviewed, rational and hypotheses tested. The chapter concludes with the conceptual framework for the study and operational definition of terms.

Theoretical Framework

Two key theories which underpinned this study are the Religious moderator-deterrent theory and the Africultural social ethos framework as explained subsequently.

Religious moderator-deterrent theory

To explain how religious coping intervenes between stresses and health outcomes in stressful situations, Pargament (1997) developed the combined religious moderator-deterrent theory. According to this theory, religious coping serves as a regulating function such that as stress levels increase, religious coping also rises to help protect religious people from the harmful effects of stress. The theory explains that when an individual is confronted with health problems, especially chronic stressful disease conditions such as CKD, he/she tries to cope with their inherent religious resources which are likely to influence their health outcomes. This theory further suggests that any type of disease condition which requires the person to modify their lifestyle becomes a key stressor that necessitates some levels of coping. Pargament (1997) explained religion as a process and a search for significance in ways associated with the sacred. On the other hand, he conceptualized spirituality as a search for the sacred (Pargament, 2007). Pargament (1997) explains coping as searching for significance in stressful situations. Pargament (2010) indicated that religious and spiritual coping occur when individuals invoke a coping process they perceive as holy in response to a stressful situation. Religious and spiritual coping are therefore viewed as a situation whereby individuals relate their understanding and dealing with negative life circumstances to the sacred and invoke a coping method they consider as holy in response to a stressor (Pargament & Raiya, 2007).In this regard, religious and spiritual coping serve asa defense mechanism which robustly involves all stages of the coping process. This helps individuals discover, maintain and transform significance. Religiosity and spirituality function as a force of conversation in the coping process which helps in maintaining a feeling of meaningfulness, mastery and divine connection with a supreme being in crises situations of life (Pargament, 1997).

In the view of Pargament (2002), higher wellbeing is linked to internalized religion, inherently motivated religion and a secure relationship with God. However, unexamined religious beliefs and imposed religion creates uncertain relationship with God. In other words, if an individual does not really believe in any particular spiritual power, he/she exhibits a poorer health outcome when they are afflicted with a disease outbreak particularly a chronic one. Thus, Belgrave and Allison (2006) suggested that the role of churches and religion in contributing to positive health outcomes must be considered in understanding health and illness outcomes amongst Africans. Religiosity and spirituality provide a significant coping resource that individuals depend upon which takes the form of emotional and psychological support (George, Larson, Koenig, & McCullough, 2000). Belgrave and Allison (2006) reported that African-Americans have stronger religious beliefs compared to European Americans. They are more concerned about religious fulfillments and therefore spend more time in church and other places of religious activities or worship. The researchers concluded that African-Americans are more likely to use spirituality as a framework for coping with stressful circumstances such as chronic illnesses and disabling conditions. According to Campbell, Yoon and Johnstone (2010), patients who regularly use public religious services and believe they had divine experiences usually see themselves as healthier than those who seldom involved themselves in religious programs and activities.

On the local level, Anim (2015) used the religious moderator-deterrent theory in examining African cultural values and psychological health among adult persons living with sickle cell disease in Ghana. He reported that specific African cultural values predicted psychological health among sickle cell respondents. The study further indicated that participants reported using specific African cultural values including spirituality and religiosity for transcendental, social support, psychological relaxation, and minimal physical exercise to promote psychological health. Additionally, the study found that participants used spirituality, religiosity and social support in various degrees as means of coping with their condition which helped improve their psychological health.

The study however, noted that spirituality/religiosity did not make a major contribution to predicting Africultural coping. This finding is quite intriguing considering the fact that Ghanaians are perceived as highly spiritual and religious and therefore one would have expected that spiritual/religious coping would play a key role in coping with a devastating chronic condition like sickle cell disease. The current study therefore sought to establish whether similar findings could be made about a sample of adult Ghanaians living with CKD and receiving haemodialysis therapy since CKD is also chronic in nature. Thus, the usage of the religious moderator-deterrent theory as a cornerstone for this study is very appropriate.

Africultural Social Ethos framework

African-centered philosophy strongly believes that everything under the universe is functionally connected, and individuals are therefore considered to be an extension of the environment. Therefore, the collective consciousness emphasizes cooperation and group orientation which serves as a natural support system for the African (Weddington, 1997). In view of this consciousness, the Africutural social ethos framework by Jagers, Smith, Mock and Dill (1997) is another theory considered most appropriate for this study. The theory examined the association between culture and psychological functioning amongst urban adolescents in the USA. Jagers et al. (1997) maintain that three African worldview factors are significant to general African American psychosocial experiences. African worldview factors are viewed as a group of beliefs, values, code of conducts and assumptions which are based on African cultural traditions relating to definitions of the self, others, and the relationship of the self with the environment (Utsey, Adams & Bolden, 2000).

This Africentric worldview examines the relationship amongst the self, others and the environment in times of difficult life circumstances (Utsey et al., 2000). These African worldview factors which positively help the psychosocial experiences of the African include Spirituality, Affect and Communalism (Utsey et al., 2000; Mattis & Jagers, 2001). Spirituality in the African perspective is interpreted as an indebted mindfulness of the continuous existence of ancestors, prayers or pleas for help from higher power and respect for the presence of "spirit" in others (Nobles, 2006). Spirituality is therefore thought to be one key characteristic that defines the African-American's life (Mattis & Jagers, 2001).Another Africentric worldview component is "Affect." Affect denotes openness to receive and agreement of thought and feeling, being honest with one's emotions, and feeling connected to others (Utsey et al., 2000). Many African-American psychology scholars have noted that expressing positive emotion is a basis for resilience, psychological health and wellbeing (Caldwell-Colbert, Parks & Eshun, 2009). The last Africentric worldview component is Communalism.

According to Tyler, Boykin, Boelter and Dillihunt (2005), communalism represents the basic obligation of harmony with others and nature when a person is socially involved, willing to accept group responsibilities and holds principles that emphasized interdependence. These Africentric values and behaviors serve as a reservoir which provides protective factors of coping methods for Africans (Constantine & Blackmon,2002).Africultural coping can be explained as the extent to which people of African-American ancestry use coping behaviours thought to be deep-rooted in African-American culture (Utsey, Adams, &Bolden, 2000). In addition to the three key Africentric worldview factors, Africultural coping comprises four primary components. These include cognitive/emotional debriefing, spiritual-centered coping, collective centered coping and ritual- centered coping.

Cognitive/emotional debriefing is an adaptive response by African Americans in their attempt to deal with perceived environmental stressors. Spiritual-centered coping on the hand, has to do with coping behaviours which reflect a sense of connection with God and with other spiritual elements in the universe. Collective coping is viewed as an individual's reliance on group centered activities to cope with stressful life circumstance whereas ritual-centered coping involves the use of rituals, such as lighting candles or burning incense, to deal with stressful situations (Utsey et al., 2000).Relating the Africultural social ethos framework to the current study, Ghanaians are just like African-Americans and therefore exhibit religious characteristics in most aspect of their lives.

Atuahene (2018) for example reported that the church is so important in the lives of Ghanaians, such that to the Ghanaian, the force is a mobile one that even follows a patient to the hospital especially in chronic health cases such as CKD, Stroke, diabetes, and others. The researcher therefore examined whether a relationship existed between Africultural social ethos such as cognitive/emotional debriefing coping, spiritual centered coping, collective coping and ritual coping and psychological health in a sample of adults Ghanaians coping with CKD and undergoing haemodialysis treatment. In view of existing literature, the present study is the first examination of African cultural values as a possible intervening psychosocial and coping factor in the CKD population in Ghana.

Review of related empirical literature

Rocco and Plakhotnik (2009) explained literature review as a scrutiny of other people's work related to a topic which contains essential ideas, information and evidence to support a current study. Thus, to establish relationships among the various variables in this study, several relevant studies were selected and reviewed. The review of related studies is subsequently put into sections as follows:

Depression and chronic kidney disease (CKD)

Zalai, Szeifert and Novak (2012) explain depression as a mood condition marked by low mood and anhedonia (i.e. lack of interest in otherwise pleasurable daily activities including hobbies, sex and work). Additional symptoms are somatic, cognitive, and behavioral, that is, low levels of energy, significant disturbance in body weight, insomnia, agitation, trouble concentrating, feelings of worthlessness, hopelessness, extreme guilt feeling and suicidal ideations. Feroze et al. (2014) investigated the prevalence of depressive and anxiety disorders in patients on maintenance dialysis and reported that depression and anxiety are amongst the commonest comorbid conditions in CKD. Individuals with CKD are confronted with a myriad of difficulties that increase their likelihood of developing depression or anxiety or worsen these conditions.

Amongst these difficulties are the feeling of disruptions in lifestyle; the requirement to conform to treatment regimens, dialysis schedules, diet and water restrictions and the apprehension of becoming disable and shortened lifespan are main sources of depression and anxiety in CKD patients. Riolo, Nguyen, Greden and King (2005) reported in a national survey conducted in the United States of America that the incidence rate for major depression in the general population was 10.4% in Caucasians, 7.5% in African-Americans, and 8.0% in Mexican Americans. However, Dziubek et al. (2016) in determining the level of anxiety and depression in dialysis patients reported that depression was the commonest psychological difficulty experienced by CKD patients undertaking haemodialysis (HD) with nearly 68% incidence rate.

This high rate of depression affects the self-care of this population and leads to poor adherence to dialysis therapy.

Furthermore, Hu et al. (2013) investigated the prevalence rate of major depressive disorder amongst haemodialysis patients in China using 260 participants. The CKD patients receiving HD were screened using the nine-item patient health questionnaire. The formal diagnosis of major depressive disorder (MDD) was additionally assessed using the Diagnostic and Statistical Manual of Mental Disorders, 4th edition. Severity of depressive symptoms was assessed using the Hamilton Rating Scale for Depression. They reported that 69.2% of CKD patients undergoing haemodialysis therapy experienced severe to very severe form of depressive symptoms. They concluded that frequent screening, diagnosis and treatment of depressive disorder in CKD will ensure effective interventions for CKD patients. They indicated further that major depressive illness amongst such individuals increases the burden of their physical conditions and symptoms, functionality and their medical expenses. The researchers concluded that little or no research on treatment of MDD in HD patients exists. They therefore called for more research in this area in order for clinicians and policy makers to establish evidence-based protocols for the management and effective treatments of MDD in CKD patients. Studies have also established that patients suffering from CKD experience higher occurrence of psychiatric conditions compared to the general population. For instance, Roy-Byrne and Davidson, (2008) stated that CKD clients frequently experience higher degrees of anxiety and depression caused by their condition.

Moreover, Cukor, Rosenthal, Jindal, Brown and Kimmel (2009) reported prevalence rates of depression of 26.6% in patients with CKD which is higher than the general population and has negative impacts on the psychological health of CKD patients as well as their treatment outcomes. Additionally, Pop-Jordanova and Polenakovic (2016) assessed depression and anxiety in haemodialysis patients in Macedonia. The study aimed at screening the level of depression and anxiety in a group of end-stage kidney disease treated with haemodialysis. The sample consisted of 230 participants. The Beck Depression Inventory (BDI) and the Minnesota Multiphasic Personality Inventory (MMPI-201) were used as measuring instruments. Results revealed that depression was highly prevalent and associated with poor quality of life and increased mortality in patients with chronic kidney disease. The studies also found that depression contributed to complications in dialysis patients.

AlDukhayel (2015) investigated the prevalence rate of depressive symptoms amongst haemodialysis and peritoneal dialysis patients in Saudi Arabia. The cross-sectional design was used in the study. The study included 133 Peritoneal Dialysis (PD) patients and 133 haemodialysis (HD) patients. Depressive symptoms were assessed using the Zung self- rating depression scale (Zung SDS). Result revealed that 83.5%CKDpatients undergoing HD were depressed, and therefore needed regular screening so as to improve their psychological health and quality of life. It is therefore imperative to frequently assess these patients for this variable in order to put in place effective interventions to ensure better health outcomes for these patients. According to Chilcot, Wellsted, Silva-Gane and Farrington (2008), depression has been found as the commonest psychopathological condition amongst patients with CKD but under-recognized and misdiagnosed. The authors further reported that depression reduces the quality of life and has a negative clinical impact upon sufferers' psychological health. The researchers therefore indicated that there was the need to establish correct tools and procedures for screening of depression amongst dialysis patients. They emphasized the need for health practitioners to be particularly concerned with the psychological interventions of CKD patients. A similar study found that depression in CKD patients receiving haemodialysis (HD) is associated with problems of quality of life. This includes impairment in functioning, frequent hospitalization, expensive medical treatment, withdrawal from dialysis, and mortality and also seen as the commonest psychiatric condition amongst CKD patients (Kimmel & Peterson, 2005).

Anxiety and chronic kidney disease (CKD)

CKD is highly associated with anxiety disorders (Cukor, Cohen, Peterson & Kimmel, 2007). Kohli, Batra and Aggarwal (2011) explained anxiety as a psychological state marked by cognitive, somatic, emotional, and behavioral components which create painful feelings of uneasiness, apprehension and worry in an individual. The authors further explained anxiety as a normal response to stressful situations but extreme levels contribute to psychological health problems and reduced quality of life and wellbeing. Besides the CKD itself, patients receiving haemodialysis have to adjust to modifications in their occupational, marital, societal, and personal lives which result in high anxiety. The effects of the condition, financial challenges, feeling of handicap and the psychological strain of death anticipation, hinder the usual ways of coping which results in rising levels of anxiety in CKD individuals (Kohli et al., 2011).

Murtagh, Addington-Hall, and Higginson (2007), systematically reviewed 55 studies to find out the prevalence rates of symptoms of anxiety in CKD patients. The result revealed that 38% of CKD patients had significantly high levels of anxiety indicating CKD patients experienced more anxiety than the general population and this affected their coping ability with the condition negatively leading to poor treatment outcomes. Similarly, Macaron et al. (2014) conducted a study to determine the prevalence of anxiety, depression and suicidal tendency in Lebanese CKD patients undergoing haemodialysis. The number of patients involved in the study was 51. The results indicated that CKD patients experienced relatively high rate of symptoms of anxiety (e.g. 45 %) that negatively impacted their psychological health and treatment outcomes. They concluded that anxiety conditions should be assessed frequently in populations at risk such as CKD patients. The study further suggested a constant involvement of CKD patients undergoing haemodialysis in psychiatric consultation to deal with anxiety conditions for better health outcomes.

In a related study to establish the degree of anxiety and depression in dialysis patients, Dziubek et al. (2016) reported high levels of anxiety i.e. 50% in these patients. Cukor, Coplan and Brown (2008) reported a 27% prevalence of anxiety amongst 70 urban haemodialysis patients, which was greater than the 18% incidence stated in a national survey. Anxiety is obviously a commonest psychological problem that arises in the early stages of dialysis therapy. This has the potential of affecting treatment outcomes poorly if it is not addressed.

Religiosity/spirituality and coping with CKD

CKD Patients receiving haemodialysis (HD) are often distressed and faced with challenges in many facets of their lives. These challenges include physical, social and psychological health issues like stress, anxiety, depression and coping challenges (Fradelos et al., 2015). These challenges pose a grave danger to their physical and psychological health. Resorting to religious and spiritual interventions as a way of dealing with their psychological and physical problems is generally acknowledged. Additionally, these patients exhibit some degree of spiritual needs which influence their psychological adjustment to the illness (Cruz et al., 2017; Fradelos et al., 2015). Gyekye (2010) explains spirituality as a higher form of religiosity attained by some individuals in the community who claim to have mystical connections with the supernatural. He further indicated that it should be right to assert, however, that the encounters are the results, rather than the sources of religion in the traditional African setting leading to moral conducts which inevitably influence lifestyle and well-being. An entrenched feeling of spiritual transcendence and unity with nature is central to African cultural thought pattern (Kwate, 2005).

The key components of spirituality are meaning, hope, relatedness/connectedness, and belief systems. Spirituality viewed as the search for meaning in life, through experiences and expressions of mind, in a distinctive and dynamic process which is different for every individual. In the view of many people, spirituality and religiosity are essential parts of their existence. This constitutes a source of support that contributes to well-being and helps them cope with challenges of daily life experiences (Fradelos et al., 2015). Drake-Brassfield (2008) noted that spirituality is an ideal coping strategy among Africans which largely reinforces the collectivism culture. In contrast, religion is theorized to be a routine and practical demonstration of spirituality (Constantine, Lewis, Conner, & Sanchez, 2000). Religious coping is explained by Peres and Lucchetti (2010) to be the use of religious beliefs or behaviours in facilitating problem solving for prevention and reduction of negative emotional consequences of stressful life conditions. Cruz et al. (2017) investigated the influence of religiosity and spiritual coping on health-related quality of life in Saudi Arabia using 168 haemodialysis patients. They reported that religiosity and spirituality was an important coping tool which enhanced quality of life in CKD patients receiving haemodialysis treatment. The researchers strongly recommended the integration of religious beliefs into the health-care process in order to expedite the achievement of overall optimal health. The study further noted that individuals become less religious as their health conditions improve. By implication, it is apparent that as a patient's health outcome improves, there is decrease need for religiosity and spirituality in coping.

Fradelos et al. (2015) examined evidence from the international empirical literature concerning the possible relationship of spirituality and health outcomes among CKD patients. They reported that individuals' spirituality and religious background play key roles in their existence, wellbeing and aid them to cope with life's daily challenges. The authors concluded that a link exists between physical and spiritual wellbeing and this interaction affects each other. It is imperative therefore to take CKD patient's spirituality and religious needs very seriously because they play a positive role in health-related quality of life, psychological health and life expectancy. In a related study, Cruz et al. (2015) investigated religiosity and health-related quality of life among Filipino Christian Haemodialysis Patients. The study measured religiosity of 100 Filipino Christian HD patients using The Duke University Religion Index. Results indicated that religiosity bore important positive relationship with health-related quality of life amongst Christian patients undertaking haemodialysis treatment. The study further revealed that religiosity strongly correlated with Health-Related quality of life and played a key role in chronic conditions such as CKD. The researchers therefore strongly recommended that health workers must incorporate the religious and spiritual needs of CKD patients into their plan of care.

A correlation study was undertaken by Ottaviani et al. (2014) to assess hope and spirituality among patients with chronic kidney disease undergoing haemodialysis. The aim of the study was to analyze the relationship between hope and spirituality of patients with chronic kidney disease undergoing haemodialysis using 127 HD patients. Methodology used was cross-sectional and correlational. Spearman's coefficient analysis showed a moderately positive correlation between religiosity and spirituality coping with CKD. They subsequently suggested the inclusion of spiritual concerns of patients in delivering care to them. This, they believed will greatly help patients to effectively cope with their stressful conditions. Saffari et al. (2013) examined spiritual coping, religiosity and quality of life of Iranian Muslim women receiving haemodialysis treatment in Iran. The study established that spiritual and religious coping helped haemodialysis patients to cope better with their condition thereby helping them improve on their quality of life. The result further indicated that religious or spiritual resources contributed to a better quality of life and health outcomes amongst persons receiving haemodialysis treatment. The study also found that spiritual and religious beliefs explained a significant proportion of variance in quality of life and health status amongst Iranian Muslims on haemodialysis.

In a similar study, Yodchai, Dunning, Savage and Hutchinson (2017) investigated the role of religion and spirituality in coping with kidney disease and haemodialysis in Thailand. The researchers employed the exploratory qualitative approach where twenty participants were interviewed using semi-structured interview guide. The results revealed that religion and spirituality offered robust coping approaches to overcome stress in patients suffering from CKD. The study also reported that religion and spirituality provided strong coping methods to Thai people with CKD to overcome the difficulties and stress associated with the condition. Additionally, the study established that religious and spiritual beliefs and practices were vital coping methods for majority of the participants and assisted them in the understanding and acceptance of their condition.

Cruz et al. (2016) tested the validity and reliability of the Arabic version of the spiritual coping strategies scale in Saudi Arabia using patients undergoing haemodialysis. The authors demonstrated that the quality of life of CKD patients increased by using spiritual and religious coping methods. They reported that HD patients with higher degree of individual religious motivation and stronger internal religious feelings experienced significantly higher quality of life in all facets of their lives. The researchers therefore implored nurses to include the religious and spiritual needs in the care of CKD patients because they struggle to find meaning and purpose in life owing to the disruption in their usual life pattern. Ibrahim, Desa and Chiew-Tong (2012) explored the influence of illness perception and religious coping strategies on health-related quality of life (HRQoL) in Malaysia using 274 CKD people receiving dialysis. The authors reported that religion helped Malaysians adapt to life with HD treatment. They concluded that religion helped people with chronic illness such as diabetes; hypertension and CKD maintain a sense of control when their life was threatened and achieved a sense of inner harmony and wellbeing.

Evaluating the effects of prayers on the vital signs of patients with CKD in Brazil, Brasileiro et al. (2017) found that spirituality served as a force to drive individuals’ lives and promoted hope for overwhelming the difficult situations that arise from CKD and haemodialysis. Again, the results of the investigation demonstrated that prayer impacted satisfactorily on clients receiving haemodialysis therapy. Prayer has been found as an effective tool in reducing blood pressure, heart, and respiratory rates in the groups of patients who participated in the study. Additionally, CKD participants perceived prayer as a complementary intervention with the capacity of relieving them from the anguish of the illness processes. The authors therefore suggested the inclusion of prayers as a method of treatment in offering spiritual care to the patients in fulfillment of their spiritual needs and provide support to the patient in dealing with the disease, treatment, anxiety, and lifestyle changes brought about by CKD.

Lucchetti, de Almeida and Lucchetti (2012) investigated religiosity, mental health and quality of life among Brazilian haemodialysis patients. The study aimed at establishing whether there is any association between psychological health and quality of life amongst Brazilian haemodialysis patients. The study comprised of 205 participants. A cross-sectional survey method was used. Results indicated a positive relationship between religiosity and spirituality and patients' recovery from dialysis treatment. The study further reported that CKD patients' religious faith enabled them to overcome difficulties and cope with their condition and also facilitated their recovery. Ramirez, Macedo, and Sales (2012) examined the relationship between religious coping, psychological distress and quality of life of haemodialysis patients in Brazil. Objective of the study was to assess whether positive religious coping or religious struggle was independently associated with psychological distress and health-related quality of life (HRQoL) in haemodialysis patients. The study employed the cross-sectional method and randomly sampled 170 CKD patients for the study. The authors reported that both positive and negative religious coping strategies were adopted by haemodialysis patients to deal with CKD. Religious struggle correlated with both depression and anxiety. These associations were found to be significant after multivariate adjustment. Positive religious coping was linked to better overall and psychological functioning.

Bowie, Sydnor, Granot and Pargament (2004) conducted a research on the influence of spirituality and religiosity on coping with CKD. They reported that spirituality had beneficial effects on coping with the disease. The researchers again stated that participants, who observed positive changes in their condition, attributed it to spiritual and religious support. In a similar study which examined the use of spirituality as a mechanism for coping with chronic diseases, the finding indicated that spirituality and religiosity formed the foundation for coping with chronic diseases (Graham, Furr, Flowers, & Thomas-Burk, 2001). Furthermore, Taheri-Kharameh (2016) investigated the relationship between spiritual well-being and stress coping strategies in haemodialysis patients in Iran. The study randomly sampled 95 patients undergoing haemodialysis treatment. Data collection was done using the Spiritual Well-Being Scale and Jalowiec Coping Scale. Pearson correlation coefficient and independent t-test analyses indicated that haemodialysis patients mostly used emotion-oriented coping strategies when confronted with the challenges of the condition and its treatment. Additionally, the study revealed a positive correlation between spiritual well-being and problem-oriented coping strategies and hence suggested the inclusion of patient's spiritual needs in the treatment plan so as to increase the degree of coping with the condition. The study further established that spiritual well-being such as having a sense of belonging to a sublime source and having faith in God's assistance in traumatic circumstances help people to effectively deal with stressful life events.

Valcanti et al. (2012) investigated religious/spiritual coping in people with chronic kidney disease undergoing haemodialysis. The aim was to investigate the use of religious/spiritual coping mechanisms in patients with CKD undergoing haemodialysis. The study involved the use of the quantitative, descriptive and cross-sectional design using 123 respondents. They reported that participants used religious/spiritual coping mechanisms as a strategy to deal with the condition, especially amongst women who had higher family income attended church weekly. The results further indicated a positive correlation between spiritual/religious coping and psychological health. As psychological symptoms intensified, religious activities such as prayers increased and vice versa. The authors, thus, implored nurses to promote and allow the use of religion and spiritual coping as a process of dealing with the disease. Nikmanesh and Azaraein (2016) examined the role of religious coping in perception of suffering amongst patients undergoing dialysis in Iran. The study adopted the correlational and involved 50 participants selected using the convenience sampling technique. Pearson correlation coefficient results indicated that religiosity/spirituality and psychological suffering were significantly and inversely correlated. The researchers reported that rise in religious and spiritual activities leads to a reduction in psychological pain amongst CKD patients undergoing haemodialysis. In the same regard, Burns (2004) indicated that religious and spiritual coping is the commonest way of coping in all kinds of problems and not only disease related. Turning to God has been found to be the most frequently coping method for physical and psychosocial adaptation amongst haemodialysis patients. Although religiosity and spirituality are significant coping methods, their role in assisting people cope with CKD and haemodialysis therapy in the Ghanaian context is relatively unknown. It is therefore worth examining the association existing between religiosity/spiritual wellbeing and its influences on coping and psychological health in Ghanaian haemodialysis patients.

Psychological and physiological stressors of haemodialysis therapy

CKD and haemodialysis therapy expose patients to various psychosocial and physiological stressors and threaten many possible losses and lifestyle changes in the lives of patients (Mok & Tam, 2001). Ahmad and Al Nazly (2015) investigated stressors perceived by Jordanian CKD patients on haemodialysis and the coping methods they use to live with the condition.131 Jordanian men and women and were recruited for the study using convenience sampling technique. Stressors perceived by haemodialysis patients and the coping methods were measured using the Haemodialysis Stressor Scale and Ways of Coping Scale-Revised respectively. Findings indicated that patients on haemodialysis experience more psychosocial stressors than physiological stressors since the mean score for psychosocial stressors was higher than the mean score of physiological stressors. The authors therefore concluded that more attention must be given to the psychosocial stressors of patients on haemodialysis.

In a related study, Gerogianni et al. (2016) assessed the social impact of quality of life of 100 CKD patients undergoing haemodialysis in Athens using a quantitative method. The analysis indicated that haemodialysis patients have reduced capacity for work which served as a psychological stressor to them and therefore suggested mental health promotion programs to address CKD patients' psychological health issues such as depression, anxiety and suicidal ideation. Obviously, the presence of any of these mental disorders does not promote positive mental health outlook since anxiety is found to be inversely related to psychological well-being and life satisfaction (Bamonti et al., 2016). The study however, failed to explore the lived-experiences of the patients in order to understand the real difficulties of clients. In addition, Gerogianni et al. (2014) investigated the concerns of patients on dialysis in Athens. The study aimed at investigating the psychological impact of dialysis on the quality of life of patients with End Stage Renal Failure (ESRF). The results revealed that CKD posed a huge Psychological stressor to patients with 41.1% expressing lack of joy in life. The study concluded that variables such as age, gender, duration of dialysis and education can affect psychological health either positively or negatively. Relating to physiological stressors, Mok and Tam (2001) investigated 50 haemodialysis patients in Hong Kong to determine the stressors they faced and the coping methods they used to cope with the condition. The study identified fluid restriction as the most frequently acknowledged stressor, followed by food restrictions, itching, fatigue, and cost.

Investigating stressors and coping strategies in haemodialysis patients, Cinar, Barlas and Alpar (2009) found that the topmost three stressors usually experienced by haemodialysis patients were vacation limitation, fatigue and uncertainty about the future. Moreover, Tsay, Lee, and Lee (2005) using the Haemodialysis Stressor Scale (HSS) to assess 57 haemodialysis patients in Taiwan, identified limitations on time and place related to employment, fluid intake limitation, transportation challenges, loss of bodily function, length of dialysis of treatment and physical activity restrictions as the key stressors faced by HD patients.

Coping with chronic kidney disease (CKD)

Persons suffering from CKD are confronted with numerous problems such as psychological, physical effects and socio-economic issues accompanying the treatment of the condition (Yodchai et al., 2017). The most commonly identified psychological distress of CKD individuals receiving haemodialysis therapy are marital and sexual, financial problems, changes in social functions, restrictions in leisure activities, dependency on dialysis machine, uncertainty about the future and employment difficulties. These lifestyle changes seriously affect the psychological health of patients with CKD receiving dialysis therapy compared to the general population (Gerogianni & Babatsikou, 2014). CKD patients therefore need to develop ways to help them cope with the condition as well as the haemodialysis therapy and other life challenges that come with the condition.

Utsey et al. (2000) conceptualizes coping as an attempt by an individual to sustain a sense of harmony and balance with the physical, metaphysical, and collective and the spiritual realms of existence. In the view of Utsey et al. (2000), Africultural coping focuses on four main mechanisms including cognitive/emotional debriefing which is an adaptive response by African-Americans in their attempt to deal with perceived environmental stressors; spiritual-centered coping which has to do with coping behaviours which reflect a sense of connection with God and with other spiritual elements in the universe; collective coping seen as an individual’s reliance on group centered activities to cope with stressful life circumstance whereas ritual-centered coping indicates the use of rituals, such as lighting candles or burning incense, to deal with stressful situations (Utsey et al., 2000).

Lewis-Coles and Constantine (2006) examined the extent to which three types of racism-related stress coping such as individual, institutional and cultural would predict the utilization of Africultural coping methods such as cognitive/emotional debriefing, spiritual-centered, collective and ritual-centered coping. A sample of 284 African-American men and women took part in the study. The study reported that higher institutional racism-related stress was linked to higher usage of cognitive/emotional debriefing, spiritual centered coping and collective coping in African-American women. Additionally, the study established that higher perceived cultural racism-related stress was associated with greater utilization of collective coping methods and religious problem-solving among African American men.

In a related study involving 361 African- Americans, Utsey et al. (2007) reported that culture-specific coping regarding spiritual-centered and collective-centered coping significantly predicted quality of life for respondents. Krop (2007) examined the role of spiritual centered coping. 208 respondents completed self-description questionnaire of spirituality and coping inventory for stressful situations. The results indicated that spiritual centered coping played an important role in coping processes. The study further suggested that individuals who characterized by high degrees of spirituality solve problems through spiritual means. Cinar, Barlas and Alpar (2009) studied the relationships between treatment-related stressors and coping strategies of chronic haemodialysis patients in Turkey using 224 haemodialysis patients. Results indicated that the most frequently used coping strategies were resorting to religion, active coping and suppression of competing activities.

However, the kind of coping strategy adopted is dependent on the evaluation of the person's available resources, cultural background, previous experience and the nature of stress faced. ‘‘Problem-focused coping includes cognitive problem-solving and decision-making, interpersonal conflict resolution, information-gathering, advice-seeking, time management and goal setting, as well as problem-orientated behaviours such as dealing with the problem which is causing the distress and following prescribed medical therapy’’ (Ekelund & Andersson, 2007). According to Mok and Tam (2001), dialysis patients use problem-orientated coping strategies to a greater extent in dealing with their conditions than emotion-orientated coping methods. Emotion-oriented coping serves to reduce the emotional discomfort.

Limitations and gaps in the studies reviewed

Critically analyzing the literature above reveals some flaws and drawbacks that need further attention. First**,** the focus of this current study is to examine how CKD and haemodialysis treatment affect the psychological health of these clients. It is observed from the reviewed studies that most investigators looked at physical stress and religious coping without linking it to the psychological health of the patients (e.g. Tam, 2001; Barlas & Alpar, 2009; Tsay, Lee & Lee 2005; etc.). The danger therefore is that these stressors may affect the patients psychologically which may go unnoticed thereby leading to deterioration of health outcomes. This study therefore specifically focuses on CKD to know how these stressors are coped with and their influences on the psychological health of patients. It is significant to recognize that there are different and various ways and degrees of coping with the various chronic diseases. So, this study sought to find out the precise coping needs of CKD patients in Ghana.

Again, virtually all the studies on coping with CKD are characterized by a cultural standpoint rooted in Western individualistic cultural values. In other words, most of the coping researches on haemodialysis were done in western countries which have different cultural backgrounds from Africans in general and Ghanaians in particular and therefore generalizing findings to other non-western cultures (e.g. African countries) may be problematic. Ghana is a collectivistic society thus what applies in individualistic societies may not necessarily apply here. Hence, it is imperative to find out how collectivistic culture influences coping with chronic diseases specifically CKD in the Ghanaian context.

Another key observation from the literature is that Pargament (1997) suggested that more research is required to understand ways by which religious coping might assist in adjusting to different types of stressors amongst diverse groups of people. It is noteworthy that very little is done in that regard in Ghana. It is against this background that this study focused on Ghanaians to know how Ghanaian cultural values such as religiosity and spirituality influence coping with chronic diseases especially CKD where patients believe that their lives are dependent on dialysis machines. Again, most of the studies either used quantitative (e.g. Cruz et al., 2015) or qualitative (e.g. Al Nazly, Ahmad, Musil & Nabolsi, 2013) methods to assess the copings of this population which may have focused on just an aspect of how the person deals with the situation. However, this current study is interested used the mixed method design to help get a holistic view and understanding of how people cope with CKD. The in-depth semi-structured interview provided further insight into the issues and enhanced understanding of the concept.

Further focus of this study was to look at how CKD and haemodialysis treatment affects the psychological health of these clients. It is observed from the reviewed studies that most investigators looked at physical stress and religious coping without linking it to the psychological health of the patients. The danger therefore is that these stressors may affect the patients psychologically which may go unnoticed thereby leading to deterioration of health outcomes. This study therefore specifically focuses on CKD to know how these stressors are coped with and their influences on the psychological health of patients. It is significant to recognize that there are different and various ways and degrees of coping with the various chronic diseases. So, this study will find out the precise coping needs of CKD patients in Ghana.

Regarding the theories supporting this study, a critical analysis reveals some weaknesses as briefly discussed below. Pargament (1997) drew attention to the fact that a large amount of religious experience remains private, subjective, and highly symbolic, therefore it is not only outsiders, but also insiders' perspectives are important for examining it. This emphasizes the point that in examining the religious experiences of people in relation to coping with stressful chronic diseases, both their subjective and objective experiences must be taken into consideration. However, Pargament's research has been predominantly quantitative, which tends to study religious coping only from an outsider's perspective. This may not reveal a holistic picture of the dynamics of religious coping. A deeper and holistic understanding of religious coping could be attained if researchers focus on both the subjective as well as the objective experiences instead of focusing on either of them as in the case of Pargament and his associates.

Xu (2016) argued that although Pargament drew attention to the significance of the cultural shaping of religious coping, it is obvious that cultural variables such as individualism versus collectivism; traditionalism versus modernism; cultural convergence versus cultural divergence have not been adequately addressed in his theory. To this end, Xu noted a discrepancy that requires rectification and drew the conclusion that more research should be conducted to examine the influences of cultural ideals, beliefs, values, norms and practices on religious coping. In spite of the potential limitations of Pargament's theory, it provided an important insight into how the religious backgrounds of people help them deal with stressful chronic diseases such as CKD. The theory therefore provided a strong foundation for this current study.

Rationale for the Study

According to Utsey, Payne, Jackson and Jones, (2002), considerable attention has been given to the Eurocentric methods of coping while little importance has been put on the Africentric styles of coping under stressful circumstances. Ekelund and Andersson (2007) emphasized that the emotion-focused coping and problem-focused coping are very paramount coping mechanisms used to manage stress by patients on dialysis treatment. However, it is noteworthy that communal and spiritual centered coping are predominantly dominant among people of African ancestry which reflect an Africentric worldview must be examined in the African context (Utsey et al., 2002;Utsey, Brown, & Bolden 2004).

Joseph and Kuo (2009) indicated that spiritual- and ritual centered coping are the most important coping methods that Black Canadians employ in coping with interpersonal discrimination. It is significant to note that although a number of studies looked at Africultural coping, these studies predominantly used African Americans to demonstrate that some key African values are used in coping in times of distress. Therefore, there is the need to recognize that although African Americans and Africans have a common ancestry, certain substantial differences exist relating to environmental factors as well as certain experiences.

It is therefore important that in explaining certain phenomena about Africans, factors such as geographical location and financial factors must be taken into accounts. It is a fact that most of the time, Africans are grouped together as one big family to include African Americans and people of African ancestry, but there may be significant differences in the issues that affect them. Thus, classifying all of them as one group who are affected by a common phenomenon irrespective of their geographical locations may be inappropriate. Most studies done in the area of how Africans cope with stressful conditions such as CKD focus on Africentric theoretical framework used African Americans (Utsey et al., 2000; Constantine et al., 2005). Little has been done to know if people of 'pure' African background living on African soils will actually adhere to such values the same way as African Americans.

Another key motivation for this study stems from the view that chronic research in Ghana has been primarily dominated by the biomedical perspective (de-Graft Aikins, Boynton, & Atanga, 2010). It is a fact though that the biomedical model of treatment has come to stay, but emphasis should also be placed on the psychological perspective, cultural and social ways of coping with stressful conditions such as CKD. Similarly, Hu et al. (2013) stated emphatically that there is little or no research on treatment of MDD in HD patients. They therefore called for more research in this area in order for clinicians and policy makers to establish evidence-based protocols for the management and effective treatments of MDD in CKD patients. Therefore, screening the level of depression in Ghanaian CKD patients is in line with this call. Finally, Adegbola (2011) in her concluding comments of a review of literature on spirituality and quality of life in chronic disease patients stated that, more investigation is required to clarify the role of spirituality for persons with specific chronic conditions and also recommended more spirituality research hence my interest in this subject matter.

Statement of hypotheses for study 1

Based on the literature reviewed, the problem statement, the objectives set, and the theoretical frameworks for the study, the following hypotheses were formulated and tested in study one:

1. There will be a significant positive relationship between psychological symptoms and religiosity/spirituality among CKD patients.

2. There will be a significant positive correlation between haemodialysis stressors and Africultural coping among CKD patients.

3. Collective-centered coping will predict significant variance in haemodialysis stress among CKD than cognitive/emotional debriefing, spiritual-centered coping and ritual-centered coping.

4. CKD patients who are not married will have significantly higher psychological symptoms than those who are married.

5. Female CKD patients will obtain significantly higher haemodialysis stressors than male CKD patients.

6. a. Female CKD patients undergoing haemodialysis will experience significantly higher haemodialysis stressors than male CKD patients.

6. b. Female haemodialysis patients will show significantly higher psychological symptoms than male CKD patients undergoing haemodialysis.

7. CKD patients who have spent seven (7) years or more on dialysis will have significantly higher psychological symptoms compared to those who have been on dialysis for up to one year

Research questions for study II

The following research questions were examined in this study:

(1) What were the experiences of haemodialysis patients when they were initially diagnosed?

(2) How do haemodialysis patients cope with their health condition?

(3) What cultural values help Ghanaian haemodialysis patients to cope with their condition?

(4) How does the faith of CKD patients help them in coping with their condition?

(5) What are the current cultural values or perceptions haemodialysis patients have towards their health?

Conceptual framework of the study

Figure 1: Proposed Conceptual Framework of the Study

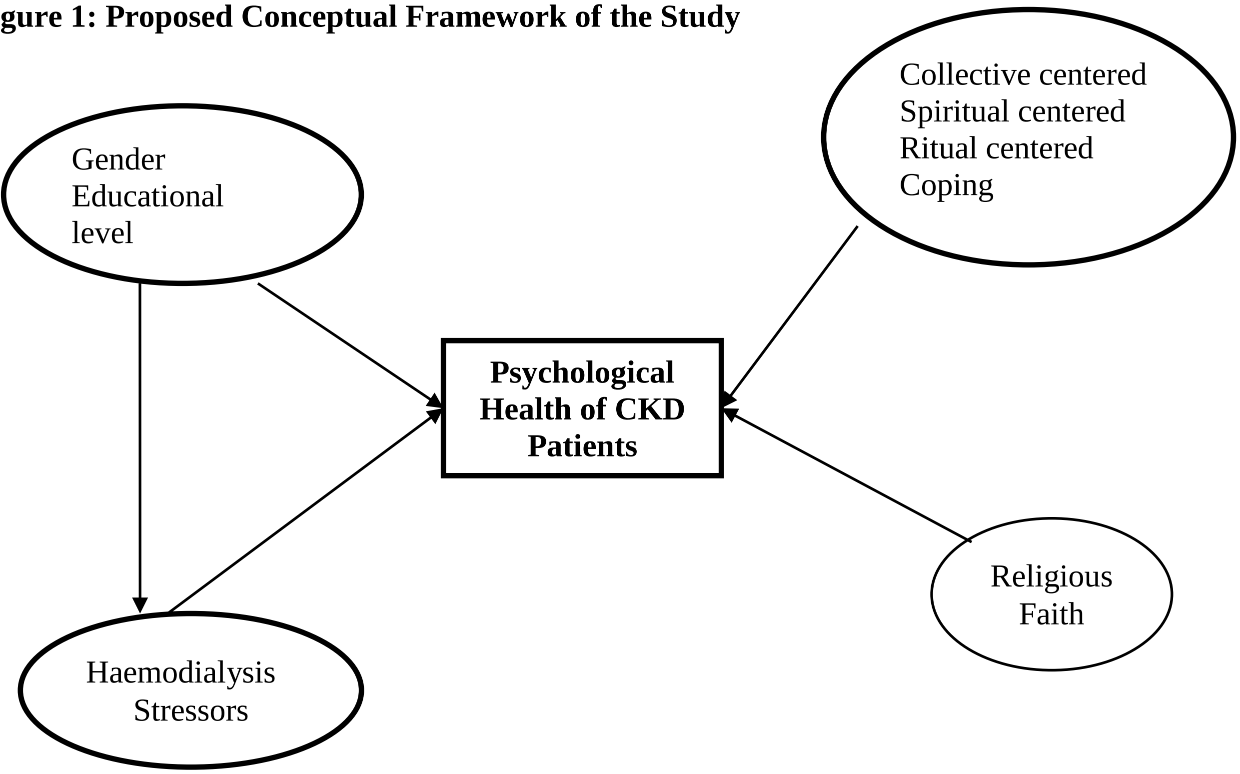

Figure 1 depicts the possible influence of religiosity, spirituality and coping on psychological health of CKD patients undergoing haemodialysis treatment. The variables mentioned in the framework have been proposed to predict the psychological health of CKD patients. Africultural coping systems such as collective centered coping, spiritual-centered coping and ritual-centered coping are expected to have stronger influence on the psychological health of CKD patients. Gender and educational level could impact the perception of haemodialysis stressors thereby determining the psychological health of CKD patients.

Operational definition of terms

Cultural values: Is defined in this study by items that make the total Santa Clara Strength of Religious Questionnaire (Plante & Boccaccini, 1997) and Spiritual-centered sub-scale of the Africultural Coping Systems Inventory (Utsey et al., 2000)

Culture is explained as the specific ways in which a group of people in a given society think, live and behave including their coping methods in times of distress and stressful chronic illness.

Coping methods are a collection of cognitive and behavioral personal mechanisms adopted by haemodialysis patients to minimize the effects, symptoms and complications of chronic kidney disease and situations which result in relieving the sufferer of the situations (Ghazanfari, 2008).

Demographic variables: These refer to age, sex, education and length of time on haemodialysis.

End-stage renal disease is an incapacitating, chronic condition in which the kidney failure is severe enough to require artificial means of excretion for survival (Finnegan-John & Thomas, 2013).

Religiosity is defined by religious wellbeing as scored on the 10 item Santa Clara Strength of Religious Faith Questionnaire in reference to God (Plante & Boccaccini, 1997)

Psychological health: This refers to a person's psychological symptoms dimension score on the Brief Symptoms Inventory (BSI-18) by Derogatis, (1993) which indicates whether there is a distressing symptom as well as the severity of symptoms. A distressing symptom is defined as a score or symptom dimension score. Psychological symptoms therefore include somatization, anxiety and depression as measured by the BSI-18.

Spirituality: It pertains to spiritual and religious wellbeing as measured by the Santa Clara Strength of Religious Faith Questionnaire (Plante & Boccaccini, 1997) and Spiritual-centered sub-scale of the Africultural Coping Systems Inventory (Utsey et al., 2000)

Study Variables:

Independent Variables: Santa Clara Religious Strength Question, Haemodialysis Stressor Scale and Africultural Coping Systems Inventory.

Dependent Variable: Psychological Health (emotional well-being, social well-being and psychological well-being).

Demographic Variables: Gender, Age, Marital Status, Religious background, Level of Education and length of time a patient has been on dialysis treatment.

CHAPTER THREE

STUDY ONE

Introduction

Methodology

This chapter comprised the research population, sample size determination, sampling technique setting of the study, study design and the inclusion and exclusion criteria. It also includes research instruments/measures, pilot study and the data collection procedure employed. Ethical issues, concerns and approval are also addressed as well as the procedure involved in data entry. The results of the quantitative study are also presented in this chapter.

Population. According to Polit, Beck, and Hungler (2001), target population is the totality of cases about which the researcher would like to make a generalization. Therefore, the population included all adult CKD patients in Ghana who were undergoing haemodialysis therapy. However, the accessible population comprised CKD patients who were receiving dialysis treatment at the Renal Unit of the Korle-Bu Teaching Hospital in Accra, Ghana. According to the head of the Renal Dialysis Unit at the Korle-Bu Teaching Hospital, Dr. Boima, 260 CKD patients were receiving dialysis treatment while 4000 people attended the clinic on out-patients department basis (Hospital source, 2018).

Sample size determination. The study recruited a sample size of 125 haemodialysis patients who met the eligibility criteria and agreed to participate in the study. This sample size was determined using the minimum sample size determination Formula by Tabachnic and Fidel (2007) as $N > 50 + 8M$; where M = Number of Independent Variables. Field (2009) recommends this sample size formula because it takes into account the effect size and statistical power at which the effects would be detected. According to Field (2009), a sample size of 200 is adequate in multiple regression analyses involving 20 predictors in order to obtain a medium effect size of .8 whiles a sample size of 100 is adequate when the predictors are 6 or less. Therefore, from this sample size determination, a sample size of 125 is sufficient for the performance of multiple regression analyses so as to obtain a medium size effect and a high statistical power of .80

Sampling technique. The purposive sampling technique was used to recruit 125 study participants at the Renal Unit of the Korle-Bu Teaching Hospital in Accra. Although a non-probability sampling technique, the researcher chose it because he aimed at recruiting participants with only chronic kidney disease (CKD) who are a group of individuals with specific disease characteristics. According to Bowling (2009), purposive sampling, also called judgmental sampling, is where respondents are selected because they have knowledge that is valuable to the research process. The investigator therefore used his judgment to select participants who have been diagnosed of kidney failure and are undergoing haemodialysis therapy. It is understandable to fall on a non-probabilistic sampling technique to recruit participants for a study when the population is "scarce" or uncommon and participants are difficult to obtain, like haemodialysis patients. However, it is advisable to use a better non-probabilistic sampling technique other than convenience sampling (Ofori & Dampson, 2011). It is for this reason that purposive sampling was used for the current study. The purpose of the study was not to generalize findings onto other populations but to predict relationships among variables studied for clinical application.

Study setting. The Dialysis Unit of the Korle-Bu Teaching Hospital in Accra, Ghana, was the location for this study. The rationale for choosing this site is that it runs dialysis clinic and patients of all ethnic backgrounds use the facility. Again, the Greater Accra region is the capital of Ghana and so encompasses people from all parts of the country. As a result, the various sections of the population cut across in terms of health and illness."Korle Bu" in the local 'Ga' dialect means 'the valley of the Korle lagoon'. It was established on October 9, 1923 by Governor Sir Gordon Guggisberg as a General Hospital to take care of the health needs of the indigenous people in the then Gold Coast. Korle-Bu Teaching hospital is the largest referral Centre in Ghana and third largest in Africa. It has over two thousand bed capacity (Korle-bu Teaching Hospital Annual Report, 2016).

Study design. Study I adopted the quantitative research design using the survey method because it was the most appropriate method to collect one-time data from a representative sample rather than every member of the population (McMillan & Schumacher, 2001). Survey is a data collection tool used to collect information about individuals. It is a self-report tool used to assess thoughts, opinions and feelings of study participants (Kendra, 2018). Quantitative methodology uses standardized instruments to capture the different views and lived experiences of research respondents. This could be fitted into standardized response categories to which numbers have been assigned. Creswell (2014) stated that quantitative research is an approach for testing objective theories by examining the relationship among variables. These variables in turn can be measured typically on instruments so that numbered data can be analyzed using statistical procedures. The cross-sectional survey method was chosen because the study aimed at examining the opinions, views and feelings of respondents about their experiences with chronic kidney disease. Although the questionnaire is not the only data collection technique in surveys, it is the most prominent (Saunders, Lewis, & Thornhill, 2009). Surveys are advantageous because they are dependable. The anonymity nature of surveys allows research respondents to answer questionnaires with more candid responses. To collect the most accurate data, open and honest respondents needed to provide answers which are the focus of survey method (DeFranzo, 2012).

It is worth noting that surveys are very flexible such that they can be administered in several ways including online surveys and face-to-face (DeFranzo, 2012). Furthermore, surveys provide high levels of representativeness because of the large numbers of people that answer them; data collected therefore possess a better description of the relative characteristics of the general population involved in the study (Kelley, Clark, Brown & Sitzia, 2003). Therefore, the cross-sectional survey design was regarded appropriate for this study because the research objectives and hypothesis tested in the study explored the relationship between independent variables and dependent variable. This design made it possible for the researcher to elicit information from CKD participants concerning their psychological health, coping and cultural values which help them in dealing with their condition to ascertain what they knew, thought and felt about the variables.

Procedure. Two ethical clearances were sought from two Institutional Review Boards. The Ethics Committee for the Humanities (ECH), University of Ghana, issued the first ethical clearance with reference ECH 080/17-18; and the Institutional Review Board (IRB) of the Korle-Bu Teaching Hospital issued ethics certificate number KBTH-IRB/0008/2018 to permit the study to be conducted. An introductory letter was also obtained from the Department of Psychology, University of Ghana and sent to the head, Department of Medicine, Korle-Bu Teaching hospital. This was to obtain permission to undertake the study at the Renal Unit of the hospital. Approval was granted and the Renal Unit staff members were duly informed. One staff nurse at the Dialysis Unit was recruited as research assistant and was given orientation in data collection techniques by use of questionnaire. The research assistant assisted the investigator with both the quantitative and qualitative data collection. The research assistant helped to recruit patients for the questionnaire administration each day. The nurse in charge of the unit and research assistant identified suitable patients by their ability to read and compared their characteristics with the inclusion and exclusion criteria, and solicited their participation. To participate in the study, the respondent must meet eligibility criteria of 18 years and above and must have been on haemodialysis for at least three months at the Korle-Bu Teaching hospital. Recruited respondents had been receiving haemodialysis treatment at least two times a week at the Dialysis Unit of the Korle-Bu Teaching hospital and could read and write in the English language and willingly volunteered to take part in the study.

The study however, excluded patients who could not write or read the questionnaires that are written in English. Respondents diagnosed with cognitive impairment by a physician were excluded since they could not provide accurate information to achieve the aim of the study. This was ensured by informing the doctor in charge of the unit that patients with cognitive impairment could not provide accurate information which would therefore affect the results of the study. Patients who underwent dialysis less than two (2) times a week were also excluded because they are not exposed to the same severity of stress as those who undergo the treatment for two times or more weekly. Lastly, severely ill and restless patients were excluded from the study in order not to cause them discomfort. The principal investigator and the research assistant (a nurse) approached prospective suitable patients, identified them by their ability to read and write, and matched their characteristics and solicited their participation. Respondents were told about what the study was about and the reason for the study. Patients who showed interest in taking part in the study gave verbal and written consent and were enrolled individually in the study during visits to the Renal Dialysis Unit of the Korle-Bu Teaching Hospital, in Accra, Ghana, between 15th May and 24th June, 2018.

All respondents who willingly volunteered to participate in the study were given brief verbal summary of the purpose of the study which included collecting data on their coping strategies. Every respondent was given some time to read the consent form and ask questions for clarification before signing it. Research personnel explained that some of them would be contacted later for a follow-up interview. Respondents were then given a copy of the questionnaire, moved to a relatively quiet place at the waiting area when possible and given further instructions for completion of the survey. Additional clarifications were given to respondents before answering started. Once completed, the questionnaire was collected and respondent was shown some appreciation. Each respondent was refreshed with some pastry, a bottle of mineral water, a bottle of malt and an envelope containing a handkerchief and a pen as a form of appreciation as spelt out in the protocol certificate obtained from the Institutional Review Board of the Korle-Bu Teaching Hospital. On the average, five questionnaires were filled per day. This is because many of the patients did not show interest in the study as they complained about having taken part in many studies but did not benefit anything from such studies.

In all, 130 questionnaires were administered within a period of 24 days. However, five did not qualify for analysis as they were not fully completed. This means a response rate of 96.15% was achieved for the data collection. The exclusion criteria of age below 18 years, inability to read and write in English language was strictly observed. There was no dropout in the quantitative study. However, during the interview sessions with one of the participants, he suddenly started experiencing shortness of breath and became restless. The interview was immediately discontinued and the nurse in charge's attention was drawn. The doctor was informed and immediate care was provided to him. The principle of do no harm to participants was adhered to strictly. Protection of human rights was ensured throughout the study in accordance with the APA's Ethics Code (2002), which stipulated in Standard 3.10, that "when obtaining informed consent from participants, Psychologists should inform participants about: (1) The purpose of the study, expected duration, and procedures; (2) Their right to decline to participate and to withdraw from the research even if participation has begun was strictly emphasized.

Pilot study. To determine the reliability of the Africultural Coping Systems Inventory to measure coping systems, Brief Symptom Inventory to measure psychological health, Haemodialysis Stressor Scale to measure stress associated with haemodialysis and the Santa Clara Strength of Religious Faith Questionnaire to measure religiosity/spirituality among haemodialysis patient in the Ghanaian population, a pilot study of twenty (20) haemodialysis patients was done at the Korle-Bu Teaching Hospital. A summary of the reliability statistics of the four major scales used on a total sample of 20 respondents subsequently presented.

Table 1

Reliability statistics (Cronbach's Alpha) of instruments for pilot study (N = 20)

Scale	α	No. of Items
1. Africultural Coping Systems Inventory	.91	30
2. Brief Symptom Inventory	.87	18
3. Haemodialysis Stressor Scale	.89	32
4. Strength of Religious Faith Questionnaire	.79	10

(N = 20 – Haemodialysis Patients)

It can be observed from Table 2 above that the reliability coefficients for the Africultural Coping Systems Inventory, Brief Symptom Inventory, Haemodialysis Stressor Scale and the Santa Clara Strength of Religious Faith Questionnaire in the pilot study are above .70. According to Wells and Wollack (2003), a Cronbach's alpha of .70 and above is considered reliable. This means that the instruments are high in reliability and therefore can be used for mass data collection among Haemodialysis patients in the National hospital (Wells & Wollack, 2003).

Participants. The study sample was made up of chronic kidney disease (CKD) patients who were undergoing haemodialysis treatment at the Korle-Bu Teaching Hospital. The inclusion criteria for participation in this study incorporated participants aged above 18 years and above and received haemodialysis treatment at least two times per week. Table1 shows the demographic characteristics of the respondents.

Table 2

Demographic characteristics of CKD respondents in the study (N=125)

Variables	**Frequency**	**Percentage (%)**
Sex		
Male	69	55.2
Female	56	44.8
Marital Status		
Single/Never Married	49	39.2
Married	63	50.4
Divorced/Separated	3	2.4
Widowed	10	8.0
Age Range		
20 – 29 years	34	27.2
30 – 39 years	30	24.0
40 – 49 years	36	28.8
50 – 59 years	18	14.4
60 years +	7	5.6
Religious background		
Christian	75	60.0
Moslem	37	29.6
Traditionalist	4	3.2
Others	9	7.2
Occupation		
Student	40	32.0
Government Worker	39	31.2
Employed in Private Sector	7	5.6
Self-Employed	11	8.8
Unemployed	28	22.4
Educational Level		
Secondary School Education	50	40.0
Polytechnic/Training College	41	32.8
Bachelor’s Degree	34	27.2
Total	125	100

(N = 125)

Demographic questionnaire. This included participant variables such as age, gender, religious affiliation, marital status, educational level and length of time a participant has been on dialysis treatment. Table 2represents the sex, marital status, age, religion, occupation and educational demographic characteristics of respondents. It could be observed that slightly more of the respondents within the research sample were men (69) representing 55.2% of the sample. However, 56 respondents representing 44.8% of the overall research sample were females. Again, it could be observed that 63 respondents representing 50.4% within the research sample were married while 49 (39.2%) were single.

Furthermore, most of the respondents (36) fell within the age bracket of 40 – 49 years which represents 28.8% of the total sample whereas5.6%of the respondents were between 60 years and above. Moreover, observation of the demographics showed that most of the haemodialysis patients 75 (60%) were Christians while 37 (29.9%) were Muslims. In terms of occupation, relatively equal number of participants were either students 40 (32%) or government workers 39 (31.2%) while 28 (22.4%) were unemployed. Additionally, 50 respondents representing 40% within the research sample were secondary school graduates and 27.2% had tertiary education. Over all, the demographic characteristics were fairly distributed to ensure fair and balanced comparisons.

Measures/instruments. The various variables in the study were measured using a number of questionnaires. Description of the questionnaires and their psychometric properties are presented subsequently:

Africultural coping systems inventory

The Africultural Coping Systems Inventory (ACSI) was developed by Utsey et al. (2000). It is intended to measure the culture-specific, spiritually based coping behaviors of African Americans in everyday stressful circumstances. The ACSI is a 30-item self-report measure that requires participants to describe a stressful event that they had experienced in the past week. The ACSI is categorized into four sub-domains including cognitive and emotional debriefing, spiritual-centered, collective-centered, and ritual-centered coping strategies (Utsey et al., 2000). This scale has a Likert response format of 4-points including:0 = did not use; 1 = used a little; 2 = used a lot and 3 = used a great deal.

The Cognitive and Emotional Debriefing subscale describes the adaptation response to environmental stressors developed out of centuries of racial oppression. The Spiritual-Centered Coping describes resilience derived from a sense of harmony with the universe. The Collective Coping describes the resolution and comfort sought from others or a group. The Ritual-Centered Coping describes the performance of rituals to maintain spiritual balance (Utsey et al., 2000). Once participants have completed all items of the ACSI, the items of each subscale is summed up to derive a total score for each category (i.e. cognitive/emotional debriefing, spiritual-centered, collective-centered, and ritual-centered) coping strategies (Utsey et al., 2000). The scoring scheme described below was used to derive total scores for each of the ACSI subscales. Cognitive /Emotional Debriefing included items like ‘I tried to forget about the situation; to keep from dealing with the situation; I found other things to keep me busy; etc.

Spiritual-Centered Coping consisted of items such as: I prayed that things would work themselves out; I left the matter in God’s hands; etc. Collective-Centered Coping items included; I got a group of family or friends together to help with the problem; I helped others with their problems; etc. Ritual Centered Coping contained items such as ‘I lit a candle for strength or guidance in dealing with the problem; I used a cross or other object for its special powers in dealing with the problem; etc. Utsey et al. (2000) reported Cronbach’s alphas of .71 to .80 for the four ACSI subscales. Anim (2015) reported Cronbach's alpha coefficient of .88 for the ACSI. It was .73, .78, .70, and .65 for the Cognitive/Emotional Debriefing, Spiritual-Centered Coping, Collective Coping, and Ritual Centered coping subscales respectively. The scale was therefore considered very reliable for the collection of data from the sample. In administering this instrument; respondents did not have any difficulty understanding the items of this scale. This was ascertained as respondents did not ask for clarifications of the items on the scale although they were told to do so before they started answering. The 30-item scale was not altered in any way. The original items on the scale were easily and clearly understood by respondents and answered the questions within seven minutes.

Santa Clara strength of religious faith questionnaire (SCSRFQ)

This was used to measure religiosity and spirituality of participants. This instrument was developed by Plante and Boccaccini (1997). The instrument is a ten-item questionnaire which measures an individual’s level of religious faith. Some examples of items on the scale are ‘I pray daily, “I look to my faith as a source of inspiration,” and “I look to my faith as providing meaning and purpose in my life.”This scale has a Likert response format of 4-points including; 1 = strongly disagree” “2 =disagree,” “3 = “agree” “4 = strongly agree.” Plante and Boccaccini (1997) reported Cronbach’s alpha and split-half reliability scores ranging from 0.90 to 0.96. The total religiosity score is obtained for each respondent by adding the responses on all the ten items with a maximum score of 40 and a minimum score of 10 with higher scores representing a higher level of religiosity and vice versa. Wnuk, (2017) reported psychometric properties of .73 to .88 of Santa Clara Religious Faith Questionnaire in a study among students in Poland and Chile. Administering this instrument was so quick and fast. Respondents did not have any challenge at all with answering this questionnaire. It was easily responded to within just a minute.

The brief symptom inventory (BSI-18)

The Brief Symptom Inventory (BSI-18) by Derogatis (2001) is the shortest and latest symptoms inventory of an integrated series of test instruments used for the measurement of psychological distress. It is designed to reflect the psychological symptoms of psychiatric, medical and non-patients. Originally, the BSI consisted of 53 items which covered nine symptom areas: Somatization, Obsessive-Compulsion, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic anxiety, Paranoid ideation and Psychoticism, and three global indices of distress, Global Severity Index, Positive Symptom Distress Index, and Positive Symptom Total. The global indices measure current or past level of symptomatology, intensity of symptoms, and number of reported symptoms respectively.

However, the BSI-18 presents only three scales or dimensions of the original instrument using the same scales of response including (1) Somatization which describes discomfort produced by perception of problems such as stomach upset, muscular problems, etc. (2) Depression—it describes s common depressive symptoms such as apathy, sadness, and thoughts of suicide; and (3) Anxiety - which talks about feelings of fear, general nervousness, and panic Derogatis (2001). The scoring scheme for the BSI-18 described as described was used to derive total scores for each of the dimensions.

Somatization dimension included items like ; Nervousness or shakiness inside, etc.

Dépression dimension included items such as ; Feeling that most people cannot be trusted, etc.

Anxiety dimension comprised items like ; Suddenly scared or afraid for no reason, etc.

In scoring this instrument, respondents rank each feeling item (e.g., your feelings being easily hurt) on a 5-point scale ranging from 1 (not at all) to 5 (extremely). The rankings describe the degree of distress in the previous seven days. The raw scores are converted to T scores with the aid of the BSI manual. Scores are interpreted by comparison to age-appropriate norms. Normative data are available for both clinical and non-clinical samples of adolescents (over 13 years) and adults (Derogatis, 1993; Derogatis& Spencer, (1982). Derogatis (2001) reported satisfactory indexes of reliability for the dimensions (0.74–0.84) and the general distress index (0.89). Internal consistency- reliability is also reported by other studies (e.g. Hoe & Brekke, 2008; Whitt & Howard, 2011). This scale which was used to assess psychological health of respondents did not go through any alteration just like the other scales. Respondents found no difficulty responding to the original items. It was answered within three minutes on the average.

Haemodialysis stressor scale (HSS)

The physiological stressors associated with haemodialysis treatment were measured using the Haemodialysis Stressor Scale (HSS). It was developed by Baldree, Murphy, & Powers (1982). It measures the intensity of stress experienced by haemodialysis patients. The HSS is a 32-item scale that describes the stressors which haemodialysis patients mostly face in their daily lives. It is a ‘‘4-point likert scale that ranges from (1-4)’’ with the highest score showing the greatest intensity of stress experienced. The 32-item scale is grouped into two stressor sub-scales which are psychosocial stressors (25-items) and physiological stressors (7-items). Each stressor was rated according to a likert type format which utilized a 4-point scale. The end points of the scale range from 'not at all' to a 'great deal'**.** Some of the items included ‘Limitation of food, ‘Cost of treatment/transportation to treatment/or other cost factors’, etc.

Patients were asked to rate the extent to which they were troubled by each of the 25 stressors by ticking a number 1-4. The respondent completed the questionnaire after the dialysis treatment, in the presence of the investigator. A total stressor scores as well as a psychosocial and physiological sub scores were derived by simple summation of the ratings. The higher scores indicate greater degree of stress. Dang et al. (2018) reported Cronbach's α of .82 to .91 and reliability coefficient of .91 to .94. No modification or change was made to this scale. The 32-item scale was responded to within approximately seven minutes without any complaints. All the questionnaires used in the study were organized logically and grouped by subject. Clear instructions were given and headings were included to make the questionnaires easily identifiable and easy to follow. The final omnibus questionnaire composed of four instruments and demographic questions. The responses to all the questionnaire items were on a Likert scale format.

Data Analyses. Quantitative data collected from the study participants were coded and entered into the Statistical Package for the Social Sciences (SPSS) software version 21.0. An SPSS expert undertook a cross-check of the entries to ensure that entries were done correctly. In order to identify participants for follow-up interviews, preliminary analysis was done on the Santa Clara Religious Strength Questionnaire weekly to identify participants who scored high on religiosity. High scorers on religiosity instrument were contacted for in-depth interviews for study two. Descriptive statistics was used to characterize the socio-demographic variables of the study. The data were analyzed using SPSS version 21.0 for windows. The level of significance was set at 95% ($p<0.05$). For the descriptive statistics mean, percentages, standard deviations and frequencies for the study variables were conducted. In order to understand the relationship between religiosity/ spirituality and psychological health and also the relationship between haemodialysis stressors and Africultural Coping of CKD participants, Pearson Product-Moment Correlation was carried out. Standard multiple regression was used to find out the extent to which each of the four aspects of Africultural Coping Systems Inventory accounted for variance (difference) in managing stressors. One-way ANOVA was used to assess the variance among the various education categories of the participants. Lastly, independent *t* test was used to find out the gender differences in psychological symptoms among haemodialysis.

Results

Preliminary Analysis. This aspect of the quantitative analysis examined the assumptions for the use of parametric tests. It consists of normality test, reliability and descriptive statistics for the variables investigated (i.e. Africultural Coping Systems Inventory to measure coping, Brief Symptom Inventory to measure psychological health, Haemodialysis Stressor Scale to measure stress associated with haemodialysis and the Santa Clara Strength of Religious Faith Questionnaire to measure religiosity and spirituality among haemodialysis patients). A total of 4 major scales were used.

Descriptive statistics. The summary of respondents on the Length of time they have been on Dialysis treatment.

Table 3

Summary of respondents' Length of time on Dialysis treatment (N = 125)

Length of Dialysis		**Frequency**	**Percentage**
Length of Dialysis	Less than 6 months	36	28.8
	6-12 months	34	27.2
	1 – 3 years	31	24.8
	4 – 6 years	17	13.6
	7 – 10 years	7	5.6
Total		125	100

(N = 125)

Table 3 represents the number of months or years haemodialysis patients have been on dialysis. It can be observed that 28.8% of the participants had been on dialysis for less than 6 months. It is also observed from the table that 27.2% had been on dialysis treatment for 6 – 12 months while 24.8% had been on the treatment for between 1 – 3 years. More so, 13.6% had been on dialysis for 4 – 6 years and 5.6% had been on dialysis for 7 – 10 years. These demographics therefore suggest that this cross-sectional study presents findings of haemodialysis patients with varied length of dialysis treatment.

Table 4

Reliability Statistics (Cronbach's Alpha) for Scales used in the study

Scale	**α**	**No. of Items**
1. Africultural Coping Systems Inventory	.73	30
1a. Cognitive/Emotional Debriefing	.78	11
1b. Spiritual-Centered Coping	.74	8
1c. Collective-Centered Coping	.71	8
1d. Ritual-Centered Coping	.70	3
2. Brief Symptom Inventory	.83	18
2a. Somatization	.79	6
2b. Depression	.85	6
2c. Anxiety	.89	6
3. Haemodialysis Stressor Scale	.90	32
4. Santa Clara Strength of Religious Faith	.71	10

N = 125

From Table 4, it can be observed that the reliability coefficients for the Africultural Coping Systems Inventory to measure coping systems, Brief Symptom Inventory to measure psychological health or symptoms, Haemodialysis Stressor Scale to measure stress associated with haemodialysis and the Santa Clara Strength of Religious Faith Questionnaire to measure religiosity/spirituality among haemodialysis patients as used for the analysis are beyond .70. According to Wells and Wollack (2003), a Cronbach's alpha of .70 and beyond can be considered reliable. This means that they are very high or good in reliability and for that matter can be used for testing the various hypotheses (Wells & Wollack, 2003).

Normality test. The normality assumption describes the degree to which the distribution of the sample data is consistent with a normal distribution (Fields, 2010). This was checked by inspecting the Skewness and Kurtosis values of all the variables. Results of the analysis are presented in Table 5.

Table 5

Summary of Means, Standard Deviation, Skewness and Kurtosis (N = 125)

Scale	Min	Max	Mean	SD	Skewness	Kurtosis
1. Africultural Coping Systems	30.00	58.00	48.04	6.62	-.77	.20
2. BSI Global Severity Index	2.00	13.00	6.69	3.05	.06	-.46
3. Haemodialysis Stressor Scale	51.00	103.00	89.31	12.94	-1.20	.41
4. Strength of Religious Faith	31.00	39.00	35.22	1.92	.01	-.64

(N = 125)

Table 5 shows results of the descriptive statistics for scales used (i.e. the Africultural Coping Systems Inventory to measure coping systems, Brief Symptom Inventory to measure psychological health or symptoms, Haemodialysis Stressor Scale to measure stress associated with haemodialysis and the Santa Clara Strength of Religious Faith Questionnaire to measure religiosity/spirituality among haemodialysis patients). The skewness and kurtosis scores above show that the scores are within the acceptability range of +1 to -1 respectively which illustrates that the data are normally distributed and therefore meet the condition for the use of parametric tests (Tabachnick & Fidell, 2007; Doane & Seward, 2011). Subsequently, these scores have been observed to fall within the acceptability range which showed no deviation from the normality requirement for testing of hypotheses

Correlation Matrix for IVs and DVs. The data was also checked for multi-collinearity, which is a situation where two variables strongly correlate (Field, 2010). Multicollinearity means that the correlation between two set of variables should not be .90 or more. In doing this, all the scales (i.e., the Africultural Coping Systems Inventory to measure coping systems, Brief Symptom Inventory to measure psychological health or symptoms, Haemodialysis Stressor Scale to measure stress associated with haemodialysis and the Santa Clara Strength of Religious Faith Questionnaire to measure religiosity/spirituality among haemodialysis patients) were correlated among themselves using Pearson's r correlation and results are presented in Table 6.

Table 6

Correlation Matrix of Scales and Subscales used in the study

Variables	1	2	3	4	5	6	7	8
1. AFCSI	-							
2. CED	.36*	-						
3. SCC	.49*	.12	-					
4. CCC	.81*	.41*	.08	-				
5. RCC	.57*	.16	.36*	.53*	-			
6. BSI/GSI	.53*	-.33*	.39*	.01	.20	-		
7. HSS	.47*	-.54*	.43*	.16	.47*	.77*	-	
8. SCSRFQ	.41*	.16	.19	.32*	.63*	.26*	.23*	-

* Significant at the .05 level of significance

ACSI = Africultural Coping Systems Inventory
SCC = Spiritual-Centered Coping
RCC = Ritual-Centered Coping
GSI = Global Severity Index
SCSRF= Santa Clara Strength of Religious Faith
CED= Cognitive/Emotional Debriefing
CCC= Collective-Centered Coping
BSI= Brief Symptom Inventory
HSS = Haemodialysis Stressor Scale

It is observed from Table 6 that positive correlation exists between Africultural coping, Brief Symptoms Inventory, haemodialysis stressors and Santa Clara Strength of religious faith questionnaire. This means that as any of these variables rises, the other variable also rises and as one variable decreases, the other variable also decreases.

Hypotheses testing. Seven (7) main hypotheses were tested in this study. They include (1) There will be a significant positive relationship between psychological symptoms and religiosity/spirituality; (2) There will be a significant positive correlation between haemodialysis stressors and Africultural coping; (3) Collective-centered coping will predict significant variance in haemodialysis stress than cognitive/emotional debriefing, spiritual-centered coping and ritual-centered coping; (4) CKD patients with Bachelor's education will have significantly less psychological symptoms compared to those with lesser educational qualification such as secondary education and polytechnic education; (5) CKD patients who are not married will have significantly higher psychological symptoms than those who are married; (6.a) Female CKD patients will obtain significantly higher haemodialysis stressors than males; (6.b). Female haemodialysis patients will show significantly higher psychological symptoms than males; and (7) Haemodialysis patients who have spent 7 – 10 years on dialysis will have significantly higher psychological symptoms than those with up to one-year length of treatment.

Hypothesis one. *There will be a significant positive relationship between psychological health and religiosity /spirituality.* The Pearson product moment correlation was used to test this hypothesis. The aim was to find out whether a relationship exists between the dependent variable (psychological health) and the independent variable (religiosity / spirituality) among CKD patients. Both variables are continuous variables (psychological health and religiosity/spirituality). From Table 6above (Summary of Pearson Product Moment Correlation – Matrix), it could be observed that the correlation coefficient between psychological and religiosity/spirituality among haemodialysis patients is .63 which is significant at the .05 level of significance since $P < .05$ alpha level. This therefore suggests that there is a significant positive correlation between psychological symptoms and religiosity/spirituality among haemodialysis patients. It could therefore be said that as psychological symptoms among haemodialysis patients increase or worsen, their religious faith increases. Therefore, hypothesis one which stated that *there will be a significant positive relationship between psychological symptoms and religiosity/spirituality''* was supported at the .05 level of significance.

Hypothesis two. *There will be a significant positive correlation between haemodialysis stressors and Africultural coping.* Statistically, the Pearson product moment correlation was used because there are two continuous variables – haemodialysis stressors and Africultural coping – and this line of assumption seeks to test the relationship between the two continuous variables. From Table 6 above, (Summary of Pearson Product Moment Correlation – Matrix), it could be observed that the correlation coefficient between haemodialysis stressors and Africultural coping among haemodialysis patients is .47 which is significant at the .05 level of significance since $P <$ .05 alpha level. This therefore suggests that there is a significant positive correlation between haemodialysis stressors and Africultural coping among haemodialysis patients. It could therefore be said that as haemodialysis stressors among CKD patients increase or worsen, their Africultural coping intensifies/increases. For that reason, hypothesis two which stated that, *"There will be a significant positive correlation between haemodialysis stressors and Africultural coping,"* was supported at the .05 level of significance.

Hypothesis three. Collective-centered coping will predict significantly higher variance in haemodialysis stress than cognitive/emotional debriefing, spiritual-centered coping and ritual-centered coping. This hypothesis was analyzed using the Standard Multiple Regression. Standard multiple regression was to find out the extent to which each of the four aspects of Africultural Coping Systems Inventory accounted for variance in stressors. According to Pallant (2011), to use multiple regressions, certain assumptions must be met. This includes appropriate sample size, normality and multicollinearity. First, the sample size determination for use of multiple regression is determined by Tabachnick and Fidel (2007) as "N > 50 + 8m where m = number of independent variables." For the purpose of this work, there are seven independent variables. This means that N > 50 + 8(7) = 106. This implies that for the analysis of hypothesis three (3) to be possible or valid, the sample size should not be less than 106 participants. It is interesting to note that 125 participants responded to the informed consent and participated in the study. For that matter, the sample size assumption was not violated. Furthermore, the data was checked for outliers and none was found.

Table 7

Summary of Regression Analysis for the Africultural Coping Systems used to manage Haemodialysis Stressors (N = 125)

Model	**Unstandardized**		**Standardized**			
	β	**SE**	**β**	**t**	***p***	**Part**
Model	75.18	15	.29	4.92	.00*	
Cognitive/Emotional Debrief.	4.39	.54	.74	8.11	.00*	.67
Spiritual-Centered Coping	2.95	.70	.13	4.21	.00*	.35
Collective Centered Coping	1.87	.77	.26	2.43	.02*	.20
Ritual-Centered Coping	2.98	1.01	.31	2.96	.01*	.24

***** Significant at the .05 level of significance

R = .862^a; R^2 = .743; Adjusted R^2 = .716; *P* = .000

a. Predictors: (Constant) Collective-centered coping, Cognitive/emotional debriefing, Spiritual-Centered coping and Ritual-centered coping.

b. Dependent Variable: Haemodialysis Stressors

According to Pallant (2011), it is essential to run a multicollinearity checks before falling on the results of a standard multiple regression to make inferences. Multicollinearity is the extent to which “the independent variables are highly correlated” (i.e. r = .90 and above). From Table 6 (Correlation matrix), it is observed that the relationship between all the aspects of Africultural coping variables is not more than .90. Under this, tolerance and VIF (Variance Inflation Factor) are calculated. Tolerance is "an indicator of how much of the variability of the specified independent is not explained by the other independent variables in the model and is calculated using the formula $1–R^2$ for each variable" (Pallant, 2011). If this value is very small (less than .10) it indicates that the multiple correlation with other variables is high, suggesting the possibility of multicollinearity. This assumption was not violated because from the data Tolerance = 1 - .74 = .26. Moreover, the other value given is the VIF (Variance inflation factor), which is just the inverse of the Tolerance value (1 divided by Tolerance). VIF values "above 10 would be a concern here, indicating multicollinearity" (Pallant, 2011). This assumption was not violated because from the data VIF = 1 ÷ .26 = 3.85; which is not more than 10.

From Table 7, it is observed that $R^2 = .743$ which means that the aspects of Africultural coping systems such as Collective-centered coping, Cognitive/emotional debriefing, Spiritual-centered coping and Ritual-centered coping account for (.743 x 100) = 74.3% of the variance in haemodialysis stressors. This relationship can be trusted because the model was significant $P(.00) < .05$ level of significance. However, to find the extent to which each of the elements of Africultural coping systems account for variance in haemodialysis stressors, it is essential to refer to beta values in Table 7. It can also be observed from Table 7 above that Cognitive/Emotional Debriefing is the best coping method helpful to CKD patients to manage haemodialysis stressors ($\beta = .74$; $t = 8.11$; $P < .05$). Furthermore, the Spiritual-centered coping is the second-best coping strategy used by haemodialysis patients to manage haemodialysis stressors ($\beta = .13$; $t = 4.21$; $P < .05$).

Moreover, Ritual-Centered Coping is the third best coping strategy used by haemodialysis patients to manage haemodialysis stressors ($\beta = .31$; $t = 2.96$; $P < .05$). The Collective Centered Coping is the least significant coping strategy used by Ghanaian CKD patients to manage haemodialysis stressors ($\beta = .13$; $t = 4.21$; $P < .05$). In this case, to get the unique contribution of each of the Africultural coping systems in managing haemodialysis stressors among patients, Table 7 shows a part relationship of .67 for cognitive/emotional debriefing. According to Tabachnick and Fidel (2007), this is achieved by finding a square of the part relationship and multiplied by 100 to find its percentage value. This implies that cognitive/emotional debriefing accounts for ($.67^2 = 0.45 \times 100$) = 45% of coping strategy used to manage haemodialysis stressors by Ghanaian respondents. Again, Spiritual Centered coping accounts for ($.35^2 = 0.12 \times 100$) = 12% of coping strategy used to manage haemodialysis stressors. Furthermore, Ritual Centered coping accounts for ($.24^2 = 0.057 \times 100$) = 5.7% of coping strategy used to manage haemodialysis stressors. Lastly, Collective Centered coping accounts for ($.20^2 = 0.04 \times 100$) = 4% of coping strategy used to manage haemodialysis stressors. In all, cognitive/emotional debriefing with its 45% variance is the most used Africultural Coping System as this is followed in order of use by Spiritual centered, ritual centered and collective centered coping. For that matter, hypothesis three which stated that, “Collective-centered coping will predict significantly higher variance in haemodialysis stress than cognitive/emotional debriefing, spiritual-centered coping and ritual-centered coping” is not supported, although at the .05 level of significance it predicted some level of variance in haemodialysis stressors but not more than the other Africultural coping systems elements.

Hypothesis four. This stated that haemodialysis patients with Bachelor’s education will have significantly less psychological symptoms than those with lower educational qualification such as polytechnic and secondary education. Statistically, One-Way ANOVA test was used as the appropriate statistical analysis because there is one discontinuous independent variable – Educational Background – with three levels (i.e. SHS, Polytechnic/training College and

Bachelor’s degree) being measured against psychological symptoms. Table 8 contains a summary of the One-Way ANOVA analysis.

Table 8

Summary of One-Way ANOVA indicating Differences in Psychological Symptoms based on Educational Background of CKD Patients (N = 125)

Psychological Symptoms	**Sum of Squares**	**df**	**MS**	**F**	***p***
Between Groups	123.47	2	61.74	7.33	.00*
Within Groups	1027.03	122	8.42		
Total	1150.50	124			

** Significant at the .05 level of significance*

A one-way analysis of variance was carried out to compare the means based on the educational background of the respondents. The results in Table 8 indicate a statistically significant difference exists among the various age groups. $F_{[2, 122]} = 7.33$, $p < .05$.

To determine the differences in the groups, post-hoc analysis was conducted. Table 9 presents the summary results.

Table 9

Summary of One-Way ANOVA and Post-hoc indicating Differences in Psychological Symptoms based on Educational Background of CKD Patients (N = 125)

Variables	**SHS**	**Polytechnic**	**Bachelor**	**F-ratio**	***p***	**Post-Hoc**
Somatization	2.19 (SD=.66)	1.78 (SD=.55)	2.13 (SD=.49)	6.31	.00*	SHS>P B>P
Anxiety	2.41 (SD=1.89)	1.45 (SD=.87)	1.94 (SD=.77)	5.65	.00*	SHS>P
Depression	3.17 (SD=1.82)	2.20 (SD=1.38)	2.57 (SD=1.08)	4.76	.01*	SHS>P
Global Severity Index	2.59 (SD=3.43)	1.81 (SD=2.73)	2.21 (SD=2.17)	7.33	.00*	SHS>P

* Significant at the .05 level of significance (df = 2,122)

SHS = Senior High School. P=Polytechnic. B=Bachelor

From Table 9, it can be observed that when it comes to psychological symptoms (Global Severity Index), the differences between haemodialysis patients who have Secondary School education (M = 2.29; SD = 3.43), Polytechnic/Training College Education (M = 1.81; SD = 2.73), and Bachelor's Degree (M = 2.21; SD = 2.17) on psychological symptoms was significant *P* (.00; F = 7.33; df = 2,122) < .05. Taking a critical look at Table 9, it can be said that at least the differences in any two of the means in terms of psychological symptoms based on educational background is significant. In view of that a Tukey analysis was used for the post-hoc multiple comparisons since ANOVA Tables do not show intergroup differences.It can be observed that there was a significant difference in psychological symptoms among haemodialysis patients based on educational background. On Somatization, both those with SHS and Bachelor's education had significantly higher Somatization symptoms than those with Polytechnic Education. Again, on Anxiety, haemodialysis patients with SHS education had significantly higher anxiety symptoms than those with Polytechnic Education.

Differences were thus observed between those who had secondary school education and polytechnic education (MD = -2.34; $P < .05$) but not Bachelor's Degree on psychological symptoms (Global Severity Index). This implies that haemodialysis patients with secondary school education have significantly higher psychological symptoms than those with polytechnic or training college education. For that matter, hypothesis 4 which stated that haemodialysis patients with Bachelor's education would have significantly less psychological symptoms compared to those with lesser educational qualification such as secondary education and polytechnic education was not supported at the .05 alpha level. However, haemodialysis patients with polytechnic/training college education had significantly less psychological symptoms compared to those with secondary school education.

Hypothesis five. Hypothesis Five (5) stated that haemodialysis patients who are not married will have significantly higher psychological symptoms compared to those who are married. Statistically, the Independent *t* test was used as the appropriate statistical analysis since there is one discontinuous independent variable – marital status– with two levels (i.e. married and unmarried haemodialysis patients) being measured against one dependent variable (psychological symptoms). Table 10 contains a summary of the Independent *t* test.

Table 10

Summary of Independent t test indicating Differences in Psychological Symptoms

Psyc. Symptoms	**Unmarried** **N= 62**	**Married** **N=63**	***t* (df=123)**	***p***
Somatization	2.11 (SD=.55)	1.97 (SD=.65)	1.37	.17
Anxiety	2.56 (SD=1.61)	1.38 (SD=.82)	5.18	.00*
Depression	3.30 (SD=1.55)	2.09 (SD=1.32)	4.67	.00*
Global Severity Index	7.97 (SD=2.89)	5.43 (SD=2.66)	5.117	.00*

* Significant at the .05 level of significance

From Table 10, it is observed that the differences between Unmarried (M = 7.97; SD = 2.89) and Married haemodialysis patients (M = 5.43; SD = 2.66) in psychological symptoms (Global Severity Index) was significant *P* (.00; t = 5.117; df = 123) < .05. Taking a critical look at Table 10, it could be seen that the mean of unmarried haemodialysis patients in psychological symptoms is really higher especially for such variables as anxiety and depression than that of those who are married and the difference is significant. This means that, married haemodialysis patients experience less psychological symptoms than unmarried haemodialysis patients do. For that matter, hypothesis five which stated that haemodialysis patients who are unmarried will have significantly higher psychological symptoms than those who are married is supported at the .05 level of significance.

Hypothesis six (6a). This hypothesis stated that female haemodialysis patients will have significantly higher haemodialysis stressors than males. Statistically, the Independent *t* test was used as the appropriate statistical analysis since there is one discontinuous independent variable

– gender – with two levels (i.e. male and female haemodialysis patients) being measured against one dependent variable (haemodialysis stressors) Table11 contains a summary of the Independent *t* test.

Table 11

Summary of Independent t test indicating Gender Differences in haemodialysis stressors among haemodialysis patients (N = 125)

Variable	**Males** *N=69*	**Females** *N=56*	***t*(df=123)**	***p***
Haemodialysis Stressors	85.70 (SD=13.87)	93.77 (SD=10.14)	-3.64	.00*

* Significant at the .05 level of significance

From Table 11, it can be observed that the differences between male (M = 85.70; SD = 13.87) and female haemodialysis patients (M = 93.77; SD = 10.14) in haemodialysis stressors was significant *P* (.00; t = -3.64; df = 123) < .05. Taking a critical look at Table 3.10, it could be seen that the mean of female haemodialysis patients in haemodialysis stressors is really higher than that of males and the difference is significant. This means that female haemodialysis patients experience more haemodialysis stressors than male haemodialysis patients do. For that matter, hypothesis 6a which stated that, “Female haemodialysis patients will have significantly higher haemodialysis stressors than males” is supported at the .05 level of significance.

Hypothesis six (6b). Hypothesis six (6b*)* stated that female haemodialysis patients will have significantly higher psychological symptoms than males. Statistically, the Independent *t* test was used as the appropriate statistical analysis since there is one discontinuous independent variable – gender – with two levels (i.e. male and female haemodialysis patients) being measured against one dependent variable (psychological health). Table 12 contains a summary of the Independent *t* test.

Table 12

Summary of Independent t test indicating Gender Differences in psychological symptoms among haemodialysis patients (N = 125)

Psyc. Symptoms	**Males** **N=69**	**Females** **N=56**	***t* (df=123)**	***p***
Somatization	1.89 (SD=.58)	2.22 (SD=.59)	-3.18	.00*
Anxiety	2.05 (SD=1.73)	1.86 (SD=.86)	.72	.47
Depression	2.29 (SD=1.81)	2.81 (SD=1.18)	-.8	.41
Global Severity Index	6.52 (SD=3.44)	6.90 (SD=2.48)	-.69	.49

* Significant at the .05 level of significance

From Table 12, it can be observed that the differences between male (M = 6.52; SD = 3.44) and female haemodialysis patients (M = 6.90; SD = 2.48) in psychological symptoms (Global Severity Index) was not significant *P* (.49; t = -.69; df = 123) > .05. Taking a critical look at Table 12, it could be observed that Females haemodialysis patients (M = 2.22; SD = .59) had significantly higher Somatization symptoms than males (M = 1.89; SD = .58); however, all other symptoms showed no significant differences between males and females. It could also be seen that the mean of female haemodialysis patients in psychological symptoms is slightly higher than that of males but the difference is not significant. This means that female haemodialysis patients and male haemodialysis patients do experience relatively similar forms of psychological symptoms. For that matter hypothesis 6b which stated that female haemodialysis patients will have significantly higher psychological symptoms than males was not supported at the .05 level of significance.

Hypothesis seven. This hypothesis stated that haemodialysis patients who have spent above 1 year on dialysis will have significantly higher psychological symptoms compared to those with lesser length of treatment such as less than 6 months and 6 months to 1 year. Statistically, the One-Way ANOVA test was used as the appropriate statistical analysis since there is one discontinuous independent variable – Length of Dialysis – with three levels (i.e. less than 6 months, 6 – 12 months and above 1 year) being measured against psychological symptoms. Table 13 contains a summary of the One-Way ANOVA analysis and Post Hoc.

Table 13

Summary of One-Way ANOVA and Post-hoc indicating Differences in Psychological Symptoms based on Length of being Dialysis (N = 125)

Variables	**< 6 months.**	**6-12 Months.**	**Above 1 year.**	**F-ratio**	***p***	**Post-Hoc**
Somatization	2.40 (SD=.30)	2.04 (SD=.68)	1.80 (SD=.59)	13.0	. 00*	<6months>6-12month <6months>above 1 yr
Anxiety	2.34 (SD=.26)	1.89 (SD=.85)	1.76(SD=1.98)	1.9	.15	
Depression	3.84 (SD=1.65)	2.63(SD=1.17)	1.97(SD=1.24)	20.86.	00*	<6months>6-12month <6months>above 1 yr 6-12month>above1yr
Global Severity Index	8.58 (SD=1.88)	6.57 (SD=2.54)	5.53(SD=3.36)	13.11.	00*	<6months>6-12month <6months>above 1 yr 6-12month>above1yr

* Significant at the .05 level of significance (df = 2,122)

From Table 13, it can be observed that the differences between haemodialysis patients who have spent less than 6 months on Dialysis (M = 8.58; SD = 1.88), 6 – 12 months (M = 6.57; SD = 2.54) and above 1 year (M = 5.53; SD = 3.36) on psychological symptoms was significant *P* (.00; F = 13.11; df = 2,122) < .05. Taking a critical look at the Table 3.12, it can be said that at least the differences in any two of the means in terms of psychological symptoms based on length of dialysis is significant. In view of that a Tukey analysis was used for the post-hoc multiple comparisons. It can be observed that there was a significant difference in psychological symptoms among haemodialysis patients based on length of dialysis especially on the somatization and depression symptoms but not anxiety. Differences were thus observed between those who have spent Above 1 year in dialysis and those who have spent less than 6 months (*P* < .05). This implies that haemodialysis patients who have spent less than 6 months on dialysis treatment have significantly higher psychological symptoms than those who have spent Above 1 year. It could also be observed that haemodialysis patients who have spent 6 months – 12 months have significantly higher psychological symptoms than those who have spent Above 1 year (*P* < .05). For that reason, hypothesis 7 which stated that, “Haemodialysis patients who have spent above 1 year on dialysis will have significantly higher psychological symptoms compared to those with lesser length of duration of treatment such as less than 6 months and 6 months to 1 year” was not supported at the .05 alpha level.

Summary. This present study has shown that a significant positive correlation exists between psychological symptoms and religiosity/spirituality among haemodialysis patients. For that matter, as psychological symptoms among haemodialysis patients rise or worsen their religious faith also increases and vice versa. Again, a significant positive correlation was found between haemodialysis stressors and Africultural coping among haemodialysis patients. It could therefore be said that as haemodialysis stressors among haemodialysis patients rise or worsen, their Africultural coping intensifies/increases and vice versa. Among the Africultural coping systems, cognitive/emotional debriefing is the most often used predicting 45% variance in haemodialysis stressors. This means that in moments of haemodialysis stress, patients need more of cognitive/emotional debriefing (i.e. explaining the condition to patient and offering reassurance) to help them cope effectively. Other useful elements of coping as found include Spiritual centered, ritual centered and collective centered coping respectively.

Haemodialysis patients with polytechnic/training college education have significantly less psychological symptoms compared to those with secondary school education. However, haemodialysis patients who are married have a significantly lesser psychological symptoms than those who are unmarried. In terms of gender, female haemodialysis patients experience more haemodialysis stressors than male haemodialysis patients do. However, there is no significant difference between male and female haemodialysis patients when it comes to psychological symptoms. More so, haemodialysis patients who have spent above 1 year have significantly lesser psychological symptoms compared to those with lesser length of treatment such as less than 6 months and 6 months to 1 year.

To determine the presence of somatization, anxiety and depression in the present study, the scores of participants on somatization, anxiety and depression dimensions were compared to the norms reported by Derogatis and Melisaratos (1983).Derogatis and Melisaratos (1983) reported that the norm for in-patients on the BSI for Somatization was 1.01, for outpatients is 0.83 and 0.29 for non-patients. Comparing the norms to the present study, Somatization scores were 1.78, 2.13 and 2.19 respectively for Polytechnic, Bachelors and Senior High educations for haemodialysis patients. It is therefore clear haemodialysis patients in Ghana experience high levels of Somatization symptoms. Similarly, Somatization is very high in the present study for both married and unmarried CKD patients whose Somatization scores were between 1.97 and 2.11 respectively. Regarding gender, the scores indicate that female haemodialysis patients in Ghana experience more Somatization symptoms (2.22) compared to male haemodialysis patients whose Somatization score is 1.89. On the anxiety dimension, Derogatis and Melisaratos (1993) reported the norms for Anxiety on BSI as 1.70 for both in-patients and out-patients and 0.35 for non-patients.

Comparing these norms to that of the present study whereby anxiety is 1.94 and 2.41 for haemodialysis patients with Bachelor's education and SHS education respectively, it could be said that, anxiety levels is very high for these groups. However, it is not high for those with polytechnic education since they had a mean of 1.45. Similarly, anxiety is very high in the present study for unmarried haemodialysis patients. Their anxiety mean score was 2.56 but it was low for married haemodialysis patients since their anxiety mean score was 1.38. In terms of gender, male haemodialysis patients experienced more anxiety since their mean score was 2.05 compared to 1.86 mean score of female haemodialysis patients.

Concerning depression, Derogatis and Melisaratos (1983) reported the norms for in-patients on the BSI for depression to be 1.77, for out-patients is 1.80 and 0.28 for non-patients. Comparing the norm to that of the present study, depression scores were 3.17 for participants with SHS education, 2.57 for Bachelor's and 2.20 for haemodialysis patients with polytechnic education. Following from that it could be concluded that haemodialysis patients in Ghana experience high levels of depression which calls for serious attention. Similarly, depression is very high in the present study for both married and unmarried haemodialysis patients whose depression scores were 2.09 and 3.30 respectively. Finally, regarding gender, female haemodialysis patients experience slightly higher depressive symptoms (i.e. 2.81) than male haemodialysis patients whose score is 2.29.

CHAPTER FOUR

STUDY TWO

Introduction

The purpose of study two was to explore the psychosocial and cultural coping experiences of adult CKD participants within the Ghanaian socio-cultural setting. The lived-experiences of Ghanaians living with CKD who were undergoing haemodialysis treatment at the Dialysis Unit of the Korle—Bu Teaching Hospital were explored. It also aimed at exploring the phenomenological aspects of cultural values of spirituality/religiosity, psychological health and coping with CKD in the Ghanaian cultural context. Qualitative study was employed to help understand from the perspective of the CKD participants how cultural factors of spirituality and religiosity helped them in coping with their condition. This chapter also presents the methodology and results of study two. It outlines the rationale for a qualitative study and the qualitative methodology employed.

Methodology. The phenomenological qualitative research methodology was adopted for this study. Phenomenological qualitative research design explores the lived- experiences of people involved in a social issue being investigated (Astalin, 2013).This qualitative approach helped the researcher to use naturalistic methods to understand the experiences of living with CKD, through meticulous collection and analysis of narrations. Information related to psychological health, coping and religiosity and spirituality were directly obtained from Ghanaian adults living with the CKD phenomenon for in-depth analysis through one-on-one interviews with the participants.

Participant selection. The purposive sampling technique was used as the most appropriate method to select participants. This sampling technique was used because the researcher needed only cases that were in line with the purpose of the study. According to Polit, Beck and Hungler (2001), purposive sampling is a non-probability sampling technique whereby the researcher selects study participants based on personal judgment about participants who would be most suitable to answer the research questions. Bowling (2009) held the view that convenience, purposive and snowball sampling techniques are generally restricted to qualitative research methods.

Sample size for study two. Study two recruited a sub-sample size of 15 haemodialysis patients who met the eligibility criteria and agreed to take part in the interview process. The sample size determination for study two was guided by the concept of saturation. Data saturation is achieved when no new responses are forthcoming from participants or when no new patterns or themes are emerging from the interview (O' Reilly & Parker, 2012). Bowen (2008) argues that the focus of qualitative inquiry is not about the sample size but rather about sample adequacy since generalization of findings is not the aim. Therefore, the adequacy of sample size is justified when saturation is achieved where no new information is coming from study participants. The researcher therefore discontinued the interviews when he realized that no new information was forthcoming from participants. Some of the questions asked during the interview session included the following:

1. What does CKD mean to you?
2. How did you feel when you were diagnosed with this condition?
3. What does spirituality mean to you? What about religiosity?

4. Does your belief system play any role in coping with your condition?
5. Do spirituality and religiosity have any effects on your mental health?
6. How do you cope with this condition

Interview guide. The investigator developed the guide based on the objectives of the study. The questions and their follow-ups were modified and re-structured by the principal supervisor before it was used for the pilot study. The interview guide was tested on five haemodialysis volunteers at the Dialysis Unit of the Korle-Bu Teaching Hospital in Accra where the study took place. It contained items that took between 30- 40 minutes to answer. The interview guide consisted of five main questions based on the theoretical framework, with probing questions. Some questions touched on what CKD meant to the participant, how they coped with the condition and how their choice of coping affected their psychological health as well as what Ghanaian cultural values meant to participants.

The interview process. A semi-structured interview guide (Appendix B) was used for the collection of the qualitative data. The researcher developed the interview guide with the help of the principal supervisor to reflect the aims and objectives of the study. The questions in the interview guide were therefore open-ended and allowed for further probing of issues. The questions covered psychological health, coping and religiosity and spirituality. The items were arranged in a logical order in the research topic and theoretical frameworks. Once a participant willingly agreed to be interviewed, he/she moved with the researcher to the nurses' coffee room given out by the nurse-in-charge for that purpose. The researcher then introduced himself and gave the interviewee an overview of the study including the purpose of the study. The participant was also assured of confidentiality. He/she was then given the consent form(Appendix B)and given some time to read through before signing. After reading, the participant was asked for questions and clarification. When the interviewee gave indication of satisfaction with the consent form, permission was then sought to audiotape the interview to be transcribed verbatim later. Participants were also told they could withdraw from the interview anytime they felt so without any consequence. They were also told to freely express their feelings if they felt the interview was probing too much into their personal lives. When a participant gave verbal consent of full participation, he/she was then given the consent form to sign for the interview to get underway. The researcher used an audiotape to capture voice data and also recorded key points with pen in the field-notes notebook which consisted of observations made by the researcher during the interviews. All the interviews were conducted in the English language.

The interviews lasted between 30-50 minutes. In cases where participant's narrative was not clear enough, the research probed further for clarity which participants did willingly. Most of the interviews were conducted before the participants were put on the dialysis machine while a few were done after they were discharged and declared fit to go home by the doctor. These arrangements were the wish of the participants. One participant dropped out in the course of the interview. Participant suddenly became restless and started experiencing shortness of breath. The interview was immediately discontinued and the nurse-in-charge's attention was drawn. He was immediately attended to and emergency medical service was provided to him. At the end of the main interview session, a debriefing session was also held with them. During this session, participants shared their feelings about their participation in the interviews with the researcher. They were all happy and felt satisfied for sharing their experiences with CKD and dialysis treatment with someone who was concerned about their condition. They were appreciative and grateful for the opportunity given them to share their experiences with the 'world' noting that a problem shared is half-solved. They made a passionate appeal to the government to cover kidney disease under the National Health Insurance Scheme and also prayed that the outcome of this study would be beneficial to CKD patients in the future.

Finally, each participant was refreshed with bottled water, can malt, meat pie and shown appreciation with an envelope containing a handkerchief and a pen. Averagely, three participants were interviewed in a day. Six days were used to conduct the whole interview. It is worth noting that many of the CKD patients approached to take part in the study declined claiming that they had participated in a number of studies without deriving any benefit from such studies.

Data credibility and trustworthiness. To establish credibility and trustworthiness of the data, the member-checking technique was employed. This is a technique in which feeding back data, analytical categories, interpretations and conclusions are discussed with participants from whom data was originally collected. This is to allow participants clarify what their intentions were, correct errors in the interpretation, and provide additional information if necessary (Korstjens & Moser 2018).After the verbatim transcription of the data, the researcher and his assistant went back to participants and shared the whole information with them to ensure that the information was exactly what they intended. The member-checking was done at short intervals to ensure that participant did not lose memory of the information they had given out. Member-checking was done after every five interviews. A total of three member-checking were conducted.

Qualitative Data analysis technique. Thematic analysis approach was used to analyze the qualitative data collected from the participants. According to Braun and Clarke (2006), thematic analysis is a process of identifying patterns from the narrations collected from the study participants and putting them into various themes as emerged from the interviews. The analysis was guided by Braun and Clarke (2006) six-phase guide for qualitative analysis which included familiarization with the data, generation of initial codes, searching through the data thoroughly for themes, reviewing the themes, defining the themes and finally conducting the write-up.

The responses which were audio-recorded were transcribed verbatim at the end of each interview day. This was to ensure safety of the data. Responses to the same questions were analyzed, looking for similarities and differences in the responses. The researcher read and assessed the key themes that emerged from the responses to the same questions for all participants. This entailed reading responses to each question for each transcript, making notes of important words, phrases and statements that recurred and writing exploratory notes in the transcripts. This helped to familiarize the researcher with the data and generation of initial codes. It was then followed by generation of the themes. Themes are patterns which capture something noteworthy or important about the data (Braun & Clarke, 2006). Preliminary themes developed were subsequently reviewed, modified and reduced to five major themes after a second opinion was sought. These themes included psychological factors, financial factors, physical factors, cognitive spirituality and practical/ ritual-spirituality. A second opinion was employed in order to ensure convergence, confirmation, validation and credibility of the analysis. This was to corroborate and validate the themes generated. It was also to help identify inconsistencies if any in the analysis and ensure trustworthiness of the results.

Results

The themes that were generated from analyzing the interview are presented using participants' own verbal accounts. The thematic analysis and findings are also presented.

Characteristics of participants. In all, 15 participants were interviewed, comprising eight (8) females and seven (7) males. Their ages ranged from 22 to 58 years. Eight of the participants were married while six had never been married. Eleven were Christians while three were Muslims and twelve had tertiary education. Eight of the participants were employed whereas seven were not employed and two were students. Table 14 indicates the detail profile of participants.

Table 14

Demographic information of participants - interviews

Part.	Sex	Age	Marital Status	Education	Occupation	Length of Dialysis	Religion
P1	Male	28.00	Married	Tertiary	Student	1 year	Christian
P2	Female	22.00	Married	Senior High	Student	3 years	Christian
P3	Female	40.00	Married	Senior High	Government Worker	6 months	Moslem
P4	Female	38.00	Married	Tertiary	Unemployed	9 months	Christian
P5	Female	35.00	Single	Tertiary	Government Worker	3 years	Christian
P6	Male	29.00	Married	Tertiary	Unemployed	4 months	Christian
P7	Female	25.00	Single	Secondary School	Unemployed	3 years	Moslem
P8	Male	53.00	Married	Tertiary	Self-Employed	6 years	Traditionalist
P9	Male	28.00	Single	Tertiary	Unemployed in	2 years	Christian
P10	Female	31.00	Single	Tertiary	Student	1 year	Christian
P11	Male	29.00	Single	Tertiary	Employed in Private Sector	3 months	Moslem
P12	Female	49.00	Married	Tertiary	Employed in Private Sector	2 years	Christian
P13	Female	36.00	Single	Tertiary	Government Worker	5 years	Christian
P14	Male	58.00	Married	Tertiary	Unemployed	7 years	Christian
P15	Male	39.00	Divorced	Tertiary	Employed in Private Sector	11months	Christian

* Note: P = Participant

Findings. The results are presented in five sections based on the five major themes generated from the data. These include psychological health factors; financial factors; physiological factors; religiosity/spirituality and practical/ritual spirituality. In each section, the results are briefly discussed under the appropriate theme and quotes from participants are presented for illustration. Participants are identified by numbers, corresponding to the detailed participant profiles as indicated in Table 14. The main and subthemes generated from the data are also presented in Table 15.

Table 15

Summary of main themes and subthemes derived from the qualitative data

Main Theme	Subtheme	Example of quote
Psychological health factors	Extreme sadness/depression Uncertainty Stigmatization Despair	*Honestly, I felt very, very bad. I almost committed suicide.* *I was really depressed*
Finance factors	Cost of treatment	*It is expensive and I pray that the government will take some of cost.*
Physiological factors	Weakness Discomfort in body	*I feel feeble and weak after the treatment to the extent that sometimes I can't even sleep.*
Religiosity/spirituality factors	Hope of treatment Expectation of miraculous healing	*My relationships with God, my hope in Christ my savior, and by God's grace, I know there is hope for me one day*
Practical/ritual spirituality	Scriptural motivation Prayer and fasting	*I fast and pray every week on my day of birth using anointing oil fortified spiritually by my pastor.*

Psychological health factors. These factors had to do with issues which bothered on how participants felt about their condition. Four sub-themes were generated from this major theme. They included extreme sadness/depression, uncertainty, stigmatization and despair. The following responses by five participants indicated that the psychological health of CKD participants was negatively impacted when they were initially diagnosed and lasted for a few days:

> *Honestly, I felt very, very bad. I was sad for three days. I almost committed suicide. My world was crushing but with God all things are possible so I have hope that one day God will heal me. [P1: male]*
>
> *P5-female: I cried almost the whole day. Really, I was sad and depressed. How could I deal with this terrible disease I asked myself severally?*

Interviewee 2 (female) said,

> *I felt very bad for about three days. I cried for two days. A young lady to be afflicted with this kind of satanic condition was devastating but when my mother reminded me about the power of God, I accepted to live with the situation in good faith.*
>
> *P7- female stated: I have written down my experience on that day in my diary. It was a black Wednesday in my life. I was totally down. Shedding tears like a baby but glory to God that I am quite better now.*

Similarly, interviewee 1 (male) stated,

> *I was really depressed. But for my mother, it would have been a different story altogether. For days I was not eating. The best solution that came to my mind was suicide. But God is great.*

The second psychological subtheme was uncertainty about life. Here, four participants related similar ideas:

> *I live a life of uncertainty. Life is simply unpredictable for me. [P12: Female]*
>
> *P7-female: As for this condition, you can't tell what will happen to you tomorrow.*
>
> *Death can hit you at any time. If for instance, you don't get money to come for dialysis, then death is just calling you. [P14-male]*

According to participant 1 [male],

> *You can die at any time. Even traveling from far place to this centre two or three times a week is a high risk but God is in control.*

Regarding stigmatization as a subtheme of psychological factors suffered by CKD patients, two participants reported having experienced stigmatization as a result of the condition as indicated by these responses:

> *There is a lot of stigma with this condition. You lose your respect and honour you deserve. I have good education and as a pastor you expect to get the necessary respect and honour one deserves but because of this condition people look down upon me. Sometimes I feel so depressed when I think about the way look down upon me. [P9: male]*

Similarly, interviewee 5 [female] stated,

> *I look like a pregnant woman because of this condition. My neighbours are always gossiping about me that I have been pregnant for years without delivering which makes me feel depressed but I can't blame them.*

The last subtheme of psychological factors was despair. Although participants strongly believed that God would heal them, they also expressed despair about their situation. For instance, a participant stated thus:

> *My parents used to say certain conditions were for rich people but we are not rich yet am suffering from rich people's condition. I sometimes don't think I can achieve my ambition in Life with this condition and feel like there is no need living. [P15: male]*

Finance. Another major theme that emerged from the qualitative data was financial difficulties regarding treatment. A sub-theme derived from this theme was cost of treatment. Ten out of the fifteen participants expressed grave concern about the cost of treatment of the condition. They bemoaned the high cost of dialysis treatment and passionately appealed to the government to capture kidney disease under the National Health Insurance Scheme (NHIS) to give some financial respite to sufferers of CKD.

According to participant 1 [male],

> *The cost of treatment is very high, something I was not prepared for. Government has to do something about it. At least taking half of the cost of treatment through NHIS would be a huge relieve to us.*
>
> *[P3-female]: Dialysis is awful although it saves life. It is expensive and I pray that the government will come in to take up at least half of the cost so that patients will live a bit longer.*

Interviewee 10 [female] expressed her frustration simply,

> *You will die prematurely if you can't afford it.*
>
> *The cost of dialysis treatment is just unbearable. [P8-male]*
>
> *[P4-female]: If NHIS takes part of it, it will help us to live a bit long. I am not saying government should bear the full cost of treatment but at least 60% for the poor*

Some participants also called for NGOs intervention;

> *Apart from the dialysis itself, the medications are costly. I think that government and even NGOs must come to our aid. [P7-female]*
>
> *I am not working and my parents are poor. We have virtually become beggars in our village because of the cost of treatment of this condition. [P9-male]*
>
> *I will call on churches, NGOs and the government to come to the aid of CKD patients. The cost of drugs and dialysis treatment is killing us. [P11-male]*

Participant 13 (female) lamented as follows;

> *As for the cost of treatment of this condition, it is only God. It is very expensive. I have sold some of my personal effects and valuables in order to stay alive. I will be very grateful if it will be covered by the NHIS.*
>
> *P14-male: I would have been dead by now but for my brother who is abroad and buys me some of medications and also supports me financially.*

Physiological factors. This key theme also emerged from the interview. The physical factor describes participant’s physiological reaction to haemodialysis treatment. Two sub-themes emerged which included feeling of weakness after dialysis treatment and discomfort with restrictions with food. Four participants related similarly to this theme. For instance, participant number two [P2-female] stated:

> *Most of the time I feel very weak in some parts of my body especially my limbs. Now I cannot take part in many activities such as sporting activities and visiting my friends*
>
> *Dialysis treatment is awful. I feel feeble and weak after the treatment to the extent that sometimes I can’t even sleep. [P11-male]*

Three participants expressed concern about discomfort and food restrictions:

> *My eating habit has changed. I can't [even] eat beans my favourite meal, high protein food, we are restricted in the amount of water we drink in a day.[P4-female]*
>
> *The doctor said I can only take egg once in a while and other things like meat. Personally, I like meant but now that am restricted, you can imagine what am going through. [P7-female]*
>
> *[P6- male]: The condition makes life uncomfortable but what can I do? You are restricted in your eating habits and rigorous activities. I used to drink a lot of water but now I am restricted to only 500mills a day.*

Spirituality/religiosity. This emerged as one of the major themes from the interviews conducted. Spirituality/religiosity in this context is where most of the participants said they relied heavily on their faith in the Almighty God /Allah to live with or cope with CKD. All the fifteen participants interviewed believed that God was the ultimate healer who does not fail in His miraculous healing. They posited that believing in a supreme being is the way of life which helped them to cope with a deadly disease such as CKD. Four subthemes derived from this theme included; hope of treatment, expectation of miracles, God's awareness of their condition and trust in God for healing.

Under hope in God for treatment and healing, five participants related similar ideas:

> *My relationships with God, my hope in Christ my savior, and by God's grace, I know there is hope for me one day. [P1-male]*
>
> *[P15- male]: Apart from God who can heal you from CKD? Doctors can do their best but it is only God that can heal you spiritually and manifest physically. There is hundred percent hope that one day I will be healed in Jesus name. My faith in God's healing actually helps me to cope with this condition.*

Interviewee 2 [female] succinctly stated,

> *There is hope for me. I have hope and believe in my God for a healing.*
>
> *Who can question the God I serve? He does things in His own time. (P10-female]*
>
> *P14-male: Just as we hope and believe that Jesus will come soon so do I have full hope in the Almighty God for healing which helps me to cope with the condition.*

Four participants believed strongly in the miraculous healing of God:

> *I trust the God I serve for a miracle. [P3-male]*
>
> *Remember Jesus healed the lame, the blind, lepers so what about CKD that he cannot do? [P2-female]*
>
> *But you know we serve a mighty God who speaks and no one can challenge Him'' He will definitely perform a miracle in my life. [P12: female]*
>
> *P5-female: God knows best so one day a miracle will happen. Remember the lady who was bleeding in the Bible. A miracle just happened to her one day. It is a matter of time.*

God's awareness of clients' condition was also generated as a subtheme. Two participants related similar ideas to this theme. For instance, participant number seven [P7: female] emphatically stated:

> *The only thing I can say is that you can't question God because I know he is aware of this situation and at his own time He will glorify Himself in my life by healing me.*
>
> *By human understanding, CKD is a deadly condition but God does not see it as such. [P14: male]*

Trusting in God helped CKD participants to cope with their condition. Three participants held a strong view that trusting in God for healing helped them in coping with the condition.

> *I trust God that healing starts with Him spiritually before it manifests physically. My trust in God is what keeps and comforts me. I know there is a Mighty God capable of doing anything at his own time. [P8: male]*
>
> *With God all things are possible. If you put all your trust in Him, there is nothing you can't conquer. [P7: female]*
>
> *I completely trust my God for his healing powers. [P12: female]*

Practical/ritual spirituality. This theme has to do with religious and spiritual activities undertaken by participants in order to squarely deal or cope with their conditions. Two sub-themes derived from this theme were scriptural motivations and fasting and prayers. Regarding scriptural motivation, five participants said they listened to acclaimed men of God, read motivational passages in the Bible and other religious literature which give them encouragement to cope with their condition:

> *I am a Christian and so I read some passages in the Bible which give me the encouragement that things will be fine one day. This encouragement gives me sound mind to live peacefully with my condition. [P10: female]*

Interviewee 13 (female) similarly stated,

> *The Bible also tells me that God is a great physician who does things in his own time. The word of God is my motivator to deal with this condition. I read it almost every day especially when I think too much about my situation. After reading some passages I feel very relieved.*
>
> *P3-(female): I always read passages from the Bible and also listen to sermons which give me comfort and encouragement.*

> *In fact, sometimes after listening to the word of God, I even forget I have a problem.[P14: male]*

Fasting and prayers emerged as ritual activities undertaken by religious people to deal with stressful situations. Many religious and spiritual rituals were undertaken by participants in order to cope with CKD. For example, four participants stated as follows:

> *I fast and pray every week on my day of birth using anointing oil fortified spiritually by my pastor. I strongly believe that there is a strong connection with God on our days of birth and so on that day God pays more attention to my prayers. Prayer and fasting help me a lot in coping with this deadly condition. [P2-female]*
>
> *My pastor has given me special spiritual water which I drink and also mix some with my bathing water and bath at specific times of the night to deal with the spirit causing my condition. [P4: female]*
>
> *[P12-female]: Sometimes I touch the TV set or radio set when my pastor is ministering healing which helps me to cope with this devastating condition.*
>
> *I have a healing sticker of my pastor I drop in water and pray over it before I drink it. I feel so relieved after performing these spiritual rituals. [P6-male]*

Discussion. The main objective of study two was to explore the lived-experiences of people living with CKD and factors that helped them to cope with the condition. In analyzing the qualitative data, five (5) major themes were developed. These included psychological health factors, financial factors; physiological factors; spirituality/religiosity and practical/ ritual spirituality. Under psychological health factors, most CKD participants who were receiving haemodialysis treatment experienced bouts of sadness/depression, uncertainty, suicidal ideation and despair when they were initially diagnosed. They viewed CKD as a devastating and deadly condition which shortens life especially if the victim is poor. The thought of imminent death, cost of treatment, food restrictions and the stigma attached to the condition evoke depression and suicidal thoughts. This finding is strongly aligned with studies conducted in other countries which focused on psychological difficulties experienced by CKD patients undergoing haemodialysis (Feroze et al., 2014; Dziubek et al., 2016; Roy-Byrne & Davidson, 2008).

Roy-Byrne and Davidson, (2008) in their study found that CKD clients frequently experience higher degrees of depression caused by their condition. It is however, instructive to note that CKD patients experience reactive depression since they react or respond to stressful and unfavourable environmental conditions. It is worth noting that the disease process (course of disease) itself does not produce depression in CKD patients. Although CKD patients experience reactive depression, their religious background determined how best they coped with the condition. Participants' psychological health was therefore determined by their religious backgrounds. Patients who held strong faith in the healing powers of God/Allah and Jesus Christ, suffered depression and suicidal thoughts only at the initial stages of diagnosis with the condition. These depression and suicidal ideations were overcome within few days of diagnosis due to their faith in the Almighty God for healing. Spirituality and religiosity therefore help sufferers of CKD to positively cope with their condition thereby impacting positively on their psychological health. This finding agrees with Peres and Lucchetti (2010) who reported that the religious beliefs of CKD patients helped them to effectively reduce negative emotional consequences of stressful life conditions. In furtherance of this finding, the current study is in convergence with a number of studies which reported similar findings (e.g. Fradelos et al., 2015; Cruz et al., 2017).

Regarding spirituality as a theme, people view occurrences in life as having two extreme sides; spiritual and physical. They believe that the spiritual aspect can only be handled by the Almighty God or a supreme being while the physical side is within the purview of man. Therefore, patients rely heavily on spirituality as a form of covering when it comes to healing and coping with perceived mysterious and devastating conditions such as CKD. Additionally, if one cannot understand the actual cause of their illness, spiritual cause is impugned and therefore spirituality becomes the only option as a form of solution and coping. In this regard, God is then seen as the only solution to their problem and thus put all their hope and trust in Him. Most people however believe that spiritual healing such as prayers and performance of religious and spiritual rituals should be merged with other medical methods of treatments. They believed that a merger of the two would produce better treatment outcomes and enhance their quality of life. This finding is in alignment with the findings of Saffari et al. (2013) that spiritual and religious coping helped haemodialysis patients to cope better with their condition thereby helping them improve on their quality of life.

Concerning practical/ritual spirituality, the religious background of the participant determined its performance. Participants' engagement in ritual solution depends on their religious affiliations or the type of church they attend, whether orthodox, charismatic or Pentecostal. Participants engaged in ritual activities if it was part of their religious beliefs and had a symbolic meaning and had been instructed by their religious/spiritual fathers. Religious and spiritual rituals mostly performed included placing one's hand on the part of the body which is hurting while the spiritual authority prays, touching a radio or television set while the pastor or spiritual father ministers healing, fasting and prayers, drinking of special spiritual water and spiritual bath at specific times of the night. Most of the participants believed that these rituals heal them both spiritually and physically. For instance, the spiritual water they strongly believe heals spiritually and physically cleans the system. Participants held a strong belief that God is the ultimate healer who does things at His own time and therefore nobody can fault or blame Him for allowing His creatures to go through certain situations.

In summary, CKD participants used factors in the religious moderator-deterrent theory to help them cope with their condition. The reasons for using this model are that religiosity/spirituality helped them to maintain psychological health in stressful situations. Again, spiritual wellbeing motivated and encouraged them that there was hope of healing from the Almighty God and that a miracle will drop from heaven one day. This belief helped CKD participants in coping as well as maintaining psychological balance. Findings from the study give credence to the religious-moderator-deterrent theory by Pargament (1997)which emphasized that religious coping serves as a regulating function which protect religious people from the harmful effects of stressful health conditions.

Interestingly, the collectivistic component of the Africultural social ethos framework did not play any significant role in coping methods of CKD participants. This is quite intriguing considering the fact that Africans are viewed as collectivistic in nature. It is however, important to note that the spiritual component of the Africultural social ethos framework is a major variable which helps CKD patients when it comes to coping and living with their condition.

Conclusions

This study has revealed that psychological health of CKD participants in coping with their condition is dependent on the religious and spiritual beliefs of the participants. Participants who held strong faith in the healing powers of God coped positively with the condition. Their psychological health was therefore not negatively impacted. The spiritual/religious belief of the individual served as a protective cover for CKD participants and shielded them from depression, committing suicide and worries. It is interesting to note that CKD participants strongly attributed their condition to the wish of God and therefore could not be blamed. This belief and attribution protected participants against emotional and psychological worries which helped them live meaningfully with the condition. Finally, CKD individuals viewed spirituality/religiosity as a supernatural means that facilitates the healing of all forms of ailments. Spirituality therefore ignites life, strengthens people and helps in dealing with mysterious conditions such as CKD.

CHAPTER FIVE

GENERAL DISCUSSION

Introduction

This study examined psychological health, coping and cultural values among CKD patients receiving haemodialysis treatment at the Korle-Bu Teaching Hospital. Specific objectives were (1) to examine the relationship among psychological health, haemodialysis stressors, spirituality/religiosity and coping; (2) to examine specific aspects of coping often used by haemodialysis patients in Ghana to manage their stress; (3) to examine the role demographic variables such as gender, education, marital status and length of time on dialysis play in psychological health and haemodialysis stress; and (4) to explore the lived-experiences, coping methods and the role cultural values play in coping with haemodialysis among CKD patients. By means of a sequential explanatory mixed method design, 125 haemodialysis patients were examined based on quantitative constructs whereas a sub-group of 15 CKD patients receiving haemodialysis treatment were additionally examined based on the qualitative interview guide. Summary of the findings is consequently presented.

Summary of findings

This current study found a significant positive correlation between psychological symptoms and religiosity/spirituality among haemodialysis patients. For that matter, as psychological symptoms among haemodialysis patients rise or worsen their religious faith also increases and vice versa. A significant positive correlation was found between haemodialysis stressors and Africultural coping among haemodialysis patients. It could therefore be said that as haemodialysis stressors among haemodialysis patients increase or worsen, their Africultural coping intensifies/increases and vice versa.

Additionally, the analysis indicated that among the Africultural coping systems inventory used, cognitive/emotional debriefing is the most often used Africultural coping system which predicted 45% variance in haemodialysis stressors. This means that in times of haemodialysis stresses (crises), patients need more of cognitive/emotional debriefing to help them cope effectively. Other useful elements of coping as found included spiritual centered, ritual centered and collective centered coping.

Also, the study found that haemodialysis patients with polytechnic/training college education had significantly fewer psychological symptoms compared to those with secondary school education. Again, the analysis revealed that haemodialysis patients who are married had a significantly fewer psychological symptoms than those who were not married. Female haemodialysis patients were found to experience more haemodialysis stressors than male haemodialysis patients do. However, there is no significant difference between male and female haemodialysis patients when it comes to psychological symptoms.

Haemodialysis patients who have spent above one year on dialysis therapy had significantly lesser psychological symptoms compared to those with lesser length of treatment such as less than 6 months and 6 months to 1 year. Initial experiences of haemodialysis patients at the time of diagnosis included sadness/depression, suicidal ideations, uncertainty, how to deal with high cost of treatment, feeling of weakness, discomfort with restrictions in food, fluids intake, activity levels and stigmatization.

Haemodialysis patients practically coped with their condition through expectation of a miracle, and hope of treatment, but also experience some level of despair. Lastly, cultural values or perception among haemodialysis patients included scriptural motivation, prayers and fasting, knowing that God was aware of the situation, and trust/hope in God.

Relationship between psychological health and spirituality

The findings of this present study in terms of relationship between psychological symptoms and religiosity/spirituality among haemodialysis patients agree with Cruz et al. (2017). Cruz and his associates reported a positive correlation between religiosity and chronic disease. They contended that people tend to be less religious as their health conditions improve in life. This by implication means that as a patient’s health outcome improves, there is decrease need for religiosity and spirituality in coping. In this present study too, a significant positive correlation was found between psychological symptoms and religiosity/spirituality among haemodialysis patients. This suggests that as psychological symptoms among haemodialysis patients rise or worsen, their religious faith also increases. It also stands to reason that as psychological symptoms get worse, religiosity/spirituality may decline.

Indeed, the findings of Bragazzi and Puente (2013), Valcanti et al. (2012), Fradelos et al. (2015), Nikmanesh and Azaraein (2016), and Koenig et al. (2001) make this relationship clearer: religion is used as a coping strategy among most patients who suffer from chronic illnesses. Increase in religious and spiritual activities leads to a better coping amongst patients undergoing haemodialysis. So, if the chronicity of their illness is rising, then they would have to hold on strongly to religion, but if the chronicity is reducing, then they loosen up on religion. This implies that as chronic disease patients see improvement in their condition, the level of their religious activities or involvement such as praying, fasting, frequent church attendance, etc. reduce.

Further in this regard, another convergence of research finding is noted in Tsang and McCullough (2003) who suggested that religiosity correlates significantly with physical and mental health, tolerance, pro-social behaviour and positive interpersonal relationships. This present finding fills in a gap in research. For example, it was argued that religiosity and spirituality were important coping strategies, but their role in helping people cope with CKD and haemodialysis (HD) remained relatively unknown (Yodchai et al., 2017). For now, the relationship between religiosity and psychological symptoms of haemodialysis patients is no longer a guess work. For that reason, findings reported by Ramirez et al. (2012) that spirituality increased patient's ability to cope with the outbreak of a disease and accelerated their improvement was supported. It also linked to the study by Rocha (2014) who revealed a relationship between spirituality and resilience and quality of life. Even sometimes, suicidal ideation becomes higher for patients with chronic illness as Pompili et al. (2013) pointed out, but religiosity among haemodialysis patients in the present study has shown to be a protective factor for suicide in this population.

African cultural values impact on all aspects of the life of people of African descent including coping with chronic conditions such as CKD. The qualitative responses provided by participants also go a long way to demonstrate that Ghanaian cultural values were very vital and to a larger extent helped persons living with CKD cope effectively with the condition. Spirituality emerged from the qualitative study as a protective cover in dealing with CKD. Four sub-themes from spirituality included hope of treatment, expectation of miraculous healing from God, God's awareness of their condition and trust in God for healing. Persons suffering from chronic conditions heavily depended on the expectation of God's healing powers as a solution to their condition. *''Male participant 15-I have hundred percent hope in God that He will heal me* *one day in Jesus name. ’’*He sees spirituality as the ultimate solution to his condition and therefore relies on it for healing. *‘‘The only thing I can say is that you can’t question God because I know He is aware of this situation and at his own time He will glorify Himself in my life by healing me, female-7.’’*Most people hold the view that as far as God is aware of the condition or situation, they have no power over it but God only. They therefore trust and believe strongly that God will perform a miracle in their lives by healing them.

This present study further points to the fact that religiosity is not the only coping mechanism used by haemodialysis patients. A significant positive correlation was found between haemodialysis stressors and Africultural coping among haemodialysis patients. It could therefore be said that as haemodialysis stressors among CKD patients rise or worsen, their Africultural coping intensifies/increases and vice versa. Present finding therefore supports the study by Taheri-Kharameh (2016) who indicated that haemodialysis patients mostly use emotion-oriented strategies when facing the challenges of the condition and its treatment. Taheri-Kharameh’s study further revealed a positive relation between spiritual well-being and problem-oriented coping strategies and consequently suggested the inclusion of patient’s spiritual needs in the treatment plan in order to increase the levels of coping with the condition. This present study fills in a great gap in the African literature on Haemodialysis patients and coping strategies. In most foreign literature, coping is all about managing your emotions or the problem, however, this present study investigated this concept of coping in an African framework of coping which includes a Cognitive/Emotional debriefing, Spiritual Centered coping, Collective Centered coping and Ritual Centered coping.

Anxiety and depression

Finding of this study in terms of experience of high levels of anxiety, agrees with several studies who reported that CKD patients experience higher anxiety compared to the general population (Macaron et al., 2014; Cukor &Coplan, 2008; Murtagh, Addington-Hall, & Higginson, 2007; Dziubek et al., 2016; Cukor et al., 2008). In relation to depression in CKD patients, the finding of the current study is linked to studies by Roy-Byrne and Davidson (2008), Riolo, Nguyen, Greden, and King (2005), Dziubek et al. (2016) who all reported high prevalence of depressive symptoms in CKD patients receiving haemodialysis treatment. The present study further gives credence to the findings of Wang and Chen (2012) who reported that the incidence of depression in CKD patients undergoing haemodialysis ranges from 19% to 60% as the respondents scored much higher values on the BSI scale compared with the norms.

For a fact, the Africultural social ethos framework expounds on the coping strategies clearer (Jagers et al., 1997). To haemodialysis patients, managing haemodialysis stressors requires the use of coping strategies. What is even interesting in this regard is the use of standard multiple regression to find which aspects of the Africultural coping systems inventory makes significant impact on managing haemodialysis stressors. In fact, Africultural coping alone impacted 74% on haemodialysis stressor management. Among the Africultural coping systems used, cognitive/emotional debriefing is the most often used Africultural coping system which predicted 45% variance in haemodialysis stressors. This means that in times of haemodialysis stress (crisis), patients needed more of cognitive/emotional debriefing to help them cope effectively. Cognitive-emotional debriefing basically involves helping patients to realistically understand their problems, giving them reassurance and how their condition could be effectively managed. Utsey (1999) suggests that the cognitive / emotional debriefing helps the African adapt effectively to environmental stressors.

Indeed, all the elements of the Africultural coping were found to be significant in managing haemodialysis stressors. Other useful elements of coping as found included spiritual centered, ritual centered and collective centered coping. Spiritual centered coping appeared as the next highest coping strategy in this regard. Utsey (1999) explains that this coping strategy allows patients to have a sense of harmony with the universe. To the African, this is needed for optimum functioning in life. For that reason, Philips et al. (2009) emphasized that the life or health of such patients is 'by the grace of God and spiritual harmony allows patients to have wellbeing since they are able to count their blessings and claim whatever thing happens is under God's purview and that it is well with their soul. Utsey et al. (2000) emphasized that Africans engage in the performance of rituals to maintain a spiritual balance. Finding from the qualitative data of the current study corroborated Utsey et al. (2000). A major theme which emerged from the qualitative data was practical/ritual spirituality. Participants believed that undertaking religious/spiritual activities or rituals helps them maintain psychological health which helps them to cope with their stressful condition. ''*Female-10; I am a Christian and so read some passages in the Bible which give me the encouragement that things will be fine one day. This encouragement gives me sound mind to live peacefully with my condition''*

''Female-12: Sometimes I touch the TV set or radio set when my pastor is ministering healing which helps me to cope with this devastating condition.'' ''I have a healing sticker of my pastor I drop in water and pray over it before I drink it. I feel so relieved after performing these spiritual rituals-male 6.'' ''Female-2; I fast and pray every week on my day of birth using anointing oil fortified spiritually by my pastor. I strongly believe that there is a strong connection with God on

our days of birth and so on that day God pays more attention to my prayers. Prayer and fasting help me a lot in coping with this deadly condition'' These responses clearly demonstrate that performance of rituals plays a significant role in Ghanaian CKD patients when it comes to coping with the condition. It therefore stands to reason that, performance of religious/spiritual rituals as African cultural values is a major means of coping with stressful disease conditions by people of African ancestry.

Moreover, Africans are known to be largely collectivistic. Collectivistic coping concerns seeking comfort from others or a group in times of stressful conditions. It was initially hypothesized that this collective coping would be the most adaptive coping strategy for haemodialysis patients because seeking social supports from significant others is purported to be an adaptive coping strategy for most Ghanaian patients because of the collectivistic nature of Ghanaians. However, it can now be said that although haemodialysis patients value supports they receive from others, they rather prefer to be encouraged, reassured and given detail explanation of their condition and its prognosis.

Demographic characteristics and coping with Dialysis

This present study fills in gaps in knowledge when it comes to demographic characteristics pertaining to haemodialysis stressors and psychological symptoms. In this current study, it was found that haemodialysis patients with polytechnic/training college education had significantly fewer psychological symptoms compared to those with secondary school education. This fills in gaps in knowledge pertaining to Chilcot et al. (2014) who did an extensive study on haemodialysis patients and psychological symptoms but failed to establish that education played a significant role. In this study, those with polytechnic or technical training education reported significantly fewer psychological symptoms than those who completed Senior High school but not tertiary education. It was assumed that those with tertiary education should report lesser psychological symptoms than those who had polytechnic education who in turn should report lesser symptoms than those with Senior High school education. However, the analysis revealed that patients with polytechnic education had fewer psychological symptoms. It can be said that in Ghana, polytechnic education involves practical knowledge with an equipment of technical capabilities or skills. It can be deduced then that the practical aspect of their education is the significant explanatory factor compared to secondary education which involves usually rote learning with few skills or experience for living.

Marital status of patients was also examined as an essential demographic characteristic in psychological symptoms. Again, it was found that haemodialysis patients who were married had significantly lesser psychological symptoms than those who were not married. This finding also fills in gap in knowledge, specifically that of Brasileiroet al. (2017), who also took interest in support systems while investigating CKD patients undergoing haemodialysis. From this present study, it is clear that haemodialysis patients who are married have lesser psychological symptoms than those who are unmarried because Brasileiroet al. offers a reason to believe that haemodialysis patients who are married seem to have someone committed to support them with their daily activities as well as give them cognitive and emotional support.

Gender differences in haemodialysis stressors and psychological symptoms were also examined. It was observed that female haemodialysis patients experience more haemodialysis stressors than male haemodialysis patients do. In this regard, a great divergence in research findings is observed when compared to Yodchai et al. (2017) who reported that CKD patients undergo much distress and difficulties associated with haemodialysis therapy, however, this present findings reveals sex differences in the experience of haemodialysis stressors. It could be as Brasileiroet al. (2017) put it that social support plays a significant role. For that matter, it could be that males gain much more help from females but females may not get that equal help from males in that accord. This area requires further studies to truly ascertain why males have lesser haemodialysis stressors than females. However, when gender differences for psychological symptoms were examined, there was no significant difference between male and female haemodialysis patients. This further suggests that male and females would require the same effort during intervention including therapy to reduce psychological symptoms, nonetheless, when it comes to reducing haemodialysis stressors, females require more help than males. Examining age variable, the present study found that most of the respondents (i.e. 80%) fell between the ages of 20 and 49. This confirmed the findings of Naicker (2013) and Osafo (2012), who reported that in Africa and Ghana, CKD mostly afflicted relatively young adults' population between 20-50 years as compared to the developed world where the condition affected the middle aged and the elderly.

Psychological health and socio-economic factors

Yodchai et al. (2017) reported that persons suffering from CKD are confronted with numerous problems such as psychological, physical effects and socioeconomic issues accompanying the treatment of the condition. Linkingit to the study by Gerogianni and Babatsikou (2014) who reported that the most commonly identified psychological worries of individuals receiving haemodialysis therapy were food and fluid limitations, alterations in marital role, financial problems, changes in social functions, recurrent hospitalizations, vacation limitations, restrictions in leisure activities, dependency on dialysis machine, uncertainty about the future, sleep disturbances, fatigue, sexual problems and employment difficulties. These findings align with the findings of the current study. Three themes generated from the qualitative study which included psychological health factors, financial difficulties regarding cost of treatment and restriction in food and leisure activities reveal similar findings. It is imperative to note that the psychological health of CKD individuals was impacted. *‘‘Male-1; honestly, I felt very, very bad. I was sad for three days. My world was crushing but with God all things are possible so I have hope that one day God will heal me.’’ ‘‘Female-5; I cried almost the whole day. Really, I was sad and depressed. How could I deal with this terrible disease I asked myself severally?’’ ‘‘I felt very bad for about three days. I cried for two days. A young lady to be afflicted with this kind of satanic condition was devastating but when my mother reminded me about the power of God, I accepted to live with the situation in good faith-[female 2].*

These responses clearly indicate that the psychological health or state of CKD patients was negatively impacted when they were diagnosed initially with the condition.

Another key theme that emerged was high cost of treating the condition. According to *participant 1 [male], ‘‘the cost of treatment is very high, something I was not prepared for. Government has to do something about it. At least taking half of the cost of treatment through NHIS would be a huge relieve to us.’’Female-3; Dialysis is awful although it saves life. It is expensive and I pray that the government will come in to take up at least half of the cost so that patients will live a bit longer.’’ Female-10; you will die prematurely if you can’t afford it.’’*

These responses undoubtedly indicate that the cost of dialysis and CKD treatment is simply unbearable for patients and therefore need government intervention to prolong their lives. Patients also bemoaned the restrictions in food, fluids intake and leisure activities. *‘‘Female-2; expressed her frustration in no uncertain terms; most of the time I feel very weak in some parts* *of my body especially my limbs. Now I cannot take part in many activities such as sporting activities and visiting my friends.'' 'My eating habit has changed. I can't even eat beans my favourite meal, high protein food, we are restricted in the amount of water we drink in a day, female- 4.''*In the words of*Male-6; the condition makes life uncomfortable but what can I do? You are restricted in your eating habits and rigorous activities. I used to drink a lot of water but now I am restricted to only 500mills a day''.* It is obviously clear from these responses that CKD patients feel uncomfortable with the nature of their condition and its treatment methods and are therefore worried about it. These worries could negatively impact their psychological health and therefore affect treatment outcomes negatively.

Religiosity/spirituality protects CKD patients against suicide

Another key finding of this current study is that initial diagnosis of CKD invoked suicidal thoughts in some of the patients but their religious beliefs prevented them from committing the act. *Male-1; honestly, I felt very, very bad. I was sad for three days. I almost committed suicide. M y world was crushing but with God all things are possible so I have hope that one day God will heal me. Male-6; I was really depressed. But for my mother, it would have been a different story altogether. For days I was not eating. The best solution that came to my mind was suicide but God is great.* This finding is in agreement with Hackney and Snaders (2003) and Chaaya et al. (2007) who reported that religiosity highly correlates with proper psychological functioning and therefore served as a protective cover from suicide for religious people.

Divergence with other studies

A great divergence was observed when compared to the findings by Mariotti and Carvalho (2011) who reported that65 dialysis patients who were industrial employees of a certain company did not complain about cost as a burden to them. It is significant to note that in Mariottie and Carvalho's study, the company paid for the cost of treatment on behalf of their workers, so there was no burden in that regard. However, that is not the case among most patients interviewed in the course of the interviewees who bemoaned their health status on the grounds that it was extremely expensive to manage along with the stigma that it was a 'devilish condition.' *'As for the cost of treatment of this condition, it is only God. It is very expensive. I have sold some of my personal effects and valuables in order to stay alive. I will be very grateful if it would be covered by the NHIS; female-13.'Female-7, could not hide her frustration apart from the dialysis itself, the medications are costly. I think that government and even NGOs must come to our aid. ''The cost of dialysis treatment is just unbearable, male-8.''*

Haemodialysis patients were also found in this present study to practically cope with their condition through expectation of a miracle from God, and hope of treatment, but also experience some significant level of despair. This finding also shows a sharp divergence with that of Chilcot et al. (2010) who reported that patients living with CKD largely coped with their condition through therapy. In this present study, it is clearer that patients living with CKD rely more on religious faith than to seek psychotherapy intervention. They rather expect a miracle to drop from heaven while hoping to be treated successfully. *''I trust the God I serve for a miracle, male-3.''Female-2; remember Jesus healed the lame, the blind, lepers so what is about CKD that he cannot do? My relationships with God, my hope in Christ my savior, and by God's grace, I know there is hope for me one day; male-1. Apart from God who can heal you from CKD?*

Doctors can do their best but it is only God that can heal you spiritually and manifest physically. There is hundred percent hope that one day I will be healed in Jesus name. My faith in God's healing actually helps me to cope with this condition, Male-15.

Even by so doing, despair appeared to be a coping strategy especially among those who suggested that the gravity of their sickness indicated that they would die. For that reason, they appeared to be non-compliance with medical procedures which had earlier been highlighted as a challenge or cause of discomfort among most patients. So, while those with strong hope rely on their religious faith and hope along with compliance to get treatment, those who despair rely on non-compliance to enjoy some momentary comfort. It therefore partially supports Cinar et al.'s (2009) finding that the most frequently used coping strategies were resorting to religion, active coping and suppression of competing activities. Yes, patients living with CKD resort to religion mostly rather than the therapy suggested by Chilcot et al. but some do not reject competing activities like Cinar et al. suggested because they despair. It was even further revealed that most of the patients who stick to religion especially as a way of coping do so by means of scriptural motivation, prayers and fasting, knowing that God is aware of the situation, and trust/hope in God. *''I fast and pray every week on my day of birth. I strongly believe that there is a strong connection with God on our days of birth and so on that day God pays more attention to my prayers. Prayer and fasting helps me a lot in coping with this deadly and satanic condition, female-2.' 'In fact, sometimes after listening to the word of God, I even forget I have a problem, male-4.The Bible also tells me that God is a great physician who does things in his own time. The word of God is my motivator to deal with this condition. I read it almost every day especially when I think too much about my situation. After reading some passages I feel very relieved, female-13.*The study has demonstrated that religion is an important variable in coping with stressful health condition such as CKD. The more religious a Ghanaian is, the better their ability to deal with stressful health conditions because they seek consolation in the healing powers of the Almighty God.

Observed conceptual framework

Figure 2: Observed conceptual framework of the study

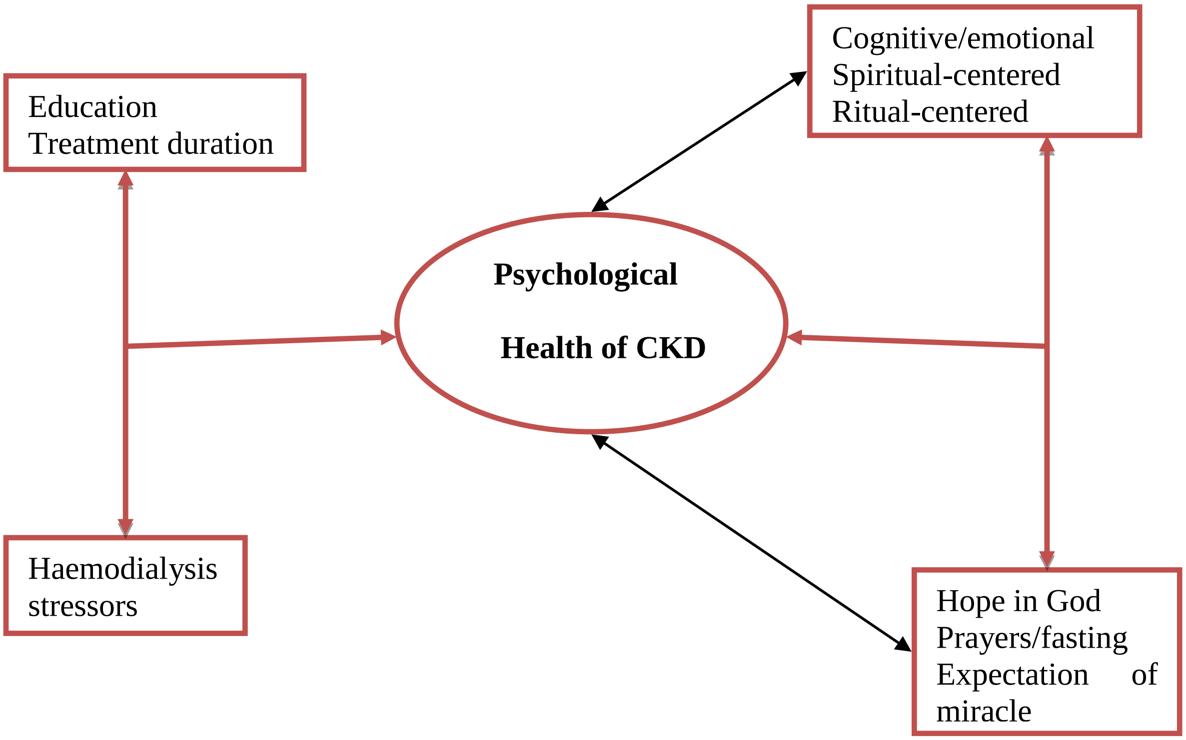

Figure 2 illustrates the observed conceptual framework of the study showing significant relationship amongst the variables measured in the study. The figure describes an important relationship between psychological health and variables that aid in coping with stressful chronic health condition. Religion and cognitive emotional debriefing of the Africultural coping inventory play the most significant role in the lives of Ghanaian CKD patients when it comes to coping with their condition thereby predicting better mental health outlook amongst these patients. There is a reverse relationship between psychological health, spirituality as well as Africultural coping. This means that the more spiritual/religious a person is, the better they cope with CKD and vice versa. Religiosity/spirituality therefore predicts better psychological health of CKD patients. Again, more educated CKD patients cope better with the condition.

Implications for clinical practice

The following recommendations are made for practice and policy as well as research and theory: Treatment of haemodialysis patients should not only focus on the biological aspects of the chronic condition but also, on their psychological concerns such as despair, depression, anxiety and stigmatization. Psychological intervention for haemodialysis patients should take into account their spiritual concerns since it is a very important aspect of their healing process.

Apart from dialysis therapy which sustains life, attention should also be given to Cognitive/Emotional debriefing as a form of psychological intervention. It basically involves helping patients to realistically understand their problems and how it could be managed and also offering them genuine reassurances. Again, Future research should investigate why the relatively young adult population is mostly affected by CKD in Ghana and Africa. Theoretically speaking, further research involving coping mechanisms should dissuade from the European coping strategies which basically involves emotion-focused and problem-focused coping to Africultural Coping Systems which involves Cognitive/Emotional Debriefing, Spiritual-Centered coping, Ritual-Centered coping and Collective-Centered coping.

Limitations of the study

The major limitation of the study was the sampling technique used which was based on the judgmental technique. According to Creswell (2013), sampling techniques that are based on non-probability sampling cannot be generalized. For this reason, the findings of this current study cannot be generalized to all chronic kidney disease patients in Ghana. Again, the sample did not include patients below eighteen (18) years of age therefore the psychological health and coping methods of this population still remains unknown.

Another limitation was that even though the study employed the mixed method design, it will be much better to use an in-depth interview analysis such as focus group discussion to draw more detailed information instead of the semi-structured interview since the semi-structured interview guide focused mainly on cultural values and coping. Irrespective of the limitations encountered, the study raises a key question relating to coping with chronic conditions. Does acculturation affect coping in Ghanaian chronic patients?

Directions for future research

Future studies should consider using probabilistic sampling techniques in the selection of their samples so that findings could be generalized. Future studies should look at how CKD patients under 18years of age cope with the condition. Do they face the same stressors as adult CKD patients? There is the need to research into other chronic conditions such as HIV/AIDS, cancer, diabetes, etc. to find out whether differences exist in their ways of coping compared to CKD patients. In-depth qualitative research such as focus group discussions should be conducted into collective centered coping to find out whether Ghanaians use collective coping in times of distress. Future studies should also investigate why males have lesser haemodialysis stressors than females.

Conclusion

CKD imposes a lot of psychological distress on patients from the very day of diagnosis. The issue of cost of treatment and life style changes are sources of depression and anxiety in patients which make life unbearable for CKD patients as well as their families. Depression increases vulnerability to suicide behaviours. It is therefore imperative to make frequent screening and management of depression an integral part of the routine care for CKD patients in order to improve their quality of life and treatment outcomes. Again, doctors and nurses must assist haemodialysis patients to adjust better to the dialysis experience through counseling and referring them to clinical psychologists for psychological care which are useful ways of reducing their burdens and improving the quality of life of CKD patients.

It is also very clear now the position of haemodialysis patients when it comes to psychological symptoms and haemodialysis stressors in the face of some demographic variables. In this era of a bio-psychosocial approach to treatment, it is clearly instructive not to approach haemodialysis from a biological perspective alone but a psychological, social/cultural and spiritual framework as well. Indeed, this study has established that treatment provided for haemodialysis patients that cares for their psychological, social or cultural welfare would be bound to merit success. For this reason, approaches such as enhancing patient’s spirituality and Africultural coping such as Cognitive/emotional debriefing, spiritual coping, ritual coping and collective support are needed to help such patients achieve optimum wellbeing. Certainly, successful treatment for haemodialysis patients is never devoid of depression, anxiety, uncertainties, feeling of weakness and stigmatization among others, but by moving beyond only the medical intervention and incorporating psychological care as well as spiritual/cultural values, patients would be better re-adjusted in dealing with the devastating condition of chronic kidney disease which will enhance their treatment outcomes for a better life.

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APPENDICES

Appendix A: Questionnaires

SECTION A: DEMOGRAPHIC CHARACTERISTICS

PLEASE TICK

1. **Sex:** Male ( ) Female ( )
2. **Marital Status**: Never Married ( ) Married ( ) Divorced/Separated ( ) Widowed ( )
3. **Age** (Actual age):……………
4. Christian ( ); Moslem ( ); Traditionalist/spiritualist ( );No religion( );Other ( ).
5. **Occupation**: Student ( ) Government Worker ( ) Employed in private sector ( ) Self-employed ( ) Unemployed ( ) Other specify.......
6. **Educational level**: S.H.S ( ); Polytechnic/training college ( ); Bachelors ( ); Masters ( ); Third degree ( )

SECTION B

Santa Clara Strength of Religious Faith Questionnaire

Please answer the following questions about religious faith using the scale below. Indicate the level of agreement (or disagreement) for each statement.

1 = strongly disagree

2 = disagree

3 = agree

4 = strongly agree

……….1. My religious faith is extremely important to me

……….2. I pray daily

……….3. I look to my faith as a source of inspiration

……….4. I look to my faith as providing meaning and purpose in my life

……….5. I consider myself active in my faith or church

……….6. My faith is an important part of who I am as a person

……….7. My relationship with God is extremely important to me

……….8. I enjoy being around others who share my faith

……….9. I look to my faith as a source of comfort

………10. My faith impacts many of my decisions

SECTION C

AFRICULTURAL COPING SYSTEMS INVENTORY (ACSI)

Instructions: Please, recall a stressful situation that you went through. Consider the strategies you used in coping with that stressful situation .Rate each coping strategy below by indicating whether you used it to cope with the stressful situation.

0 = Did not use 1 = Used a little 2 = Used a lot 3 = Used a great deal

1. I prayed that things would work themselves out……………………

2. I got a group of family or friends together to help with the problem……………….

3. I shared my feelings with a friend or family member. ……………………..

4. I remembered what a parent (or other relative) once said about dealing with these kinds of situations……………………..

5. I tried to forget about the situation……………………..

6. I went to church (or other religious meeting) to get help or support from the group. …………

7. I thought of life's struggles people endure and it gave me strength to deal with the situation…..

8. To keep from dealing with the situation, I found other things to keep me busy……………….

9. I sought advice about how to handle the situation from an older person in my family or community. ……………..

10. I read a scripture from the Bible (or similar book) for comfort and/or guidance……………..

11. I asked for suggestions on how to deal with the situation during a meeting of my organization or club. ………………………

12. I tried to convince myself that it was not that bad. ……………

13. I asked someone to pray for me…………………
14. I spent more time than usual doing group activities. ……………
15. I hope that things would get better with time. ……………………

16. I read a passage from a daily meditation book. ………………….
17. I spent more time than usual doing more things with friends and family……………..
18. I tried to remove or separate myself from the situation. …………………….
19. I sought out people I thought would make me laugh. ………………………….
20. I got dressed up in my best clothing……………………………
21. I asked for blessing from a spiritual or religious person. ………………
22. I helped others with their problems. …………………………………
23. I lit a candle for strength or guidance in dealing with the problem. ………………….
24. I sought emotional support from family and friends. ……………………………..
25. I burned incense for strength or guidance in dealing with the problem. ……………….
26. I attended a social event (dance, party, movie) to reduce stress caused by the situation. ……
27. I sang a song to myself to help reduce the stress. ………………..
28. I used a cross or other object for its special powers in dealing with the problem………..
29. I found myself watching more comedy shows on television. …………
30. I left the matter in God‟s hands…………………………………

SECTION D: HAEMODILYSIS STRESSOR SCALE (HSS)

HAEMODIALYSIS STRESSORS	1 Not at all	2 Slightly	3 Moderately	4 A great deal
1. Arterial and venous stick				
2.Nausea and vomiting				
3.Muscle cramps/soreness				
4.Itching				
5.length of treatment				
6.Stiffness of joints				
7.Feeling tired				
8.Loss of body function				
9.Decrease in social life				
10.Limitation of food				
11. Limitation of fluid				
12.Interference with job				
13.Decrease in sexual drive				
14.Limitation of physical activity				
15.Sleep disturbances				
16.Changes in family responsibilities				
17.Reversal in family role with spouse				
18.Reversal in family roles with the children				
19.Uncertainty about the future				
20. Changes in body appearance				
21.Limited in style of clothing				
22.Cost of treatment/transportation to treatment/or other cost factors				
23.Transportation to and from the unit				
24.Limits on time and place for vacation				
25.Frequent hospital admission				
26.Dialysis machine /or equipment				
27.Dependency on nurses and technicians				
28.Dependency on physicians				
29.Fear of being alone				
30.Feelings related to treatments example feeling cold				
31.Boredom				
32. Decreased ability to have children				

SECTION E: BRIEF SYMPTOM INVENTORY -18

Instructions: The list of symptoms is some of the problems or complaints that people sometimes experience. Please tick the box indicating how severe the symptoms on the scale apply to you. Thank you.

How much has the problem below bothered or distressed you during the past week including today?	0 Not at all	1 A little bit	2 Moderately	3 Quite a bit	4 Extremely	5 Refused to answer
1. Faintness or dizziness						
2. Feeling no interest in things						
3. Nervousness or shakiness inside						
4. Pains in the heart or chest						
5. Feeling loneliness						
6. Feeling tensed or keyed up						
7. Nausea or upset stomach						
8. Feeling down						
9. Suddenly scared for no reason						
10. Trouble getting your breath						
11. Feeling of worthlessness						
12. Spells of terror or panic						
13. Numbness or tingling in parts of your body						
14. Feeling hopeless about the future						
15. Feeling so restless you could not sit still						
16. Feeling weak in parts of the body						
17. Thoughts of ending your life						
18. Feeling fearful						

SECTION F: Semi-Structured Interview Guide for Qualitative Study

Introductions
1. Introduction of interviewer
2. **Introduction of project**

Africans and Ghanaians use various means of coping with outbreak of diseases especially chronic ones. Some people cope with stressful situations and diseases by using religious/ spiritual resources. Others cope by using hospital resources. We will explore what you do in particular, how you do them, and why you do them.

Aim: You will; share with me the cultural meaning of your disease and how this affects your psychological, physical and spiritual health. Also, we will evaluate your use of spiritual practice, in relation to your chronic disease; and finally to explore and clarify your basic beliefs about your condition. Specifically, to examine spirituality and religiosity in adults receiving haemodialysis treatment as a result of your condition and the way(s) you use them to cope and why you use them.

3. Introduction of recorder
4. Participant signs informed consent form
5. Switch recorder on

Background Information

Socio-demographic questions and medical characteristics of CKD patients

1. Sex: Female__________Male____________ Age____
2. Religion____________
3. What is your marital status?
4. Occupation: What do you do for a living?
5. Schooling: What's your highest level of education?

Main Questions and follow ups

1. Please tell me about CKD
a. What does CKD mean to you?
b. When you were diagnosed with CKD, how did you feel?
c. What was the first treatment you were put on?
d. When was dialysis recommended?
e. Since your diagnosis, what is your experience about life?
2. How do Ghanaians view culture?
a. What does culture mean to you?
b. How has your belief system influenced your ability to cope with the disease?
3. What does spirituality mean to you? What about religiosity?
b. Do you use spirituality or religion in coping with your condition?
c. How exactly do you use spirituality and religion in coping?
d. Why do you use and why do you not use it?
4. Do spirituality and religiosity have any effects on your mental health?
5. Please tell me how you cope with the dialysis treatment?
6. So how do you feel about your condition?

7. How do you see life since you diagnosis?
a. Do you think you can achieve anything you want in life with this condition?
b. With this condition, do you think life is worth living?
d. Have you ever thought of taking your life?

Closure and debriefing

1. Do you have anything else to tell me about this topic?
2. Do you have any questions for me?
3. How have you felt about participating in this interview that explored your life with CKD/DIALYSIS?
4. Is there anything you wish had been done differently in this interview?

APPENDIX B

Consent Form

UNIVERSITY OF GANA

Official Use only

Protocol number

Ethics Committee for Humanities (ECH)

PROTOCOL CONSENT FORM

Section A- BACKGROUND INFORMATION

Title of Study:	psychological Health, Coping And Cultural Values Among Haemodialysis Patients In A National Hospital In Ghana
Principal Investigator:	VLADIMIR PHILIP KISSEIH-KWAO **Address:** Department of Psychology, University of Ghana, Legon. P. O. Box LG 84, Legon.
Certified Protocol Number	

Section B– CONSENT TO PARTICIPATE IN RESEARCH

General Information about Research: Spirituality/religiosity as a core African/Ghanaian cultural value is known to influence both mental and physical health positively. It is judged to be one of the coping strategies mostly used by African Americans, Blacks and Whites who are sick of incurable diseases. However, how Chronic Kidney Disease patients requiring haemodialysis treatment use spirituality to promote psychological health and coping with the condition in Ghana is not known.

This study involves research with haemodialysis disease patients. Its aim is to study you as a person who has a disease that presently has no cure by studying all the areas of your being. This will be done by learning of your spirituality/religiosity and determining their relationship with the medical and psychological issues you might be confronted with. It takes roughly **25 minutes** for you to tick answers to some questions on paper and approximately **30 minutes** to engage you in an interview if you are selected to take part in that.

Procedure: The questionnaire will be given out at the dialysis clinic some minutes after the dialysis procedure when the Doctor declares you fit to answer the questionnaires. Two trained research assistants are available to give you the questionnaire and to help you to complete them.
As you complete the questionnaire, you may be identified and asked to participate in an interview where certain details of your life and the disease will be asked. The interview will take place either in the clinic or in a convenient place you choose. Interview sessions shall be recorded with your permission. The reason is that what is said in the interviews will be written again verbatim to make analyses easy.
You need not come with anything. Pens, pencils and erasers will be provided. It takes about 35 minutes to complete the interview.

Possible risks and discomforts: It is possible you could be tired physically and mentally. You will, therefore, be assessed in the clinic and standby medical personnel will assist in any eventuality. The interview could also cause some psychological distress. If it happens, you will be referred to a psychologist for psychological consultation for the necessary interventions at no cost to you.

Possible Benefits:
One possible benefit that you may get is that by talking about your health conditions, you may receive mental and emotional relief. The findings of the research will help also help doctors, nurses and psychologists to improve the care of patients suffering from chronic kidney disease.

Privacy: Interviews will be done in confidential rooms in the clinic or in your private home if you choose to be assessed at home. Information you give will be used only for purposes of research and will not be disclosed to persons who are not connected to this research. Code numbers will be used in place of your real name in order to hide your identity. The questionnaire does not require your name on it.

Confidentiality: Information about you will be protected to the best of our ability. You will not be named in any reports. The research assistants and principal supervisor of the research, may sometimes look at the research results. But your identity is still protected since you will not provide your name.

Compensation: No monetary compensations will be given**.** However,you will be given snack and refreshment as well as pens and handkerchiefs at the end of the interview.

Voluntary Participation and Right to withdraw from the Research: Participation in this research is voluntary and you can withdraw from the study at any time without penalty and still access the usual quality healthcare from the clinic. In the interview, if my questions make you uncomfortable you are free to draw my attention.

Termination of Participation by the Researcher: The researcher can ask you to stop participation in this research if it is obvious that the research contributes to worsening your condition.

Notification of Significant New Findings: When information you give on the questionnaire leads to some new findings about you that will suggest that you should take part in the interview, you will be notified.

Contacts for Additional Information: In case you have pertinent questions about the research, please, send your inquiries to the principal researcher: Vladimir P. Kisseih-Kwao on 0244511403 or livingphil@yahoo.com

Your rights as a Participant This research has been reviewed and approved by the Institutional Review Board of the Korle-Bu Teaching Hospital’s Scientific and technical committee (STC) as well as the Ethics committee and the Ethics Committee for Humanities (ECH) of the University of Ghana, Legon.
If you have any questions about your rights as a research participant you can contact the IRB Office of KBTH- IRB between the hours of 8: 30am-5pm through the landline 0302667759/673034-6 or email addresses: info@kbth.gov.gh or pr@kbth.gov.gh or www.kbth.gov.gh or Fax +233302667759.

Section C- PARTICIPANT AGREEMENT

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

____

Name of Participant

__________________________ ______________________

Signature or mark of Participant Date

If participant cannot read and or understand the form themselves, a witness must sign here:
I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

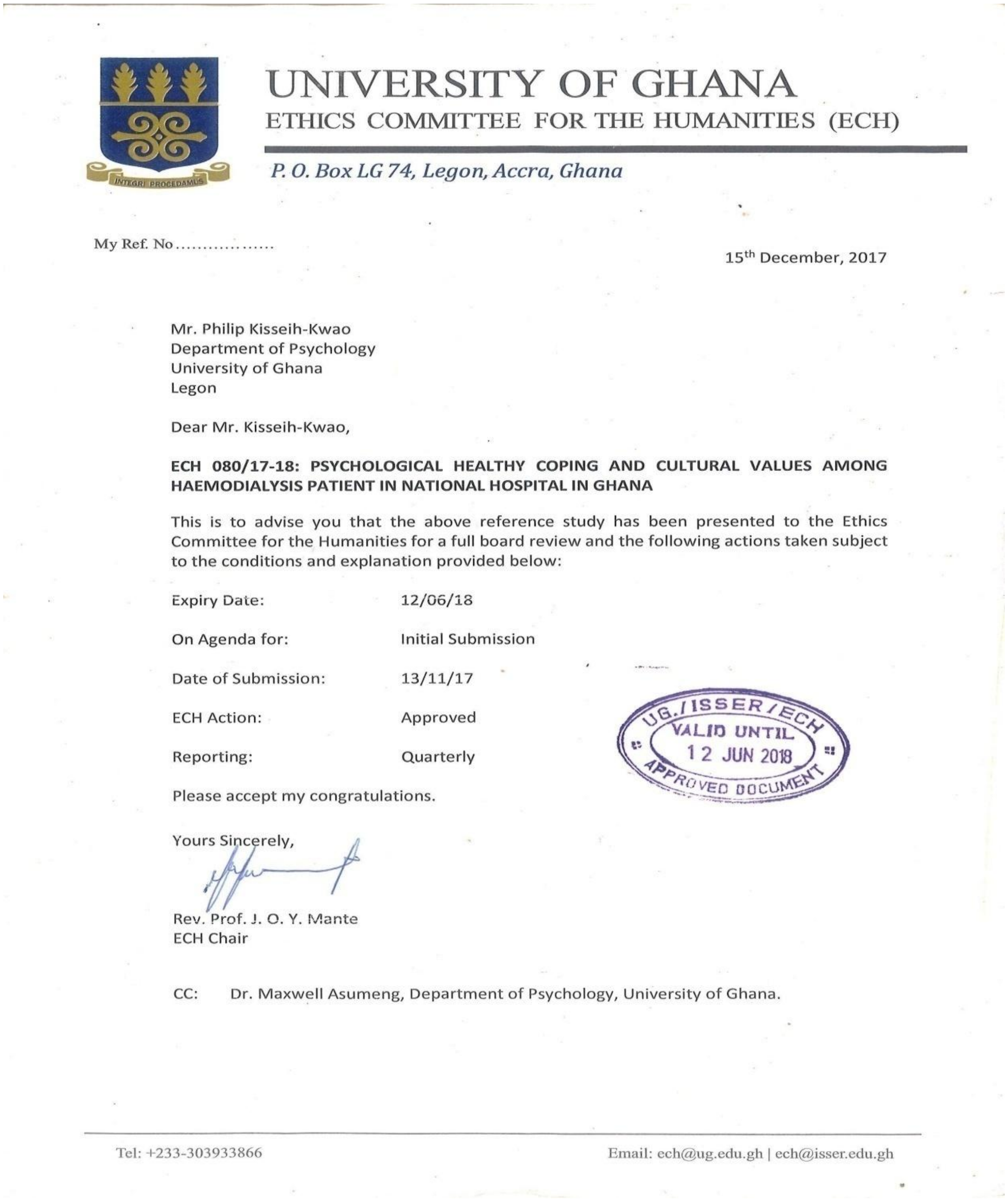
____

Name of witness

____________________________________ ______________________

Signature of witness / Mark Date

Appendix C: Ethical Clearance from ECH



UNIVERSITY OF GHANA
ETHICS COMMITTEE FOR THE HUMANITIES (ECH)
P. O. Box LG 74, Legon, Accra, Ghana

My Ref. No………………

15th December, 2017

Mr. Philip Kisseih-Kwao
Department of Psychology
University of Ghana
Legon

Dear Mr. Kisseih-Kwao,

ECH 080/17-18: PSYCHOLOGICAL HEALTHY COPING AND CULTURAL VALUES AMONG HAEMODIALYSIS PATIENT IN NATIONAL HOSPITAL IN GHANA

This is to advise you that the above reference study has been presented to the Ethics Committee for the Humanities for a full board review and the following actions taken subject to the conditions and explanation provided below:

Expiry Date:	12/06/18
On Agenda for:	Initial Submission
Date of Submission:	13/11/17
ECH Action:	Approved
Reporting:	Quarterly

UG./ISSER/ECH
VALID UNTIL
12 JUN 2018
APPROVED DOCUMENT

Please accept my congratulations.

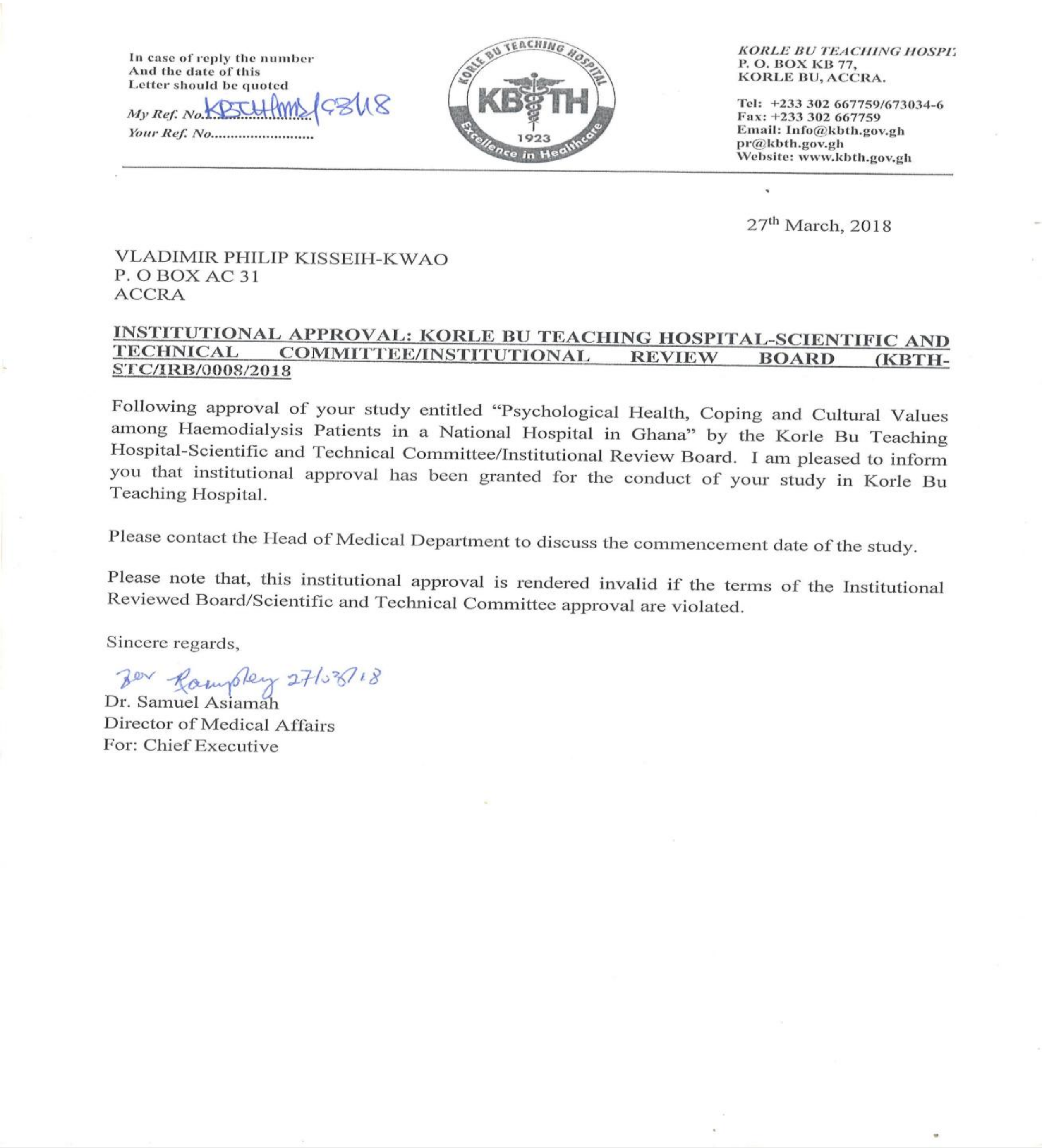
Yours Sincerely,

Rev. Prof. J. O. Y. Mante
ECH Chair

CC: Dr. Maxwell Asumeng, Department of Psychology, University of Ghana.

Tel: +233-303933866 Email: ech@ug.edu.gh | ech@isser.edu.gh

Appendix D: Ethical Clearance from Korle-Bu Teaching Hospital IRB



In case of reply the number
And the date of this
Letter should be quoted

My Ref. No. KBTH/MMS/9818
Your Ref. No...........................

KORLE BU TEACHING HOSPI
P. O. BOX KB 77,
KORLE BU, ACCRA.

Tel: +233 302 667759/673034-6
Fax: +233 302 667759
Email: Info@kbth.gov.gh
pr@kbth.gov.gh
Website: www.kbth.gov.gh

27th March, 2018

VLADIMIR PHILIP KISSEIH-KWAO
P. O BOX AC 31
ACCRA

INSTITUTIONAL APPROVAL: KORLE BU TEACHING HOSPITAL-SCIENTIFIC AND TECHNICAL COMMITTEE/INSTITUTIONAL REVIEW BOARD (KBTH-STC/IRB/0008/2018

Following approval of your study entitled "Psychological Health, Coping and Cultural Values among Haemodialysis Patients in a National Hospital in Ghana" by the Korle Bu Teaching Hospital-Scientific and Technical Committee/Institutional Review Board. I am pleased to inform you that institutional approval has been granted for the conduct of your study in Korle Bu Teaching Hospital.

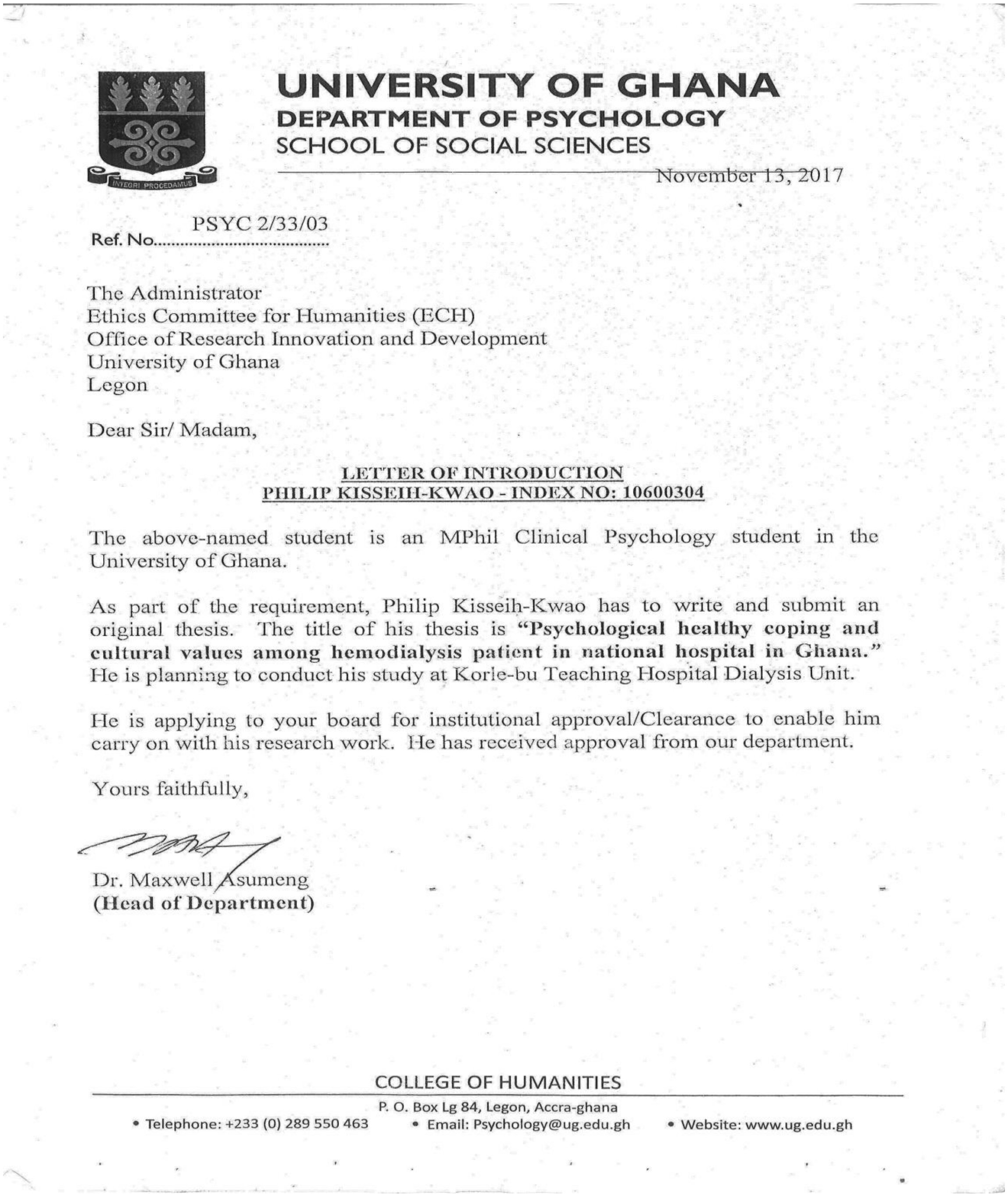
Please contact the Head of Medical Department to discuss the commencement date of the study.

Please note that, this institutional approval is rendered invalid if the terms of the Institutional Reviewed Board/Scientific and Technical Committee approval are violated.

Sincere regards,

For Rampley 27/03/18
Dr. Samuel Asiamah
Director of Medical Affairs
For: Chief Executive

Appendix E: Introductory Letter from Department of Psychology



UNIVERSITY OF GHANA
DEPARTMENT OF PSYCHOLOGY
SCHOOL OF SOCIAL SCIENCES

November 13, 2017

Ref. No. PSYC 2/33/03

The Administrator
Ethics Committee for Humanities (ECH)
Office of Research Innovation and Development
University of Ghana
Legon

Dear Sir/ Madam,

LETTER OF INTRODUCTION
PHILIP KISSEIH-KWAO - INDEX NO: 10600304

The above-named student is an MPhil Clinical Psychology student in the University of Ghana.

As part of the requirement, Philip Kisseih-Kwao has to write and submit an original thesis. The title of his thesis is **"Psychological healthy coping and cultural values among hemodialysis patient in national hospital in Ghana."** He is planning to conduct his study at Korle-bu Teaching Hospital Dialysis Unit.

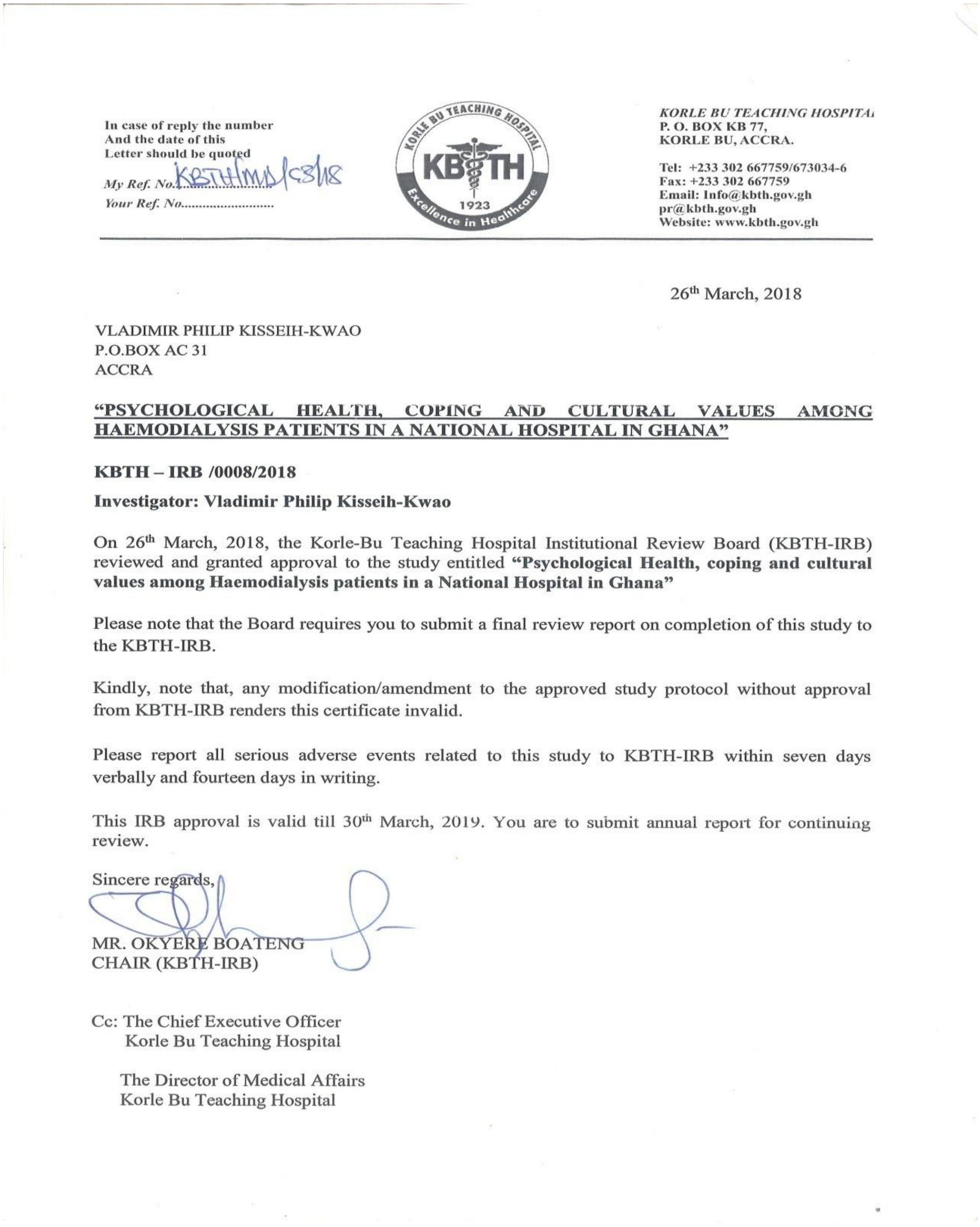
He is applying to your board for institutional approval/Clearance to enable him carry on with his research work. He has received approval from our department.

Yours faithfully,

Dr. Maxwell Asumeng
(Head of Department)

COLLEGE OF HUMANITIES
P. O. Box Lg 84, Legon, Accra-ghana
• Telephone: +233 (0) 289 550 463 • Email: Psychology@ug.edu.gh • Website: www.ug.edu.gh

Appendix F: Introductory Letter from Korle-Bu IRB



In case of reply the number
And the date of this
Letter should be quoted

My Ref. No. KBTH/MD/C8/18
Your Ref. No...........................

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26th March, 2018

VLADIMIR PHILIP KISSEIH-KWAO
P.O.BOX AC 31
ACCRA

“PSYCHOLOGICAL HEALTH, COPING AND CULTURAL VALUES AMONG HAEMODIALYSIS PATIENTS IN A NATIONAL HOSPITAL IN GHANA”

KBTH – IRB /0008/2018

Investigator: Vladimir Philip Kisseih-Kwao

On 26th March, 2018, the Korle-Bu Teaching Hospital Institutional Review Board (KBTH-IRB) reviewed and granted approval to the study entitled **“Psychological Health, coping and cultural values among Haemodialysis patients in a National Hospital in Ghana”**

Please note that the Board requires you to submit a final review report on completion of this study to the KBTH-IRB.

Kindly, note that, any modification/amendment to the approved study protocol without approval from KBTH-IRB renders this certificate invalid.

Please report all serious adverse events related to this study to KBTH-IRB within seven days verbally and fourteen days in writing.

This IRB approval is valid till 30th March, 2019. You are to submit annual report for continuing review.

Sincere regards,

MR. OKYERE BOATENG
CHAIR (KBTH-IRB)

Cc: The Chief Executive Officer
Korle Bu Teaching Hospital

The Director of Medical Affairs
Korle Bu Teaching Hospital