University of Ghana http://ugspace.ug.edu.gh

METHODIST UNIVERSITY COLLEGE, GHANA

(DEPARTMENT OF PSYCHOLOGY)

ILLNESS PERCEPTION AND QUALITY OF LIFE AMONG CHRONICALLY ILL PATIENTS: A STUDY OF DIABETICS AND HYPERTENSIVES AT KORLE-BU TEACHING HOSPITAL

BY

MAME GYANBA QUAYE

10544151

THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF PHILOSOPHY GUIDANCE AND COUNSELING DEGREE.

NOVEMBER, 2015

University of Ghana http://ugspace.ug.edu.gh

DECLARATION

I hereby declare that this thesis is conducted by me under the supervision of Prof. Samuel Danquah and Mr. Robert Mensah. This work has never been submitted to any other institution by anyone for any award. All references cited in this work have been duly acknowledged and I take full responsibility for any shortcomings in relation to this work.

NAME OF STUDENT: MAME GYANBA QUAYE

SIGNATURE: ……

DATE: ……

PRINCIPAL SUPERVISOR: PROF SAMUEL DANQUAH

SIGNATURE: ……..

DATE: ……

CO-SUPERVISOR: MR ROBERT MENSAH

SIGNATURE: ……..…….

DATE: ……..……

University of Ghana http://ugspace.ug.edu.gh

DEDICATION

I dedicate this thesis to my lovely husband, Mr. Emmanuel Obeng Annan and adorable daughter, Ewurama Nhyira Annan.

University of Ghana http://ugspace.ug.edu.gh

ACKNOWLEDGEMENT

This project work is first and foremost accredited to the Almighty God for His love, care and protection for seeing me through this period of my education. I would also like to express my sincere gratitude to my supervisors: Prof. S.A. Danquah and Mr. Robert Mensah for the immense intellectual support they offered me during the period of undertaking this research. My deepest gratitude also goes to Mr. Prince Addai and Rona Bioh for their academic support during my studies in the University. I would also like to thank my respondents from Korle Bu Teaching Hospital for assisting me source some information for this study.

University of Ghana http://ugspace.ug.edu.gh

ABSTRACT

The aim of the study was to assess the quality of life among chronically ill patients. Specifically the study examined the effects of illness perception, socio-economic status, compliance with medication, religiousity and gender of the patient on quality of life. Ninety participants were selected from the Korle Bu Teaching Hospital to take part in the study. The ninety participants consisted of 30 diabetics, 30 hypertensives and 30 participants who were neither hypertensives nor diabetics as the control group. Data was analyzed using Pearson correlation, the independent t-test and the ANOVA. Findings indicated that healthy participants had higher quality of life than hypertensives and diabetics. Diabetics also had lower quality of life than hypertensives. Patients with chronic illness who had higher level of socioeconomic status did not differ from those with lower level of socioeconomic status on quality of life. No significant difference was found in quality of life among chronically ill males and chronically ill females. There was a positive relationship between illness perception and quality of life. Compliance with medication had positive relationship with quality of life. The relationship between illness perception and quality of life was partially mediated by medication compliance. Highly religious chronically ill patients had higher quality of life than low religious chronically ill patients. In conclusions, health professionals should pay more attention to patients' quality of life and help them develop a positive perception about their illness and comply with treatment regimen.

University of Ghana http://ugspace.ug.edu.gh

TABLE OF CONTENTS

Content **Page**

Declaration……i

Dedication……ii

Acknowledgement……iii

Abstract……iv

Table of content……v

List of Tables……viii

List of Figures/Model……ix

List of Abbreviations……x

CHAPTER ONE: INTRODUCTION **1**

1.1 Background to the Study……1

1.2 Statement of the Problem……8

1.3 Aims and Objectives of the Study……10

1.4 Significance of the Study……11

CHAPTER TWO: LITERATURE REVIEW **13**

2.0 Introduction……13

2.1 Concept of Training……13

2.1 Theoretical Framework……14

2.1.1 The Health Belief Model……15

2.1.2 The Self-Regulation Model……17

2.1.3 The Socio-Emotional Selectivity Theory ……18

University of Ghana http://ugspace.ug.edu.gh

2.1.3 Risk and Protective Factor Model ……19

2.2 Review of Related Studies……20

2.2.1 Impact of Chronic Illness on Quality of Life ……..21

2.2.2 Impact of Diabetes on Quality of Life…….……..29

2.2.3 Impact of Hypertension on Quality of Life ……...36

2.2.4 Comparing Hypertensive Patients with Diabetic Patients ……42

2.2.5 Factors Influencing the Quality of Life among Chronically Ill Patients ……...42

2.3 Rationale for the Study……..……...45

2.4 Statement of Hypotheses……45

2.4 Proposed Structural Model of the Relationships……....46

2.5 Operational Definitions……47

CHAPTER THREE: METHODOLOGY

3.1 Design……51

3.2 Population……..48

3.3 Inclusion and Exclusion Criteria ….……49

3.4 Sampling and Sampling Size……50

3.5 Participants/Sampling Characteristics ……52

3.6 Instrument/Measures……..52

3.7 Pilot Study……57

3.8 Procedure……...58

3.9 Analysis of Data..……...58

3.10 Ethical Approval...……59

University of Ghana http://ugspace.ug.edu.gh

CHAPTER FOUR: RESULTS

4.0 Introduction……61

4.1 Preliminary Analysis……..61

4.2 Hypotheses Testing…….....65

4.3 Summary of Findings……74

4.4 Description of Structural Model……75

CHAPTER FIVE: DISCUSSION

5.1. Discussion……..76

5.2 Limitations and Recommendations ……..…….....92

5.3 Practical Implications……..……94

5.4 Summary and Conclusions……..96

REFERENCES…….....98

APPENDICES……..1

University of Ghana http://ugspace.ug.edu.gh

LIST OF TABLES

Table 1: Demographic Characteristics of the Respondents…….....62

Table 2: Descriptive Statistics and Normality of the Study…….....64

Table 3: Correlation and Reliabilities among the Variables ……..……....64

Table 4: Descriptive of Health Status, Sex and SES on QoL…….……66

Table 5: Health Status, Sex and SES on QoL……..……...66

Table 6: Multiple Comparison of Health Status and QoL…….……..……..……....67

Table 7: Relationship between Illness Perception, Compliance and QoL….……69

Table 8:Multiple Analysis of the Mediation Role of Medication Compliance…….……..70

Table 9: Religious Differences on Quality of Life ……..…….....71

University of Ghana http://ugspace.ug.edu.gh

LIST OF FIGURES / MODELS

Figure 1: Proposed model of relationships…….....46

Figure 2: Path diagram of moderation model (Baron & Kenny, 1986)…….72

University of Ghana http://ugspace.ug.edu.gh

LIST OF ABBREVIATIONS

E.g. …… …….For example

H…… …….Hypothesis

M……. Mean

SD…… Standard deviation

QoL……...Quality of Life

University of Ghana http://ugspace.ug.edu.gh

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Most patients with different illnesses enjoy healthy life with little need for specialized health care services (Funnell, 2008). However, some patients do not enjoy this healthy life because of the need for frequent checkups and perceived shortage of life span due to perceive control of the illness. Chronically ill patients are among such individuals. The inability to adapt to life with chronic diseases and the feeling of powerlessness and hopelessness due to perceived lack of control interferes with effective treatment and self-care and contribute to poor quality of life among patients with chronic illness. (Antipolis, 2014). The relation between illness perception and quality of life of these patients with chronic illness may be influenced by certain factors such as treatment compliance, religiousity, gender and socio-economic status of patients with chronic illness (Khongsdir, George, Mukherjee, & Norman, 2015). However, most researchers have not in a single study assessed all these factors that expose patients with chronic illness to experience the low quality of life and associated poor recovery rate. The aim of the study was therefore to assess the quality of life of patients with chronic illness and the associated factors that influence the quality of life among patients with chronic illness .

The history of chronic diseases in Ghana is longer than is usually thought. Cancer of the liver for example was recorded in 1817 among the Asante communities. Cases of stroke were discovered at Korle-Bu Teaching hospital in the 1920s (Pobee, 2006). Pobee (2006) emphasized that there was a steady increase of stroke and cardiovascular diseases at the Korle-Bu Teaching hospital between the 1920s and the 1960s. Hospital-based and community-based studies conducted since

University of Ghana http://ugspace.ug.edu.gh

the 1950s provided important information on prevalence and morbidity trends for hypertension, diabetes, cancer and sickle cell disease (De-Graft Aikins, 2007).

With the relatively longer history of chronic illness, it has not attracted much concern from experts and lay communities as other communicable and infectious disease such as HIV/AIDS (De-Graft Aikins, 2007). Since the emergence of HIV/AIDS endemic in 1986, attention and resources have been directed towards treating patients living with it and also eradicating the disease (De-Graft Aikins, 2006). If communicable and infectious disease such as HIV/AIDS with a national prevalence of 3.2% constitutes a Millennium Development Goal challenge and commands multi-million dollar funding from Ghana's development partners, why is chronic illness such as hypertension, stroke, diabetes and cancers, with a national prevalence of 28.7% (World Bank, 2006) not attracting similar attention? According to Agyei-Mensah (2004), experts and lay communities assume that chronic conditions are rare or that they do not pose significant public health threat compared to communicable diseases such as HIV/AIDS and as a result low attention has been directed towards chronic illness. However, cases of death resulting from different diseases make it prudent to pay much attention to chronic illnesses.

From 1950 to date, major causes of death have shifted from solely communicable diseases such as HIV/AIDS to a combination of communicable and chronic non-communicable diseases such as hypertension and diabetes (Agyei-Mensah, 2004). In Accra, cardiovascular diseases rose from being the seventh and tenth cause of death in 1953 and 1966 respectively, to becoming the number one cause of death in 1991 and 2001 (Agyei-Mensah, 2004). By 2003 at least four conditions (stroke, hypertension, diabetes and cancer) had become one of the top ten causes of death in at least each regional health facility in Ghana (De-Graft Aikins, 2007). Due to high

University of Ghana http://ugspace.ug.edu.gh

prevalence and mortality rate associated with chronic illnesses, there is the need for growing interest in assessing quality of life among these chronically ill patients since their quality of life to some extent influence their survival. While many illnesses can be considered chronic, there are two major chronic conditions that are a significant burden in terms of morbidity, mortality and healthcare costs in Ghana, including diabetes and hypertension. The high prevalence rate of diabetes and hypertension makes it prudent in assessing their quality of life (De-Graft Aikins, 2007).

The health status of chronically ill patients is determined by their quality of life (Bottomley, 2002). This is because quality of life issues may powerfully predict an individual's capacity to manage his or her disease and maintain long-term health and well-being. With the increased survival of patients with chronic illness, Quality of Life (QoL) has become more significant a concept since the treatment regime of chronic illness does not only have biological implication but also affect the psychological, social and economic wellbeing (Earlam, Glover, Fordy, Burke, & Allen-Mersh, 1996). According to the World Health Organization (2005), health is defined not only by the absence of disease and infirmity, but also by the presence of quality of life which has to do with physical, mental, and social well-being (Rubin & Peyrot, 1999). Quality of life (QoL) is generally defined as the perceived quality of an individual's daily life in terms of the presence of physical, mental and social wellbeing (Rubin & Peyrot, 1999). Health quality of life (HQoL) deals with the assessment of how an individual's physical, mental and social wellbeing are affected over time by a disease, disability, or disorder (Bottomley, 2002). Focusing on health quality of life supplements public health's traditional measures of morbidity and mortality.

University of Ghana http://ugspace.ug.edu.gh

Health related quality of life is related to both self-reported chronic diseases and their risk factors (gender, socio-economic factors, compliance with medication, religiousity etc.). The present study assessed the health quality of life of diabetics and hypertensives. These two chronic illnesses were selected because of the increase in their prevalence rate (Khongsdir, George, Mukherjee, & Norman, 2015).

The relation between chronic illness and quality of life may be influenced by certain factors such as socio-economic status, religiousity, perception of illness, compliance with treatment and gender (Janse, Gemke, Uiterwaal, van der Tweel, Kimpen & Sinnema, 2004). Though numerous studies have been carried out on how chronic illness is linked to quality of life in the European countries (e.g., Chaveepojnkamjorn, Pichainarong, Schelp & Mahaweerawat, 2008; Nyanzi, Wamala, and Atuhaire, 2014; Tetteroo, van der Graaf, Bosch, van Engelen, Hunink, Eikelboom & Mali, 1998), very little (e.g., de-Graft Aikins, 2007; Pobee, 2006; Agyei-Mensah, 2004) have been done to examine the risk factors that account for the quality of life among chronically ill patients especially in Ghana. The findings from the European countries cannot be applied to the Ghanaian community because of the differences in the risk factors that expose the chronically ill patients to the poor quality of life reported by previous literatures (e.g., Pobee, 2006). In Ghana, because of the economic status, the belief system and our mentality towards some chronic illness, seeking adequate care and complying with medication to help stabilize the condition becomes rare making it seem unreliable to apply the findings from the European countries to Ghana.

Moreover the apparent inconsistencies found in previous studies (e.g., Agyei-Mensah, 2004; Chaveepojnkamjorn, Pichainarong, Schelp & Mahaweerawat, 2008; de-graft Aikins, 2007;

University of Ghana http://ugspace.ug.edu.gh

Tetteroo, van der Graaf, Bosch van Engelen, Hunink, Eikelboom & Mali, 1998) highlight a glaring gap on the study of quality of life among chronically ill patients and the factors that influence the quality of life among the chronically ill patients to help enlighten the Ghanaian populace on the appropriate measures to undertake. On the basis of this, the present study sought to assess the quality of life among chronically ill patients (diabetics and hypertensives) and the factors that influence the quality of life (gender, compliance with medication, illness perception, religiousity and socioeconomic status) among these patients.

1.1.2 Prevalence Rate of Diabetes and Hypertension

Diabetes is a life-long disease marked by high levels of sugar in the blood. Today an estimated 151 million people in the adult population of the International Diabetes Federation (IDF) Regions have diabetes. In 1985 there were thirty (30) million people with diabetes globally and since that time there has been fivefold increase in the prevalence world-wide. The earliest studies in the 1960s recorded 0.2% prevalence in a population of men in Ho (Dodu & de Heer, 1964). In the early 1990s, diabetes screening conducted by the Ghana Diabetes Association suggested 2–3% prevalence in the southern part of Ghana. In the late 1990s, a prevalence rate of 6.4% for diabetes was recorded in Accra (Amoah, Owusu & Adjei, 2002). At Korle-Bu teaching hospital, the percentage of medical admissions due to diabetes increased almost two-fold from 3.5 in the mid-1970s to 6.4% in the mid-1980s (Adubofour, Ofei, Mensah-Adubufour & Owusu, 1997). The number of people with diabetes worldwide is expected to increase alarmingly in the coming decades (Jones, Lawson, Daneman, 2008). This increase is projected to occur as a result of population ageing, unhealthy diet, obesity and sedentary lifestyle (Jones, Lawson, Daneman, 2008). Atta (2007) acknowledged that diabetes has been recognized as the cause of prolonged ill health in at least 2.2 million Ghanaians and threatens 50 percent of all Ghanaian patients. Atta

University of Ghana http://ugspace.ug.edu.gh

(2007) associated this to the psychological problems that diabetics go through since diabetes has been a potentially life threatening condition.

Hypertension is also another chronic illness which is a highly prevalent disease. In most countries, 15% to 30% of the adult population and more than 50% of the elderly population suffer from diabetes thus making it a general public health problem. In the 1970s, hypertension prevalence rate in Mamprobi (Ghana) was found to be 13% (Pobee, 2006). In 1998, a survey recorded a national prevalence of 27.8% for hypertension in Ghana (Bosu, 2005). Studies conducted after the 1998 national survey showed higher prevalence rates across different groups in different regions: 28.7% in Kumasi in the Ashanti Region; 32% prevalence in Bawku/Zebilla in the Upper East Region; 36.9% in Keta-Dzelukope in the Volta Region; and 47.8% among a cohort of women in Accra (Hill, Anarfi, Darko & Duda, 2005). Hypertension is an important risk factor for cardiovascular diseases responsible for roughly 30% of deaths worldwide. The long term medical consequences of untreated hypertension such as myocardial infarction, stroke, congestive heart failure and renal failure are among the most common and serious cause of poor quality of life (Ogah, 2006).

1.1.3 Impact of Chronic Illness on Quality of Life

Chronic illnesses are mostly characterized by complex causes, many risk factors, long latency periods, a long illness, and functional impairment or disability (Archie, 2002). Most chronic illnesses are generally not cured completely. Some can be immediately life-threatening, such as heart attack and stroke. Others linger over time and need intensive management. Most chronic illnesses persist throughout a person's life (Lowes & Lyne, 2008).

University of Ghana http://ugspace.ug.edu.gh

Because they are chronic, an individual has to adjust to the demands of the illness and the therapy used to treat the condition. The additional stresses such as changing the way you live, see yourself and relate to others associated with chronic illness all have the tendency to influence negatively a person's quality of life (Archie, 2002). With chronic illness condition, patients are required to regulate blood sugars amidst required changes in lifestyle factors. There is also an unpleasant medication that usually accompanies the disease in order to maintain a correct degree of metabolic control. The fact that these changes make the patients vulnerable to stress also affect their quality of life (Archie, 2002).

Any potentially life-threatening condition has some psychological impact, and that of chronic illness such as diabetes and hypertension are profound (Lowes & Lyne, 2008). If the care regimen is complex, the impact is greater in terms of financial cost, misunderstandings, external influences (e.g., patients may be accepted or rejected by the community), and the needs imposed by the disease itself. Family members often experience the classic stages of grief, progressing from anger and denial to bargaining, depression, and finally resolution or acceptance. Unresolved grief leads to families becoming dysfunctional if they were not already so (Lowes & Lyne, 2008).

The stressors of everyday life can greatly affect both family functioning and blood glucose control. Stressors such as divorce, family arguments, violence, or abuse can lead to elevated blood glucose levels and increase the level of psychological problems such as stress and depression. Being diagnosed with chronic illness is a major life stress (Trudel, Rivard, Dobkin, Leclerc & Robaey, 1998). It requires a large number of physical and mental accommodations. The individual must learn about a complex system of dietary and medical interventions (Trudel,

University of Ghana http://ugspace.ug.edu.gh

Rivard, Dobkin, Leclerc & Robaey, 1998). Lifestyle, work, and other schedules may have to be altered. This can consume a lot of energy for both the individual and his or her family. The individual also has to adjust psychologically. One must adjust to a new view of oneself (Janse, Gemke, Uiterwaal, van der Tweel, Kimpen & Sinnema, 2004). All these also have the potential to negatively affect the quality of life of chronically ill patients.

1.1.4 Factors that Influence the Quality of Life among Chronically Ill Patients

While the effects of chronic illness on quality of life are expected, that is, poor physical, mental, and social well-being, there are certain factors that increase the impact that chronic ailment can have on the physical, mental, and social well-being of the patients. There are reports of attenuating circumstances or factors that minimize the severe consequences of chronic illness on the quality of life of the patients (Agyei-Mensah, 2004). Chief among these factors are the compliance with medication, perception of illness, socioeconomic status, age, educational level, and the gender of the chronically ill patients. These do not necessarily exhaust the list of factors that attenuate the quality of life of the chronically ill patients. However, the present study concentrated on compliance with medication, perception of illness, religious beliefs, socioeconomic status and the gender of the chronically ill patients.

The extent to which this illness can influence quality of life depends to some extent on the perception of the illness. Illness perception deals with the individual's thought processes about the perceived control over the illness. Perception of the disease influences the extent to which people seek health with chronic illness. There is a range of ways to deal with the stress of chronic illness. These include finding information, emotional support from others, setting concrete short-term goals and thinking about possible outcomes and discussing them with the

University of Ghana http://ugspace.ug.edu.gh

doctor before they become a reality. According to Scharloo and Kaptein (1997), individuals who perceive to have control over their sickness are able to take prudent measures in overcoming the sickness compared to their counterparts. When patients perceive that they have control over their condition, they engage in effective health seeking behaviours which ensure high quality of life.

Effective management of chronic illness also depends on medication compliance across a lifetime (Billson & Walker, 1994). For individuals with chronic illness, adherence to medication is crucial in preventing or minimizing the deficits associated with the illness and the cumulative impact of these deficits in everyday life. Failure to comply with medication may lead to toxicity which will serve as a significant limiting factor in treatment maintenance (Kawecka-Jaszcz, 2003). The extents to which people comply with medication depend on the religious beliefs. Every society has its own religious or traditional beliefs and practices related to health care. All people, whether rural or urban, have their own beliefs and practices concerning health and diseases. Not all customs and beliefs are bad, some have positive values while others may be harmful. The traditional belief as to the causes of diseases such as chronic illness in Ghana affects the extent to which the patients comply with medication (De-Graft Aikins, 2007). Patients who believe chronic illness is caused by spiritual factors other than a defect in the brain will fail to comply with medications provided by the medical practitioner (Ogah, 2006).

Another factor that influences quality of life among chronic illness is low socioeconomic status (Eddy, Rickards & Cavanna, 2011). In Ghana, there may be multiplicity of treatment options which may be determined by the level of socio-economic status. Some people may not comply with medication due to poor socio-economic status which makes it difficult for some patients to be able to afford medications regularly (Billson & Walker, 1994). Determinants of socio-

University of Ghana http://ugspace.ug.edu.gh

economic status such as education and income affect belief system and affordability. People might not follow through with treatment because they could not afford medication (Kawecka-Jaszcz, 2003). Some patients may also not be able to attend hospital regularly because of poor socio-economic status (Ogah, 2006). Poor socio-economic status also contributes to poor education which is associated with knowledge of etiology of disorder and higher stigma.

Gender of the individual has been found to be inconsistent predictor of quality of life among chronically ill patients. However, men generally report better quality of life than women. According to Ayedemir, Ozdemir and Koroglu (2005) the fact that men have better quality of life scores can be understood by the fact that women refer to feelings of dissatisfaction more often and, moreover, men are more tolerant of chronic diseases, thus less emotionally affected by them when compared to women. It is based on this background that the present study explored the quality of life among chronically ill patients (diabetics and hypertensives) and the mediating or attenuating factors that may account for poor quality of life among the chronically ill patients.

1.2 Statement of the problems

Chronic Disease is a long-lasting condition that can be controlled but not cured. Chronic illness affects the population worldwide. As described by the Centers for Disease Control, chronic disease is the leading cause of death and disability in the world. Chronic illness accounts for 70% of all deaths in the United States which is 1.7 million each year (De-Graft Aikins, 2007). Data from the World Health Organization shows that chronic disease is also the major cause of premature death around the world even in places where infectious diseases are rampant. Although chronic diseases are among the most common and costly health problems, they are also among the most preventable and most often can be effectively controlled (Srinivas, Venkatesha,

University of Ghana http://ugspace.ug.edu.gh

& Prasad, 2014).In Ghana, major causes of death have shifted from solely communicable diseases such as HIV/ AIDS to a combination of communicable and chronic non-communicable diseases such as hypertension and diabetes (Agyei-Mensah,2004). Though the mortality rate associated with chronic illness is not documented, the prevalence rate has increased for more than 15% and it was the number one cause of death in 1991 and 2001(Agyei-Mensah,2004)

Having a long-term, or chronic, illness can disrupt your life in many ways. Chronic disease may often affect one's appearance or physical abilities and independence resulting in the patient experiencing tiredness and pain. Ability to effectively work might also be hampered causing financial problems. For children, chronic illness can be frightening, because they may not understand why this is happening to them. The physical and physiological changes associated with chronic illness can cause stress, anxiety and anger. If they do, it is important to seek help. However, the perception that people have about the illness prevents them from seeking help (Eljedi, Mikolajczyk, Kraemer & Laaser, 2006).

Chronic illness has most times been poorly understood by some societies and has frequently been associated with numerous myths and beliefs as a result of deficient or incorrect information about it (Srinivas, Venkatesha, & Prasad, 2014). Cultural beliefs and misconceptions about chronic illness influence the care-seeking behaviour of people with chronic illness. Despite the advance in orthodox treatment, a sizable proportion of chronically ill population in Africa still resort to complementary and alternative medicine for treatment due to the cultural beliefs and misconceptions (De-Graft Aikins, 2007). This phenomenon thus highlights the importance of improvement in knowledge towards chronic illness among patients, their families or caregivers

University of Ghana http://ugspace.ug.edu.gh

as well as the public in attempt to ensure that conventional treatment and health-related quality of life is not compromised.

Currently, the knowledge level of the general public (Ghana) cannot be said to be adequate because not much studies on all the factors that put chronically ill patients at risk of developing low quality of life as being published. Whiles some studies have linked variables such as sex, cultural beliefs and socio-economic status to poor quality of life among chronically ill patients (de Gusmao, Mion & Pierin, 2009; Kiadaliri, Najafi & Mirmalek-Sani, 2013; Lindsay, Inverarity & McDowell, 2011), other studies that take into account illness perception and medication compliance as risk factors to the development of poor quality of life among chronically ill patients is underrepresented, particularly within the context of Ghana (Agyei-Mensah,2004; De-Graft Aikins, 2007). Thus the present study quantitatively explored the quality of life among chronically ill patients and the factors that may account for poor quality of life among these chronically ill patients.

1.3 Aims and Objectives of the Study

Willig (2008) argues from a pragmatic view point that the aim of research is not about generating abstract truth free from the experience of people but rather to provide insight that will inure to the benefit of humans. Hence the main aim of the study is to assess illness perception and its impact on quality of life among chronically ill patients and to provide the role that social support and health seeking behaviours will play in the quality of life of chronically ill patients. Given the above mentioned context which the present study is predicated, the following specific objectives were pursued:

1. To assess the quality of life among chronically ill patients (diabetics and hypertensivs).

University of Ghana http://ugspace.ug.edu.gh

2. To assess whether quality of life associated with chronic illness would be predicted by factors such as religiousity, illness perception, socio-economic status, compliance with medication and the gender of the patient.
3. To investigate the mediating role of treatment compliance on the relationship between illness perception and quality of life

1.4 Significance of the Study

This study aimed at investigating the quality of life associated with chronic illness and the predictive factors that expose the patients with low quality of life. Chronic illness is not new in the African continent but researchers have not concentrated much on this disorder in the African continent and Ghana to be specific. The knowledge level of some researchers and the general public on chronic illness is also low. By assessing the quality of life and the predictive factors that expose seizure patients to poor quality of life. The study will sensitize the public about chronic illness and help eradicate the misconception associated with chronic illness that leads to the discriminating, ostracizing and stigmatization of chronically ill patients and to create positive attitudes towards chronically ill patients.

The study will also generate knowledge about chronic illness and help enlighten the general public as to the factors that expose chronically ill patients to experience poor quality of life. The knowledge that this study will generate may lead to an improvement in health-related quality of life not only for patients but the families and caregivers of the chronically ill patients. Secondly, the knowledge could provide better insight into the nature of the disease as well as its future course. This will go a long way to inform educationists, counselors, the clergy, educational institutions, corperate organizations, parents and the society as a whole in gaining knowledge to

University of Ghana http://ugspace.ug.edu.gh

help them in their counseling process and also help control the factors that affect the health of the chronically ill patients. Furthermore, the study will enormously contribute toward the treatment regime of chronically ill patients by extending our understanding of the dynamics of the illness.

Lastly, the study will help address the paucity of literature, stimulate concerns and promote a platform for addressing the quality of life associated with chronic illness and the predictive factors that predisposes patients to poor quality of life through the presentation of detailed investigations of chronically ill patients in the Ghanaian context.

University of Ghana http://ugspace.ug.edu.gh

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents a review of some theoretical underpinnings of the quality of life in selected chronic illness (diabetes and hypertension) and the predictive factors which expose seizure patients to severe neuropsychological deficits. There is also a review of related studies in relation to quality of life in diabetics and hypertensives. Rationale for the present study is also presented here. There is also a presentation of predictions in the form of hypotheses which are followed by a conceptual model that graphically demonstrate the relationships predicted. Operational definitions of terms used in the study conclude the chapter.

2.1 Theoretical Framework

The use of theory serves as a guide for finding answers to research questions as well as providing broad explanations for research findings. There exist several theories that explain the quality of life in patients with chronic illness and the factors which expose chronically ill patients to poor quality of life. The predictions made in the present study were therefore based on certain specific theories such as the Health Belief Model (Rosenstock, 1966), the Self-Regulation Model (SRM; Leventhal, Nerenz, & Steele, 1984), the Socio-emotional Selectivity Theory (Carstensen, Isaacowitz & Charles, 1999) and the Risk and Protective Factor Model (Hawkins, Catalano & Miller, 1992). It is within the framework of these theories that the findings obtained are explained.

University of Ghana http://ugspace.ug.edu.gh

2.1.1 The Health Belief Model

The Health Belief Model (HBM; Rosenstock, 1966) is a psychological model that attempts to explain and predict health behaviours. This is done by focusing on the attitudes and beliefs of individuals. The HBM is based on the understanding that a person will take a health-related action if that person: feels that, a negative health condition can be avoided, has a positive expectation that by taking a recommended action, he/she will avoid a negative health condition, and believes that he/she can successfully take a recommended health action (Rosenstock, 1966).

The HBM was spelled out in terms of four constructs representing the perceived threat and net benefits: perceived susceptibility, perceived severity, perceived benefits, and perceived barriers (Rosenstock, 1966). Perceived susceptibility deals with an individual's assessment of their risk of getting the condition. It is the extent to which individuals believe they are likely to suffer from a particular ailment, discomfort or disease. Perceived severity deals with an individual's perception of how serious it might be to them both medically and socially that is an individual's assessment of the seriousness of the condition, and its potential consequences. Perceived barriers deals with impediment to or the likely cost of change in health behaviours that is an individual's assessment of the influences that facilitate or discourage adoption of the promoted behavior and the Perceived benefits of engaging in a particular health related behaviours which deals with an individual's assessment of the positive consequences of adopting the behavior (Rosenstock, 1966).

Based on this, the type of perception people have about chronic illness will influence people to seek health or engage in healthy behaviours which may affect their quality of life. When

University of Ghana http://ugspace.ug.edu.gh

chronically ill patients perceive their condition as beyond them, they are less likely to engage in effective treatment which will affect their quality of life.

2.1.2 The Self-Regulation Model (SRM; Leventhal, Nerenz, & Steele, 1984)

According to the self-regulation theory, promoting better health outcomes requires eliciting and discussing patient's beliefs and stimulating independent performance of health-related behaviors (Michie, Miles & Weinman, 2003; Leventhal, Brissette & Leventhal, 2003). The Self-Regulation Model (SRM) postulates that it is the patient's individual set of cognitive representations and emotional representations that determines the person's health behaviour.

The self-regulatory model maintains that in response to an illness or health threat, individuals form both cognitive and emotional representations of the perceived illness or health threat, which are processed relatively independently (Leventhal, Nerenz, & Steele, 1984). The cognitive representations are formed based on five distinct components, called illness perceptions (Leventhal, Meyer, & Nerenz, 1980). These components include: identity (label and symptoms associated with the illness), timeline (duration of illness), cause (source of illness), consequences (effects of illness on life domains), and control (extent to which the illness is amenable to treatment or cure; Broadbent, 2010). If an individual perceives only negative events associated with the illness and thinks he/she cannot deal effectively with it, it prevent the individual from seeking health care and engaging in constructive behaviours that helps to maintain the illness.

2.1.3 The Socio-Emotional Selectivity Theory (Carstensen, Isaacowitz & Charles, 1999)

The Socio-emotional Selectivity Theory postulates that people's awareness of how much time they have left in life affects their motivation and quality of life. The theory has two categories of

University of Ghana http://ugspace.ug.edu.gh

goals: the future-oriented goals and present-oriented goals. Future oriented goals aim at knowledge acquisition, career planning, the development of new social relationships and other endeavors that will pay off in the future. Present-oriented goals are aimed at emotion regulation, the pursuit of emotionally gratifying interactions with social partners and other pursuits whose benefits can be realized in the present. When people perceive their future as open ended, they tend to focus on future-oriented goals but when they feel that time is running out, their focus tends to shift towards present-oriented goals. The theory contends that when people are affected by fatal illness, they are less motivated to achieve any of these goals especially the future-oriented ones. This also has the propensity to affect their quality of life.

2.1.4 Risk and Protective Factor Model (Hawkins, Catalano & Miller, 1992)

Risk factors are either background characteristics or life events that may have a negative impact on child development and behavioural outcomes. Risk factors are associated with the increased likelihood of a behaviour that usually has negative consequences. Protective factors on the other hand are characteristics and events that positively influence individuals and help limit the impact of risk factors. Protective factors therefore reduce the impact of risk behaviour, help individuals not to engage in potentially harmful behaviour, and promote an alternative pathway (Spooner, Hall & Lynskey, 2001). Essentially, risk factors are the weaknesses and protective factors are the strengths of any given family.

According to the Risk and Protective Factor Model, there are some factors which when present helps improve an individual's quality of life. The Risk and Protective Factor Model view low socio-economic status and lack of compliance with medication as the causes of poor quality of life among chronically ill patients.

University of Ghana http://ugspace.ug.edu.gh

2.2 Review of Related Studies

This section reviews empirical studies that help in explaining the predicted relationships of the variables considered in the study. It reviews studies on the quality of life among chronically ill patients. It further assesses whether quality of life of chronically ill patients will be predicted by factors such as perception of the illness, socio-economic status, religiousity, compliance with medication and sex of the chronically ill patient.

2.2.1 Impact of Chronic Illness on Quality of Life

Chronically ill patients may experience significant decline in quality of life due to their permanent condition (de Gusmao, Mion and Pierin (2009). Different researchers have concentrated on the quality of life of different chronic illness. Some of these studies (e.g., Chaveepojnkamjorn, Pichainarong, Schelp, & Mahaweerawat, 2008; Huang, Brown, Ewigman, Foley & Meltzer, 2007) focus on only one chronic illness whilst others (e.g., Lindsay, Inverarity & McDowell, 2011) focus on two or more of the chronic illnesses. The chronic illnesses assessed in this study include diabetes and hypertension.

2.2.2.1 Impact of Diabetes on Quality of Life

The overall quality of life in diabetics is generally low due to the stress and depression associated with having to abide by certain way of lifestyle (Kiadaliri, Najafi & Mirmalek-Sani, 2013). The decline in quality of life among diabetics is well recognized by researchers. Huang, Brown, Ewigman, Foley and Meltzer (2007) conducted a study aimed at assessing how diabetics weigh the quality of life associated with complications and treatments to help provide insight into treatment compliance. Seven hundred and one (701) adult patients living with diabetes who were attending Chicago area clinics took part in the study. The researchers evaluated 9 complication

University of Ghana http://ugspace.ug.edu.gh

states and 10 treatment states. The results of the study indicated that in all diabetes patients have negative quality of life. The negative ratings of quality of life among the diabetics resulted from the comprehensive diabetes treatments. Though the reliability of this study cannot be questioned, yet there was no control group within which to compare the diabetics on their level of quality of life. This makes it difficult to draw conclusions on the level of quality of life relative to healthy individuals.

A cross-sectional study was conducted by Chaveepojnkamjorn, Pichainarong, Schelp and Mahaweerawat (2008) on the quality of life (QOL) and compliance among type 2 diabetics in Thailand. The researchers assessed compliance in terms of the dietary intake and life style patterns useful for diabetics to maintain health and prevent complications of the disease. Data were collected using a self-administered questionnaire. Data was analyzed using the simple descriptive statistics, the chi-square test and multiple logistic regression. The majority (78.7%) of study participants were females. The findings related significantly lower level of quality of life among diabetes patients. No socio-demographic factors (age, gender, education) were found to significantly predict quality of life among the participants. There was a significantly positive relationship between compliance and quality of life. The ratio of males to females in this study (1:5) makes it difficult to draw comparism between males and females with diabetes on quality of life. There is therefore the need to balance participants of the ratio of males to females with diabetes.

Eljedi, Mikolajczyk, Kraemer and Laaser (2006) conducted a study to assess the effects of having diabetes on health-related quality of life (HRQOL) under the living conditions in refugee camps in the Gaza strip. One hundred and ninety seven (197) diabetics were selected from three

University of Ghana http://ugspace.ug.edu.gh

refugee camps in the Gaza strip and 197 age- and sex-matched controls living in the same camps to take part in the study. The World Health Organization Quality of Life questionnaire (WHOQOL-BREF) including four domains (physical health, psychological, social relations and environment) was used to assess quality of life among the participants. The results revealed that diabetics had lower scores on all the domains of quality of life compared to the healthy control participants, with stronger effects in physical health and psychological domains. Among the diabetics, females were found to have significantly lower quality of life compared to males. Low socioeconomic status had a strong negative impact on HRQOL.

Kiadaliri, Najafi and Mirmalek-Sani (2013) also adopted the meta-analytical design to examine health-related quality of life (HRQoL) among diabetics. A total of 46 studies were included in the review. Most studies reviewed investigated HRQoL among people with type 2 diabetes. The Short Form Health Survey (SF-36) and WHO quality of life instruments (WHOQOL) were the main instruments used in the studies reviewed. The results of the meta-analysis showed that people with diabetes had lower HRQoL than people without diabetes. Diabetics with high socioeconomic status were found to have higher HRQoL than those with low socioeconomic status. The findings of the study by Kiadaliri, Najafi and Mirmalek-Sani (2013) cannot be underestimated; however, they adopted the meta-analysis (review of existing literatures) which is influenced by publication bias (Walker, Kattan & Hernandez, 2008). Moreover, their study failed to give the number of literature they reviewed. According to Walker, Kattan and Hernandez (2008), the number of studies which are included in a meta-analytical review determine the reliability and validity of the conclusions. According to Kiadaliri, Najafi and Mirmalek-Sani (2013), the studies used suffer from major methodological and reporting flaws which limit validity and generalizability of the findings.

University of Ghana http://ugspace.ug.edu.gh

2.2.2.2 Impact of Hypertension on Quality of Life

Although hypertension, especially in mild to moderate stages, is considered as an asymptomatic condition, its association with alterations in wellbeing and health-related quality of life (HRQOL) is still a controversial issue (Bardage & Isacson, 2001). According to Wilson and Cleary (1995), hypertension causes physiologic changes due to illness or treatment and lead to symptoms which in turn influences functional status or health-related quality of life.

De Carvalho, Siqueira, Sousa, and Jardim (2013) conducted a study to evaluate the quality of life of hypertensivese when compared with the general healthy population. A total of 333 individuals consisting of 246 hypertensive patients and 87 normotensive individuals took part in the study. A sociodemographic questionnaire and the SF-36 for quality of life assessment were administered to both the hypertensives and the healthy control group. Non-parametric tests (Chi-square, Kolmogorov-Smirnov test, Mann Whitney U-test, Kruskal-Wallis test) and parametric test (multivariate analysis) were used for analyzing the data. The descriptive statistics indicated that the hypertensives and the healthy groups were homogeneous for age, gender, ethnicity, educational level and marital status. However, the normotensive individuals (healthy group) showed a higher health-related quality of life compared to the hypertensives. It was concluded that although considered to be almost always a clinically silent disease, systemic hypertension impairs the quality of life of patients who suffer from it.

Ogunlana, Adedokun, Dairo and Odunaiya (2009) conducted a study aimed at assessing the level of quality of life among hypertensives and the factors that determine the health quality of life among black hypertensives in Nigeria. The study recruited 265 hypertensives receiving treatment at the medical outpatient unit of the Federal Medical Centre Abeokuta, Nigeria. Demographic

University of Ghana http://ugspace.ug.edu.gh

data, disease characteristics such as symptoms and signs and recent drug history were obtained from the patients and their hospital records as documented by the physician. The SF-36 questionnaire was administered once by interview to the participants to measure their HRQOL. The results of the study revealed that physical functioning domain mean score was far below average. Role physical and role emotional domains were a little above average. The overall HRQOL was significantly better in the group of hypertensives with controlled blood pressure compared to uncontrolled blood pressure. Increasing blood pressure and symptom count, the presence of stroke and visual impairment were significant negative predictors of the overall HRQOL.

2.2.2.3 Comparing Hypertensive Patients with Diabetic Patients

Although there are different chronic diseases with different impact on quality of life, relatively few of these studies have compared the differences in quality of life among the different forms of chronic illness. For example, a study was conducted by Khaw, Hassan and Latiffah (2011) to assess the health-related quality of life among hypertensives and diabetics in comparison with the healthy general population. The health quality of life of the hypertensive patients were compared with the norms of the quality of life among the healthy population. A total of 388 chronically ill patients were made to respond to 36-item short form (SF-36) of the HRQOL questionnaire. General linear models were used to identify statistically significant differences in the healthy quality of life scores. Hypertensive patients reported lower scores in six SF-36 dimensions except bodily pain and role emotional dimension when compared with Malaysian healthy population norms. After adjusting for socio-demographic variables (age, gender, education and employment), SF-36 scores among diabetes mellitus patients were comparably small and statistically significantly lower score than hypertensives without comorbidities.

University of Ghana http://ugspace.ug.edu.gh

Similarly, Soni, Porter, Lash and Unruh (2010) conducted a meta-analytical survey by focusing on the literature published since 2000, on HRQOL in elderly hypertensive individuals as well as other chronic diseases including chronic kidney disease (CKD), cardiovascular disease and diabetes mellitus. The results of the meta-analysis indicated that patients suffering from hypertension alone have higher quality of life than those with other chronic diseases such as diabetes. The most pronounced effect was noted in the lower physical function domains of HRQOL among other chronic ailment compared to hypertension. The researchers explained that hypertension is the milder form of all chronic illnesses and that compliance with medication improves quality of life among hypertensive patients compared to the other chronic illnesses.

2.2.2.4 Factors Influencing the Quality of Life among Chronically Ill Patients

Research assessing illness perceptions in chronically ill populations has rapidly emerged during the past two decades. Studies among patients with chronic illness including diabetes and hypertension have consistently shown a relationship between illness perceptions and health-related outcomes (i.e., adherence, quality of life, psychological functioning). For example, a meta-analysis of 8 studies by French, Cooper and Weinman (2006) found that four dimensions of illness perceptions predicted attendance in cardiac rehabilitation patients following chronic illness. Patients who perceived more consequences, symptoms (identity), control, and understanding (coherence) were found to attend cardiac rehabilitation and had higher quality of life.

Other studies among patients with chronic illness have found additional dimensions of illness perceptions associated with quality of life and psychological functioning. In a longitudinal study examining the relationship of illness perceptions and coping in 64 patients with chronic illness,

University of Ghana http://ugspace.ug.edu.gh

greater illness identity at baseline predicted poorer social functioning and health perceptions at 1-year follow-up (Scharloo et al., 2000). Another study by Stafford, Berk and Jackson (2009) on the relationship between illness perception and quality of life among 193 patients with diabetes found that greater perceived consequences predicted higher depressive symptoms at 3 and 9 months following hospital discharge. There was a positive relationship between having positive perception about the illness and quality of life among the diabetic patients.

Furthermore, Taylor, Gibson and Franck (2009) conducted a study on health-related quality of life in young people with chronic illness. The role of illness perception on health-related quality of life was assessed. Five perspectives of quality of life were analyzed including sociological, economic, psychological, philosophical and ethical. Eight hundred and sixteen chronically ill patients took part in the study. The results indicated a positive relationship between all the components of quality of life and illness perception. Participants who have positive perception were found to have higher quality of life than those who have negative perception about the treatment and control of the chronic illness.

Although there is a substantial body of literature investigating the role of illness perceptions in various medical populations, there is a relative dearth of research addressing how treatment compliance and religiousity influence quality of life among chronically ill patients. A review of 16 studies examining illness perceptions in patients with chronic illness suggests that illness perceptions are associated with a range of outcomes including quality of life, functional status and disability, and psychological distress (Kaptein et al., 2008). However, treatment compliance was found to influence the relationship between quality of life and illness perception.

University of Ghana http://ugspace.ug.edu.gh

Rafii, Fatemi, Danielson, Johansson and Modanloo (2014) assessed the role of compliance to treatment in quality of life among chronically ill patients. The study adopted the meta-analysis where studies already conducted were reviewed. Twenty three (23) relevant articles were chosen. The results indicated that compliance with medication was positively associated with the wellbeing and quality of life of chronically ill patients.

Jannuzzi, Cintra, Rodrigues, Sao-Joao and Gallani (2004) conducted a study to assess the factors related to medication adherence and its relation to Health- Related Quality of Life in elderly people with diabetic. One hundred (n=100) elderly outpatients with diabetics took part in the study. The Morisky Medication Adherence Scale and the National Eye Institute Visual Functioning Questionnaire (NEI VFQ-25) were used to assess medication compliance and quality of life respectively. The results of the study indicated a positive relationship between quality of life and medication compliance with 12.8% of the variability of quality of life explained by medication compliance.

Shamsi, Khodaifar, Arzaghi, Sarvghadi and Ghazi (2014) assessed the relationship between medication compliance and quality of life as in patients with type 2 diabetes. Quality of life among the participants was measured in terms of their affective temperaments and depression. Two hundred and seven (207) patients were selected using the convenient sampling method. All participants completed the questionnaires related to affective temperaments, medication compliance, depression and demographic information. The results of the study indicated that medication compliance had a significantly positive relationship with quality of life.

University of Ghana http://ugspace.ug.edu.gh

A cross-sectional study was conducted by Schrier, Dekker, Kaptein and Dijkman (1990) to evaluate the association between illness perceptions, treatment compliance and quality of life among 80 patients with chronic illness. The findings of the study revealed that illness identity (belief in symptoms) was associated with physical, role, and social functioning, as well as illness-specific quality of life. Treatment compliance was also found to increase significantly the quality of life among chronically ill patients. The relationship between illness perception and quality of life was also found to be influenced by compliance with medication and change in lifestyle.

Similarly, Sweileh, Zyoud, Nab, Deleq, Enaia, Nassar and Al-Jabi (2014) conducted a study with the purpose of assessing medication adherence and its potential association with beliefs and quality of life among diabetics. Four hundred and five (405) patients took part in the study. The Beliefs about Medicines Questionnaire (BMQ) was used to assess beliefs. Morisky Medication Adherence Scale (MMSA-8) was used to assess medication adherence and the Michigan Health Quality of Life Scale for measuring participant's quality of life. The results of the study indicated that approximately 42.7% of the study sample was considered non-adherent (MMAS-8 score of < 6). Quality of life was positively associated with medication compliance. Multivariate analysis showed that disease-related knowledge, perception about the control of the illness, beliefs about necessity of anti-diabetic medications, concerns about adverse consequences of anti-diabetic medications and beliefs that medicines in general are essentially harmful dictated the extent to which participants complied with medication.

Aside illness perception and medication compliance, the role of religiousity on quality of life has also received evidence. Janse, Sinnema, and Gemke (2012) investigated the differences in

University of Ghana http://ugspace.ug.edu.gh

perception of quality of life among chronically ill patients. The study adopted the longitudinal survey. Data was collected from 181 patients between July 1999 and January 2002. Results indicated differences in perception of health and wellbeing between patients with different chronic illnesses. There was positive relationship between illness perception and quality of life. Religiousity was found to have no significant impact on quality of life among chronically ill patients. Contrary, Nagpal, Kumar, Kakar and Bhartia (2010) found religion to significantly improve the quality of life among chronically ill patients.

Socio-demographic characteristics such as gender and economic status have also been assessed by researchers. For example, Nyanzi, Wamala, and Atuhaire (2014) examined how socio-demographic characteristics influence the quality of life among diabetes patients in Uganda. A total sample of 219 diabetes patients took part in the study. Quality of life was assessed in the dimensions of role limitation due to physical health, emotional health, treatment satisfaction, physical endurance, and diet satisfaction based on a five-point Likert scale. Frequency distributions and Poisson regression were used to analyze the data on patient's characteristics, medical conditions, lifestyle factors, and religiousity. The findings of the study confirm a consensus regarding the influence of age and socio-economic factors on the quality of life in the dimensions of role limitation and physical endurance. There was no significant impact of gender on the quality of life among the chronically ill patients.

Another study was conducted by Srinivas, Venkatesha and Prasad (2014) to assess the quality of life (QoL) among diabetic patients with respect to their demographic characteristics such as age and gender. One hundred and eighty (180) type 2 diabetes mellitus patients attending rural tertiary care centre took part in the study. A pretested and structured questionnaire was used to

University of Ghana http://ugspace.ug.edu.gh

obtain the information on socio-demographic profile and diabetic history. The findings of the study revealed that the mean scores of quality of life with respect to physical, psychological, social and environmental domains were significantly higher among females compared to males. Quality of life domains and other continuous variables showed that there is significant positive correlation between age and physical, psychological, social and environmental domains.

Moreover, Lindsay, Inverarity and McDowell (2011) evaluated changes in health related quality of life (HRQL) for individuals with Type 2 diabetes following the introduction of a new community-based model of care. A survey method was used in which health related quality of life and demographics were assessed before and 18 months after introducing the new service. The findings indicated that the health related quality of life (HRQL) scores were lower than published levels in individuals with diabetes but remained stable during the transition to the new model for the patients who abided with the new services. This means complying with treatment increases the health related quality of life of chronically ill patients. There was higher deterioration in health related quality of life among chronically ill patients from lower socio-economic groups. Females also experienced lower quality of life compared to males with chronic illness.

The predictors of quality of life of diabetic patients were identified by Imayama, Plotnikoff, Courneya and Johnson (2011) study as personal, medical, and lifestyle factors. Predominantly, the study indicated that religiousity, not using insulin (complying with specific lifestyle) and a higher physical activity level were significantly associated with better health related quality of life in adults with type 2 diabetes. Moreover, the study identified that factors such as gender, marital status and higher income were not associated with health quality of life among the

University of Ghana http://ugspace.ug.edu.gh

participants. Similar conclusions regarding the influence of socioeconomic status of patient, education level, and gender was reported among types 1 and 2 diabetic patients in Nigeria by Issa and Baiyewu (2007). Issa and Baiyewu (2007) indicated that socioeconomic status, educational level and gender had no significant impact on the health quality of life among type 1 and type 2 diabetes patients.

Ha, Duy, Le, Khanal and Moorin (2014) conducted a study aimed at measuring quality of life and the impact of socio-demographic characteristics on quality of life among hypertensive people in Vietnam. The study involved 275 hypertensive people aged 50 years and above using WHOQOL-BREF questionnaire. Independent T-test and ANOVA test were used for the analysis. The results of the study revealed that the QOL among hypertensive patients was found to be moderate in all domains, except for psychological domain that was fairly low. Men, marriage participants, higher educational attainment, having physical activities at moderate level, and adherence to treatment were associated with higher QOL among hypertensive patients.

Overall, research among patients with chronic illness demonstrates a relationship between illness perceptions, compliance with treatment and health-related quality of life. Specifically, negative illness perceptions about identity, consequences, timeline, and emotional representation are associated with decreased health quality of life. In contrast with data from other patient groups, the moderating roles of treatment compliance on the relationship between perceived illness perception and quality of life has not been consistent. Neither has the impact of socio-demographic characteristics (gender, religiousity and socioeconomic status) on health quality of life among chronically ill patients been consistent. On the basis of this, the present study seeks to

University of Ghana http://ugspace.ug.edu.gh

assess the quality of life among chronically ill patients and the associated factors that influence the quality of life among the chronically ill patients.

2.3 Rationale of the Present Study

Most studies have been conducted to assess the quality of life associated with chronically ill patients. These studies have largely focused on one of these deficits (e.g., Chaveepojnkamjorn, Pichainarong, Schelp & Mahaweerawat, 2008; Huang, Brown, Ewigman, Foley & Meltzer, 2007). Just few of these studies assessed the quality of life of both diabetes and chronically ill patients at a time (e.g., Schrier, Dekker, Kaptein & Dijkman, 1990).

Moreover, few of these numerous studies on the quality of life among chronically ill patients have assessed the factors that predict the quality of life of patients with chronic illness. It is an undeniable fact that most of these studies have found that chronically ill patients have lower quality of life compared to the normal healthy population. However, Agyei-Mensah (2004) estimated that about 26% of chronically ill patients are normal in terms of their quality of life. The question is what are the factors that influence these patients to have normal level of quality of life? Would it be a factor of treatment compliance, gender, socio-economic status, or illness perception of the chronically ill patient? Most of the numerous studies failed to assess these factors as contributing to the quality of life of the chronically ill patients.

Moreover, despite the low quality of life among chronically ill patients and the potential moderating variables which influence the quality of life, to date, only a handful of studies have focused on understanding the potential variables (treatment compliance, gender, socio-economic status, or illness perception of the chronically ill patients) on explaining the quality of life of

University of Ghana http://ugspace.ug.edu.gh

chronically ill patients especially in Africa (e.g., Agyei-Mensah, 2004; De-Graft Aikins, 2007; Ogunlana, Adedokun, Dairo & Odunaiya, 2009). Ogunlana, Adedokun, Dairo and Odunaiya (2009) noted that most of the studies on health quality of life among chronically ill patients were conducted in the Western world (e.g., French, Cooper & Weinman, 2006; Taylor, Gibson & Franck (2009). This is startling, given that the high prevalence rate of chronic illness in the African continent and Ghana to be specific. Moreover, studies on the predictors of quality of life among chronically ill patients have revealed an inconsistent result. This particular study is therefore aimed at assessing the quality of life among chronically ill patients and the associated factors that influence the quality of life among the chronically ill patients in the Ghanaian context.

2.4 Statement of hypotheses

Based on the literature reviewed, the study sought to test the following hypotheses:

1. Healthy participants will have higher quality of life than hypertensives and diabetics
2. Diabetics will have lower quality of life than hypertensives
3. Chronically ill patients with higher level of socioeconomic status will have higher quality of life than chronically ill patients with lower level of socioeconomic status
4. Chronically ill males will have higher quality of life than chronically ill females
5. There will be a positive relationship between illness perception and quality of life
6. Compliance with medication will have positive relationship with quality of life.
7. The relationship between illness perception and quality of life will be mediated by medication compliance
8. Highly religious chronically ill patients will have higher quality of life than low religious chronically ill patients

University of Ghana http://ugspace.ug.edu.gh

2.5 Hypothetical Model

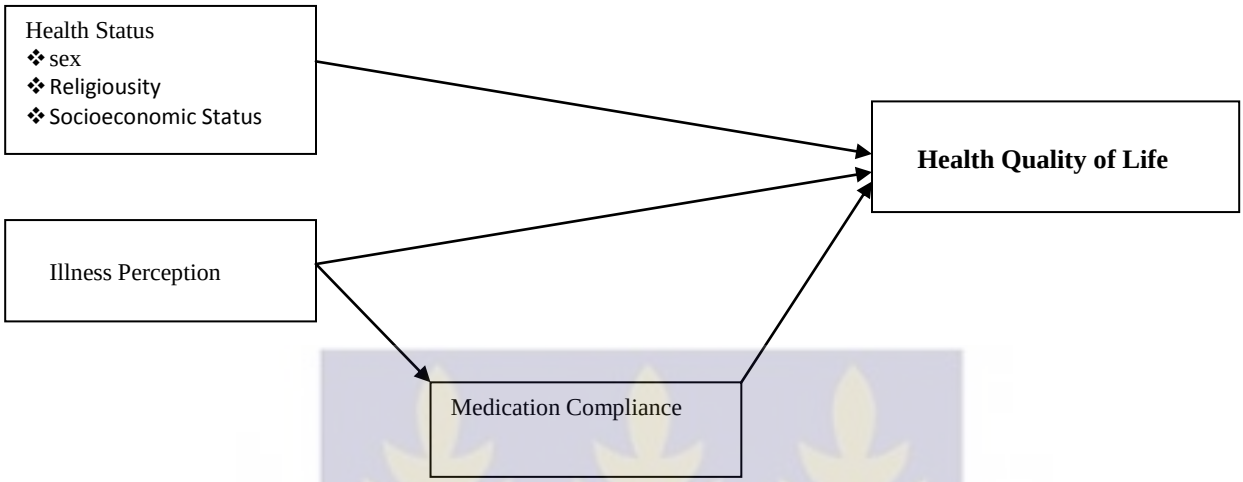

Figure 1: Hypothetical model showing the expected relationships between chronic illness and quality of life

In the model above, healthy status of the participants (chronically ill patients and healthy participants) is hypothesized to differ in their level of quality of life. The chronic illness assessed includes diabetes and hypertension. Other factors were hypothesized to influence the quality of life among the chronically ill patients. The variables predicted to influence quality of life among the chronically ill patients included illness perception, religiousity, socio-economic status, compliance with medication, and gender of the patient. Compliance with treatment is lastly predicted mediate the relationship between illness perception and quality of life among the chronically ill patients.

2.6 Operational Definition of Terms

High socio-economic background: a score above 10 on the modified Kuppuswamy's Socioeconomic Status Scale

University of Ghana http://ugspace.ug.edu.gh

Low socio-economic background: a score of 10 and below on the modified Kuppuswamy's Socioeconomic Status Scale

Highly religious: a score above 20 on the religiousity scale

Low religious: a score of 20 and below on the religiousity scale

University of Ghana http://ugspace.ug.edu.gh

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter discusses the research methodology that was used in investigating the quality of life among diabetics and hypertensives. It specified the appropriate methods employed in order to test the hypotheses and discussed the reasons and assumptions underlying the choices made. The chapter covered the participants, the sampling technique, the measuring instruments, research design, and the data collection procedure. The chapter concluded by giving a summary of the ethical principles adhered to.

3.1 Design

A quantitative research using a survey was employed in this study. Surveys are appropriate for descriptive, explanatory and exploratory purposes and are mostly used in studies that have the individual as the unit of analysis (Babbie, 2004) and are also excellent in assessing behaviours and orientations in a large population. Buckingham and Saunders (2004) refers to the survey method as a technique for gathering statistical information about the attributes, attitudes and behaviours of a population by administering standardized questions to some or all of its members. Consequently, the survey design was regarded as the most appropriate research design to conduct the research, because the purpose of the research study was explanatory and descriptive, the unit of analysis was the individual and the point of focus was the behaviour of the individual.

The specific type of questionnaire survey adopted was the cross sectional survey sorting participants views and behaviours using structured questionnaires. The time dimension of the

University of Ghana http://ugspace.ug.edu.gh

study was cross-sectional as large amount of data on quality of life among chronically ill patients were collected from among many participants within a relatively short time. This method facilitated asking a large number of chronically ill patients their quality of life in a relatively limited time or in a cost effective manner (Oppenheim, 1992).

3.2 Research Setting and Population

The study was conducted in the Accra metropolis, the capital of Ghana found in the Greater Accra Region. Accra is located in the southern part of Ghana. For this study, the target group were all patients diagnosed with diabetes and hypertension without any trace of other chronic illness. These patients were obtained from the Korle-Bu Teaching Hospital. Korle-Bu Teaching Hospital was selected because that was where evidence of people with chronic illness were obtained. Individuals' with chronic illness in this special institution were diagnosed by qualified medical officers. Based on the age range and sex of the chronically ill patients obtained, those without any trace of chronic illness (control group) were also selected. Relatives and friends (associates) who accompanies chronically ill patients or patients with other ailment were used as the control group. Usually, parents, friends, relatives or other associates of people with chronic illness or other ailment report with them to the Korle-Bu Teaching Hospital for treatment and drugs.

Since the present study was basically determined to investigate the quality of life among individual's with chronic illness (diabetes and hypertension) and the risk factors that predispose some chronic illness (diabetes and hypertension) with lower quality of life, Korle-Bu Teaching Hospital where issues of referral of patients with chronic illness was linked with the most appropriate setting to consider. These two chronic illnesses (diabetes and hypertension) were

University of Ghana http://ugspace.ug.edu.gh

also targeted because they were common and researchers have found patients with these chronic illnesses (diabetes and hypertension) to be associated with lower quality of life.

3.3 Inclusion and Exclusion Criteria

Participants included in this study were suffering from chronic illness such as diabetes or hypertension. These individuals who took part in the study were those who had been diagnosed with chronic illness (diabetes or hypertension) for at least one year and records showed that the individual was not having two or more of this chronic illness at the same time. Participants were also more than 20 years.

The following participants were exempted from the study. These were persons with more than one chronic illness who were below the age of 20 years old. To make sure the participants had only one of the conditions, the researchers sorted out patient's folders to find out patients with only one of the condition (diabetes or hypertension) without considering the other patients since the folder specified if patient had been diagnosed with one condition or more.

3.4 Sample/Sampling Technique

Quality sampling is characterized by the number of participants and the technique used in the study. To avoid wasteful results from undersized sample size, the study employed the approaches proposed by Tabacknick and Fidell (2007) as well as Cohen (1998) Statistical Power in selecting what is typical to represent the population.

According to Tabacknick and Fidell (2007) formula for sample size determination, the minimum sample size for testing a model is 50+8M and 104+M for testing individual predictors (where M is the number of predictors). In this study there were five (5) predictors (i.e. demographic

University of Ghana http://ugspace.ug.edu.gh

characteristics, health status, illness perception, religiousity, medication compliance). Drawing from the above, the minimum sample size required to meet the requirement for testing the model of regression analysis was 82 and testing individual predictors was 109. As emphasized by Cohen (1992), the sample size that is required for correlational and multiple regression analyses are 85 and 116 respectively. This indicates that the sampling size can range from a minimum of 85 for performing correlation and regression analyses to a maximum of 116 for checking individual predictors. Since a sample size between 85 and 116 was appropriate, questionnaires were distributed among 90 patients consisting of 30 diabetics, 30 hypertensives and 30 healthy control group participants without any trace of chronic ailment.

Probability sampling technique could not be used in selecting the participants because of how disperse the employees were and the inability to obtain the sample frame. Participants for the study were therefore selected using the purposive sampling technique. The purposive sampling is a non-probability sampling technique used in selecting the patients with chronic illness (diabetes and hypertension) for the study. The purposive sampling technique was selected because the researcher had in mind a certain group of individuals to take part in the study. The purposive sampling was therefore used to identify and select the respondents that helped to meet the study's objectives. The purposive sampling technique was also based on voluntary participants after the chronic ill patients (diabetes and hypertension) had been contacted by the researcher. Thus, the participation in the study among the patients with chronic illness (diabetes and hypertension) was based on interest and willingness of respondents. Likewise, the healthy control group participants were purposively selected based on the demographic characteristics of the chronically ill patients obtained.

University of Ghana http://ugspace.ug.edu.gh

3.5 Sample Characteristics

The research targeted two chronic illnesses (diabetes and hypertension) and control participants without any trace of chronic illness. The number of targeted participants were 90, 30 questionnaires each distributed to diabetics, hypertensives and the healthy participants who served as control group. From the total sample (n = 90) targeted in the study, all of them completed and returned their completed questionnaires giving a response rate of 100%. Babbie and Mouton (2001) asserted that a response rate of 50% is adequate for analysis while responses of 60% and 70% are good and very good respectively. Using Babbie and Mouton (2001) assertion as a benchmark, the response rate of 100% recorded in the study was very good for the analysis.

The demographic distribution of participants indicated that their ages ranged from 28 years to 58years with a mean age of 44.72. Among the 90 participants, 48 (53.4%) were males and 42 (46.6%) were females. The educational level of the respondents ranged from basic school to university. In Table 1, details of the demographic characteristics of the respondents used in this study have been summarized:

University of Ghana http://ugspace.ug.edu.gh

Table 1: Demographic Distribution of Participants

Demographic Variables	**Diabetes** (*M* =17, F=13)	**Hypertension** (*M* =16 F=14)	**Healthy Control** (*M* =15 F=15)	**Total** (*n* = 90)
Age	Mean (*SD*)	Mean (*SD*)	Mean (*SD*)	Mean (*SD*)
	39.81 (2.481)	44.72 (2.035)	42.26 (2.258)	44.72 (2.035)
Educational Level				
Basic	9	5	2	16
Senior Secondary	10	9	19	38
Diploma	7	10	7	24
Degree	4	6	2	12
Religion				
Christianity	18	17	19	54
Islamic	11	13	11	35
Traditional	1	-	-	1

3.6 Measures

The questionnaires for this study were categorized into five sections. The first section sought for information regarding respondent's demographic characteristics. The second section measured illness perception using the Brief Illness Perception Questionnaire (Brief IPQ; Broadbent, Petrie, Main, & Weinman, 2006). The third section measured treatment compliance using Morisky 8-Item Medication Adherence Scale (MMAS-8; Morisky, Green & Levine, 2008). The fourth part measured the religiousity of the participants using the Religiosity and Spirituality Scale developed by Hodgman and Roberts (2002). The last part assessed quality of life. Quality of life was measured using Quality of Life Scale developed by Ware and Sherbourne (1992). Detailed descriptions of the measures are provided below:

Demographic Variables

This part of the questionnaire used self-designed questions to gather information of respondents' demographic characteristics such as health status, type of chronic illness, age,

University of Ghana http://ugspace.ug.edu.gh

sex, marital status and duration of illness. Other relevant questions asked in this questionnaire were about the duration of treatment and religion.

Brief Illness Perception Questionnaire (Brief IPQ; Broadbent, Petrie, Main, & Weinman, 2006)

The Brief Illness Perception Questionnaire (Brief IPQ; Broadbent, Petrie, Main, & Weinman, 2006) was used to assess Illness perceptions among respondents. The Brief IPQ is a 9-item self-report measure designed to assess cognitive and emotional representations of illness. Each item reflects a subscale of the Revised Illness Perception Questionnaire (IPQ-R; Moss-Morris, Weinman, Petrie, Horne, Cameron, & Buick, 2002). Subscales include consequences, timeline, personal control, treatment control, identity, concern, emotions, coherence, and cause. The items are rated on a five point likert scale ranging from strongly agree to strongly disagree. The Brief IPQ demonstrates good test-retest reliability and concurrent validity (Broadbent, Petrie, Main, & Weinman, 2006) with a reliability of .89. An item on the scale is I believe I have no control over this sickness.

Scores for each item was based on the five point likert responses of the participants. Scores ranged from 9 – 45 with higher score indicating positive illness perception.

Morisky 8-Item Medication Adherence Scale (MMAS-8, Morisky, Green & Levine, 2008)

The Morisky 8-Item Medication Adherence Scale (MMAS-8) is a self-report measure of medication-taking behaviour. The scale addresses barriers to medication-taking and has an Alpha Reliability of 0.83 (Morisky, Green & Levine, 2008). Among Ghanaian populace, the reliability

University of Ghana http://ugspace.ug.edu.gh

of the scale was found to be .79 (Beune, van Charante, Beem, mohrs, & Agyemang, 2014). Participants respond to the scale on a five point likert scale ranging from Never/rarely (0), Once in a while (1), Sometimes (2), Usually (3) and All the time (4). Some items on the scale include: "Have you ever cut back or stopped taking your medicine without telling your doctor because you felt worse when you took it", "When you travel or leave home, do you sometimes forget to bring along your medicine", "Did you take all your medicines yesterday".

Scores awarded for each item ranged from 0 – 4. The maximum positive score participants obtained was 32 and the minimum possible score was 0. Higher scores meant that participants comply with medication.

Religiosity and Spirituality Scale (Hodgman & Roberts, 2002)

Religiousity of the participants was measured using the Religiosity and Spirituality Scale developed by Hodgman and Roberts (2002). The scale consists of 20 items measured on a four points likert scale ranging from 0 = I never believe this, to 3 = I always do believe this. The reliability of the scale as indicated by Hodgman and Roberts (2002) was .78.

Scores for each item ranged from 0 to 3. Therefore, the highest possible score each participant obtained was 60 and the minimum possible score was 0. Higher scores indicated higher level of religiousity.

Medical Outcome Health Quality of Life Scale (Ware & Sherbourne, 1992)

Quality of life was measured with the Medical Outcomes Study 26-item Short-Form Health Quality of Life Scale (SF-26; Ware & Sherbourne, 1992). The scale is based on the WHO quality of life model. The SF-26 is a widely-used measure of quality of life assessing eight

University of Ghana http://ugspace.ug.edu.gh

domains (Physical Functioning, Role Limitation Due to Physical Health, Social Functioning, Role Limitation Due to Emotional Problems, Mental Health, Bodily Pain, Vitality, and General Health Perception) and two summary scores (Physical Component Summary and Mental Component Summary). The scale has a reliability of .92. It is measured on a four point likert scale ranging from strongly agree to strongly disagree.

Scores awarded ranged from 0 to 108 with higher scores indicating higher quality of life.

3.7 Pilot Study

Although it is difficult to assess the quality of the data that one collects, it is possible to assess the accuracy of the survey tools used to collect data in any investigation and that can serve as means of assessing the quality of the data collected (Litwin, 1995). An assessment of the collected data relies upon determining the reliability and validity of the survey instruments. According to Churchill (1992), the pretest is the most inexpensive insurance for assessing the reliability and validity of the instrument. The scales for this study were pretested with 20 chronically ill patients (10 cancer patients and 10 healthy participants) at the 37 Military Hospital. Cancer patients were used because cancer is also a chronic disease. The piloting used patients from 37 Military Hospital because it is one of the biggest hospitals in Ghana which also receive referrals of patients with chronic illness.

The pilot testing of the draft questionnaires took place in March, 2015. This was to determine whether participants could easily understand and respond to the questionnaire and whether the scales measure what they are supposed to measure. Precisely, the pilot testing aimed at; identifying possible gaps in the questionnaire, determining practical issues in their usage and recommend possible changes. The analysis of the piloted questionnaires using SPSS version 17.0

University of Ghana http://ugspace.ug.edu.gh

indicated a good reliability of α =.78 for the whole scale. Reliability coefficients of the subscales range from .72 to .86. However, based on comments from participants of the pilot study, some minor changes were made to arrive at the final questionnaire used for the study. Changes to the draft questionnaire comprised rewording some of the questions for clarity and comprehension and correcting few typographical errors.

3.8 Procedure for Data Collection

Permission to carry out the study was obtained from the hospital with introductory letter from the Graduate School of Methodist University. Appropriate authorities consented to the study before proceeding. When permission was granted, approximately one month was scheduled for data collection because of the times that participants report to the hospital. The participants with chronic illnesses were contacted at different range of time.

The questionnaires were given to selected participants to complete through the guidance of the researcher and some trained research assistants in situations where the patients had something to complain about. Participants were guided as to how to respond to the questionnaires without influence to the responses they provided. After collecting the data, responses were coded and quantified for analyses using the statistical package for social sciences (SPSS).

3.9 Analysis of Data

Eight (8) hypotheses were formulated and tested using the Statistical Package for Social Sciences (SPSS). Inferential statistics like the Pearson Product-Moment Correlation Coefficient (Pearson *r*), the Independent t-test, the Three-Way Analysis of Variance and the Mediation Analysis were used to test the various hypotheses. In addition, where significant difference exists for the Three-

University of Ghana http://ugspace.ug.edu.gh

Way ANOVA's result, the Scheffé test was used as a post hoc test to determine where the differences lie. The twentieth version of the Statistical Product and Service Solutions (SPSS) software was used in analyzing the data.

3.10 Ethical Consideration

The American Psychological Association (APA) ethical guidelines were strictly followed throughout the study. The principle of informed consent which is supposed to be a standard feature for ethical consideration in all social research was strictly adhered to. Participants were assured of the privacy, anonymity and confidentiality of data collected and that no individual, organization or participant was identified in reports or scientific publications written on the basis of the research findings. The researcher did not engage in any form of deception regarding the aim, content or nature of the research. Ethics of justice and fairness, objectivity and respecting the dignity of all participants were adhered to.

University of Ghana http://ugspace.ug.edu.gh

CHAPTER FOUR

RESULTS

4.0. Introduction

The study was guided by three main objectives in its quest to assess the quality of life associated with chronic illness and to provide a better explanation of the risk factors that expose chronically ill patients to lower quality of life in Ghana. The first objective was to determine the level of quality of life among chronically ill patients. The second objective was to assess whether quality of life associated with chronic illness would be predicted by factors such as religiousity, illness perception, socio-economic status, compliance with medication and the sex of the patient. The last objective was to investigate the mediating role of treatment compliance on the relationship between illness perception and quality of life.

The results from the analyses are presented in two sections. The first section is the preliminary analysis (normality, reliability and computing descriptive statistics) and the second section tested the various hypotheses proposed. The analysis is then followed with the summary of results and ends with the final structural modal from the findings.

4.1. Preliminary Analysis

The preliminary analysis involves testing for normality, reliability and computing descriptive statistics for the variables studied. The results displayed in Table 2 indicated that the data was normally distributed as the test for normality produced Skewness and Kurtosis figures felt between -1 and +1. This indicated that the variables were all normal and can be used for parametric analyses (Field, 2005).

University of Ghana http://ugspace.ug.edu.gh

Descriptive statistics of the predictor and criterion variables – means and standard deviations were computed. Intercorrelations among the variables were also computed using Pearson Product-Moment Correlation and the coefficients together with the Cronbach alpha of the scales used and the results presented in Table 3. The Cronbach alpha value of the whole scale was .84. Cohen (1992) suggests that Cronbach alpha values of 0.7 and above are adequate for use in psychological research. The subscales for this study had Cronbach alpha values ranging from .74 to .89 (Table 2).

Table 2: Descriptive Statistics and Normality of the Study Variables (N=90)

	Min	Max	Mean	SD	Skewness	Kurtosis	Alpha Values
Medication Compliance	6.00	28.00	16.58	6.17	.28	-.78	.78
Illness Perception	12.00	42.00	26.08	8.90	.09	-.05	.85
Religiousity	12.00	51.00	28.66	8.67	.07	-.68	.74
QoL	33.00	97.00	64.11	16.16	.37	-.54	.89

Table 3: Correlations among Variables

		1	2	3	8
1	Medication Compliance	-			
2	Illness Perception	.41*	-		
3	Religiousity	.10	.068	-	
4	Quality of Life	.41*	.619**	.149	-

**p<.01, *p<.05

University of Ghana http://ugspace.ug.edu.gh

4.2 Testing the Hypothesis

The hypotheses were tested according to how they were stated. In presenting the findings, the hypothesis was stated, the test used in analyzing the hypothesis was justified, the summary table of the findings and the interpretation of the tables then followed.

Hypothesis 1, 2 and 3

H_1: Healthy participants will have higher quality of life than hypertensives and diabetics.

H_2: Diabetics will have lower quality of life than hypertensives.

H_3: Chronically ill patients with higher level of socioeconomic status will have higher quality of life than chronically ill patients with lower level of socioeconomic status

H_4: Chronically ill males will have higher quality of life than chronically ill females

These hypotheses (1, 2, 3 and 4) were tested using the Three-Way Analysis of Variance. This is because there were multiple (3) independent variables and only one dependent variable. Each of the independent variable was in levels. The dependent variable (quality of life) was also measured on an interval scale. The results are shown in Tables 4, 5 and 6 below.

INTEGRI PROCEDAMUS

University of Ghana http://ugspace.ug.edu.gh

Table 4: Descriptive of Health Status, Sex and Socio-economic Status on QoL

Health Status	Sex	SES	N	Mean	SD
Hypertensive Patients	Males	High	13	62.00	4.52
		Low	3	53.33	.57
		Total	16	60.37	5.35
	Females	High	3	77.66	16.16
		Low	11	64.72	8.75
		Total	14	67.50	11.37
	Total	High	16	64.93	9.54
		Low	14	62.28	9.08
		Total	30	63.70	9.27
Diabetic Patients	Males	High	12	55.75	7.81
		Low	5	45.80	6.09
		Total	17	52.82	8.55
	Females	High	4	59.25	6.29
		Low	9	42.33	7.84
		Total	13	47.53	10.81
	Total	High	16	56.62	7.42
		Low	14	43.57	7.22
		Total	30	50.53	9.78
Healthy Control	Males	High	15	75.53	11.43
		Total	15	75.53	11.43
	Females	Low	15	80.66	18.01
		Total	15	80.66	18.01
	Total	High	15	75.53	11.43
		Low	15	80.66	18.01
		Total	30	78.10	15.05
Total	Males	High	40	65.20	11.93
		Low	8	48.62	6.04
		Total	48	62.43	12.75
	Females	High	7	67.14	14.27
		Low	35	65.80	20.35
		Total	42	66.02	19.32
	Total	High	47	65.48	12.15
		Low	43	62.60	19.67
		Total	90	64.11	16.16

University of Ghana http://ugspace.ug.edu.gh

Assessing Table 4 above, differences were observed on the scores on the quality of life among the various groups. Healthy control group had the highest mean scores (M = 78.10, SD = 15.05), followed by the hypertensives (M = 63.70, SD = 9.27) and diabetics (M = 50.53, SD = 9.78) respectively.

The mean scores on quality of life among males and females are (M = 62.43, SD = 12.75) and (M = 66.02, SD = 19.32) respectively. Assessing the impact of socio-economic status on the quality of life, participants from high socio-economic background had higher score on quality of life (M = 65.48, SD = 12.15) compared to those from low socio-economic background (M = 62.60, SD = 19.67).

Table 5: Health Status, sex and socio-economic status on Quality of Life

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Health Status	10394.818	2	5197.409	44.525	.000
Sex	496.355	1	496.355	4.252	.042
Socioeconomic	1588.705	1	1588.705	13.610	.000
Health Status * Sex	493.916	1	493.916	4.231	.043
Health Status * Socioeconomic	18.712	1	18.712	.160	.690
Sex * Socioeconomic	85.415	1	85.415	.732	.395
Health Status * Sex * Socioeconomic	4.907	1	4.907	.042	.838
Error	9338.382	80	116.730		
Total	393168.000	90			

University of Ghana http://ugspace.ug.edu.gh

The results from Table 5 showed that there was a significant impact of health status (healthy control, diabetics, and hypertensives) on quality of life ($F_{(2, 80)} = 44.525$, $p < 0.001$). The multiple comparison was conducted with the results demonstrated on Table 5 below.

With regard to gender differences in quality of life, the results from the analysis showed that there was a significant genderr difference in quality of life ($F_{(1, 80)} = 4.252$, $p < .04$). Moreover, the results from the analysis showed that the interactive effect of gender and health status of respondents on quality of life was significant ($F_{(1, 80)} = .043$, $p < .05$). Assessing the multiple comparison of gender and health status (Appendix 2), chronically ill males had significantly higher mean scores than chronically ill females. This means that the prediction that chronically ill males will have higher quality of life than chronically ill females was supported.

Assessing the effect of socio-economic status in quality of life, Table 4 showed that the observed effect of socio-economic status in quality of life was significant ($F_{(1, 80)} = 13.610$, $p < .001$). However, the interaction effect of gender health status on quality of life was not significant ($F_{(1, 80)} = .160$, $p = .690$) (Table 5). This means that though in general people with higher socio-economic status have higher quality of life than those with lower socio-economic status, the prediction that chronically ill patients with higher level of socioeconomic status will have higher quality of life than chronically ill patients with lower level of socioeconomic status was not supported.

University of Ghana http://ugspace.ug.edu.gh

Table 6: Multiple Comparisons of Health Status on Quality of Life

	1	2	3
1. Healthy Control	-	-	-
2. Diabetes	14.40*	-	-
3. Hypertension	13.16*	27.56*	-

**. The mean difference is significant at the 0.05 level.*

From the results of the multiple comparisons shown on Table 6, the mean scores of all the three groups (healthy control, diabetics and hypertensivs) are all significantly different. With higher score indicating higher quality of life, it means that healthy control group had the highest quality of life (M = 78.10, SD = 15.05), followed by the hypertensives (M = 63.70, SD = 9.27) and diabetics (M = 50.53, SD = 9.78). The predictions that healthy participants will have higher quality of life than hypertensives and diabetics and that, diabetics will have lower quality of life than hypertensives are all supported.

Hypotheses 5 and 6

H_5: There will be a positive relationship between illness perception and quality of life

H_6: Compliance with medication will have positive relationship with quality of life.

The Pearson Product Moment Correlation Coefficient was used to analyze hypotheses 5 and 6. This is because the relationship between two variables was established in each of the hypothesis.

University of Ghana http://ugspace.ug.edu.gh

Table 7: Relationship between Illness Perception, Medication Compliance and Quality of Life

	1	2	3
1. Illness Perception	-	-	-
2. Medication Compliance	.410**		-
3. Quality of Life	.619**	.412**	-

**p<.01

As indicated on the Pearson Product Moment Correlation results shown on Table 7, illness perception is positively related with quality of life (r =.619, $p < .01$). The results therefore support the prediction that "there will be a positive relationship between illness perception and quality of life".

Compliance with medication also have positive and significant relationship with quality of life (r = .412, $p < .01$). This means that the prediction which states that 'compliance with medication will have positive relationship with quality of life' is supported.

Testing for Mediation

The mediating role was tested following Baron and Kenny's (1986) four (4) step approach in which several regression analyses were conducted and significance of the coefficients examined at each step. The steps are as follows:

Step 1: Simple regression analysis of illness perception predicting quality of life (Path c)

Step 2: Simple regression analysis of illness perception predicting medication compliance (i.e. Path a)

University of Ghana http://ugspace.ug.edu.gh

Step 3: Simple regression of medication compliance predicting quality of life (i.e. Path b).

Step 4: Multiple regression analysis of illness perception and medication compliance predicting quality of life.

This can be illustrated diagrammatically as:

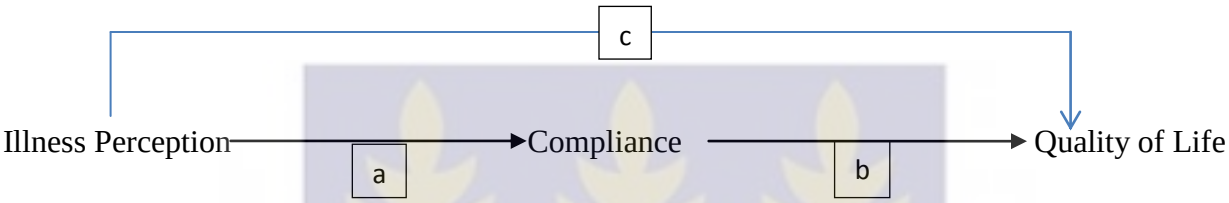

Figure 2: Mediating Relationship Diagram

Steps 1, 2 and 3 were to establish that zero-order relationships exist among the variables. In step 4, according to Baron and Kenny (1986) some form of mediation is supported if the effect of illness perception remains significant after controlling for medication compliance (path b). When illness perception is not significant in predicting quality of life after controlling for medication compliance, then the finding supports full mediation. If illness perception is still significant (i.e. both illness perception and medication compliance significantly predict quality of life), the finding supports partial mediation.

The analysis presented in table 3 showed that the correlation coefficients for each path is statistically significant. This indicates that each of the conditions necessary to test for a possible mediator has been met. The regression analysis for the mediating role is shown on Table 7 below.

University of Ghana http://ugspace.ug.edu.gh

Where there was evidence of some mediation, the software provided by Preacher and Hayes (2004) was used. To conduct the sobel test, four values are important. These are *a* = raw (unstandardized) regression coefficient for the association between IV and mediator. s_a = standard error of *a*. *b* = raw coefficient for the association between the mediator and the DV, s_b = standard error of *b*.

The sobel test was then conducted using three simple steps:

Step 1: Run a regression analysis with the IV predicting the mediator. This will give *a* and s_a.

Step 2: Run a regression analysis with the IV and mediator predicting the DV. This will give *b* and s_b.

Step 3: Insert the *a*, *b*, s_a, and s_b into the cells of the software and the software will calculate the critical ratio as a test of whether the indirect effect of the IV on the DV via the mediator is significantly different from zero.

Hypothesis 7

The relationship between illness perception and quality of life will be mediated by medication compliance

University of Ghana http://ugspace.ug.edu.gh

Table 8: Results of Multiple Analyses for the mediating role of Medication Compliance on Illness Perception – Quality of Life Relationship

Model		B	Std Error	*Beta*
Step 1	(Constant)	36.171	3.685	
	Illness Perception	.803	.134	.619***
Step 2	(Constant)	32.899	4.097	
	Illness Perception	.702	.144	.541***
	Compliance with medication	.357	.208	.291*

R^2= .383 for step1, R^2= .643 for step 2, ΔR^2=.383 for step 1, ΔR^2=.260 for step 2, *p < .05, ***p < .001

The regression coefficients of the mediation analysis reveal that, there was an initial significant relationship between illness perception and quality of life (β = .619, p < .001) with illness perception accounting for 38.3% (R^2 = .383, p < .001) of the variance in quality of life. When compliance with medication was added into the regression model, the regression coefficient of illness perception on quality of life reduced (β = .541, p < .001) though still significant indicating partial mediation. Sobel test for significant mediation indicated that the observed mediation was significant (Z = 4.91, p < .001). Therefore the prediction that *the relationship between illness perception and quality of life will be mediated by medication compliance* received support but was partial mediation.

University of Ghana http://ugspace.ug.edu.gh

Hypothesis 8

Highly religious chronically ill patients will have higher quality of life than low religious chronically ill patients

Table 9: Religious Differences in Quality of Life

Religiousity	N	Mean	SD	df	t	p
High	27	63.07	11.01	58	4.060	.000
Low	33	52.24	9.64			

$p < .001$

Inferring from Table 8, the impact of religiousity (high and low) on quality of life among chronically ill patients was significant [$t_{(58)} = 4.060$, $p < .001$]. This means that the mean score on quality of life of highly religious chronic ill patients (M=63.07, SD=11.01) was significantly higher than the mean score on quality of life of low religious chronically ill patients (M=52.24, SD=9.64). The last prediction which states that highly religious chronically ill patients will have higher quality of life than low religious chronically ill patients was supported.

4.3 Summary of results

In summary, the results of the study showed that:

1. Healthy participants had higher quality of life than hypertensives and diabetics
2. Diabetics also had lower quality of life than hypertensives
3. Chronically ill patients with higher level of socioeconomic status did not differ from chronically ill patients with lower level of socioeconomic status on quality of life

University of Ghana http://ugspace.ug.edu.gh

4. No significant difference was found in quality of life among chronically ill males and chronically ill females
5. There was a positive relationship between illness perception and quality of life
6. Compliance with medication had positive relationship with quality of life.
7. The relationship between illness perception and quality of life was partially mediated by medication compliance
8. Highly religious chronically ill patients had higher quality of life than low religious chronically ill patients.

University of Ghana http://ugspace.ug.edu.gh

CHAPTER FIVE

DISCUSSION, RECOMMENDATIONS AND CONCLUSION

5.0 Introduction

The purpose of the study was to assess the quality of life associated with chronic illness. The study also assessed the factors (medication compliance, religion, illness perception, and gender) that influence the quality of life of chronically ill patients. Diabetics and hypertensives were involved in the study. Eight hypotheses were formulated and analysed. The results are discussed based on the hypotheses tested. The impact of chronic illness on quality of life is discussed and the impact of each predictive factor (medication compliance, religion, illness perception, and sex) on quality of life is also discussed based on the findings generated from the data.

5.1 Discussion

Quality of Life between Chronically Ill Patients and the Healthy Control

The first prediction stated that healthy participants will have higher quality of life than hypertensives and diabetics. The second prediction also stated that diabetics will have lower quality of life than hypertensives. These two predictions were supported indicating that healthy participants have higher quality of life than hypertensives and diabetics. Among the chronically ill patients, diabetics were also associated with lower quality of life than hypertensives. In the literature, several studies have corroborated this result, thus demonstrating the impact of chronic illness on quality of life.

The poor quality of life among chronically ill patients (diabetics and hypertensives) compared to the healthy control group is in line with the study conducted by Chaveepojnkamjorn, Pichainarong, Schelp and Mahaweerawat (2008) on the quality of life (QOL) among chronically

University of Ghana http://ugspace.ug.edu.gh

ill patients and healthy control group. It was found that the quality of life among healthy control group was significantly higher than the chronically ill patients. Similarly, the result agrees with the study by Khaw, Hassan and Latiffah (2011) on the health-related quality of life among hypertensives and diabetics in comparison with the healthy general population. The health quality of life of the chronically ill patients (hypertensives and diabetics) was compared with the norms of the quality of life among the healthy population. The result of the study showed that chronically ill patients reported lower scores in six SF-36 dimensions of the health quality of life scores compared to the healthy control group.

The result is also in agreement with the study by de Carvalho, Siqueira, Sousa, and Jardim (2013). The study by de Carvalho, Siqueira, Sousa, and Jardim (2013) revealed that chronically ill patients report lower quality of life in all dimensions including physical, social and psychological. A study by Ogunlana, Adedokun, Dairo and Odunaiya (2009) conducted in Nigeria also supported the prediction that chronic illness is associated with lower quality of life than healthy control group which is in line with the present finding. Similarly Kiadaliri, Najafi and Mirmalek-Sani (2013) revealed a significantly lower quality of life among chronically ill patients compared to the healthy control group.

According to Felder-Puig, Frey, Sonnleithner, Feeny, Gadner, Barr, Furlong and Topf, (2000), chronic patients have lower quality of life because the patients have to adjust to the demands of the illness and the therapy used to treat the condition. Being diagnosed with chronic illness is a major life stress itself (Trudel, Rivard, Dobkin, Leclerc & Robaey, 1998) The additional stresses such as changing the way you live, see yourself and relate to others associated with chronic illness all have the tendency to negatively influence a person's quality of life. Stressors such as

University of Ghana http://ugspace.ug.edu.gh

divorce, family arguments, violence, or abuse can lead to elevated blood glucose levels and increase the level of psychological problems such as stress and depression. Moreover, the reason for the lower quality of life among chronically ill patients is because chronic illness is a potentially life-threatening condition. Any potentially life-threatening condition has some psychological impact on the individual (Lowes & Lyne, 2008). The complex nature of the care regimen also has a significant impact in terms of financial cost and the needs imposed by the disease itself which all have the potential to decrease the quality of life of the patient.

Comparing the quality of life among diabetics and hypertensives, the results indicated that the quality of life among diabetics was significantly lower than that of the hypertensives. This means diabetes deteriorates the quality of life of patients compared to hypertension. This finding is in line with the study conducted by Khaw, Hassan and Latiffah (2011) to assess the health-related quality of life among hypertensives and diabetics. The finding indicated that diabetics have statistically lower score than hypertensives.

The higher quality of life of hypertensives compared to the diabetics is also in agreement with the study by Soni, Porter, Lash and Unruh (2010) which assessed HRQOL in elderly hypertensive individuals as well as other chronic diseases including chronic kidney disease (CKD), cardiovascular disease and diabetes mellitus. The results of the meta-analysis indicated that patients suffering from hypertension alone have higher quality of life than those with other chronic diseases such as diabetes. As explained by Soni, Porter, Lash and Unruh (2010), hypertension is the milder form of all chronic illnesses and that compliance with medication improves quality of life among hypertensives compared to the other chronic illnesses such as diabetes.

University of Ghana http://ugspace.ug.edu.gh

Gavard, Lustman, and Clouse (1993) reported that the level of depression among diabetics were at least three times that of the hypertensives. Due to the higher level of depression among diabetics, they may not be motivated to follow treatment regimens, leading to further complications, which in turn make the person more depressed and even less likely to engage in treatment leading to lower quality of life (Christensen & Ehlers, 2002). Moreover, unlike hypertension, diabetes significantly increases an individual's risk of developing multiple microvascular and cardiovascular complications, and the risk of these complications can significantly decrease the quality of life of the diabetics.

Predictive Factors of Neuro and Non-Neuropsychological Deficits in Seizure Patients

While the effects of chronic illness on quality of life were found, the effect was found to be dependent on certain factors. The results indicated that socioeconomic status did not have any significant impact on the quality of life of chronically ill patients. Gender, medication compliance, illness perception and religiousity were found to influence the quality of life of chronically ill patients. These findings are discussed below.

Socioeconomic Status on Quality of Life among Chronically Ill Patients

The study predicted that chronically ill patients with higher level of socioeconomic status will have higher quality of life than chronically ill patients with lower level of socioeconomic status. The results did not support this prediction indicating that chronically ill patients with higher level of socioeconomic status do not differ from chronically ill patients with lower level of socioeconomic status on quality of life and that quality of life does not depend on socioeconomic status.

University of Ghana http://ugspace.ug.edu.gh

The insignificant impact of socioeconomic status on quality of life is incongruent with the study by Christensen and Ehlers (2002) which indicated that chronic patients with significantly low level of quality of life came from families with low socioeconomic status. The finding is again inconsistent with the study by Imayama, Plotnikoff, Courneya and Johnson (2011) which identified socioeconomic status to be a significant predictor of quality of life among diabetics. The cultural differences in the study by Christensen and Ehlers (2002), Imayama, Plotnikoff, Courneya and Johnson (2011) and the present study could have resulted in the inconsistent findings. Moreover, the inconsistencies could be due to the questionnaires used in measuring socioeconomic status. Socioeconomic status is very difficult to measure and using the Kuppuswamy's Socio-Economic Status Scale (Kuppuswamy, 1976) could have been bias associated with measuring socio-economic status and may not be culturally valid since it was not validated before its use.

The insignificant impact of socioeconomic status on quality of life of chronically ill patients is in line with the study by Issa and Baiyewu (2007) which found that socioeconomic status has no significant impact on the health quality of life among type 1 and type 2 diabetics. Similarly, Nyanzi, Wamala, and Atuhaire (2014) examined how socio-demographic characteristics influence the quality of life among diabetics in Uganda. They found that socioeconomic status do not significantly influence quality of life among the patients.

Financial resources are important in everyday life and in quality of life since they interfere with the physical and mental states and guarantee access to treatment and the possibility to afford medication. However, in the present study, socioeconomic status was not objectively measured. The socioeconomic status indicated by the patients may not reflect their own economic situation.

University of Ghana http://ugspace.ug.edu.gh

Moreover, all the participants were at the hospital receiving their treatment. This means that the level of socioeconomic status did not influence their treatment or maybe they were all financially sound to look for effective treatment. No matter the financial situation of the patient, if effective treatment is sought for and complied with, socioeconomic situation will not have any significant impact on quality of life. This can be the reason why no significant difference was found in quality of life of patients from high socioeconomic status and those from low socioeconomic status.

Moreover, no matter the level of socioeconomic status, the impact of chronic illness on diseases and the depression associated with chronic illness affect both chronically ill patients from high socioeconomic status and those from low socioeconomic status equally.

Gender Differences in Quality of life among the chronically ill patients

The fourth prediction that chronically ill males will have higher quality of life than chronically ill females was supported. This means that chronic illness have more negative impact on quality of life of females compared to males. This is contrary to the study by Srinivas, Venkatesha and Prasad (2014) which indicated no significant difference in quality of life of males and females with chronic illness. It is again inconsistent with the study by Issa and Baiyewu (2007) which indicated that gender has no significant impact on the health quality of life among type 1 and type 2 diabetics.

The finding is however consistent with the study by Nyanzi, Wamala, and Atuhaire (2014) which examined how socio-demographic characteristics influence the quality of life among diabetics in Uganda. A total sample of 219 diabetics took part in the study. The findings of the study confirm

University of Ghana http://ugspace.ug.edu.gh

a consensus regarding the influence of gender on quality of life with males indicating higher level of quality of life than females. Moreover, Lindsay, Inverarity and McDowell (2011) evaluated the health related quality of life (HRQL) for individuals with Type 2 diabetes among males and females and found that the quality of life among males was higher than the females. The present finding therefore supports Lindsay, Inverarity and McDowell (2011) study as well.

The reason for the lower quality of life among chronically ill females compared to the males was professed by Issa and Baiyewu (2007). According to Issa and Baiyewu (2007), men have better quality of life scores compared to the females not on the basis of their objective feeling but that females express feelings of dissatisfaction more often. Moreover, males are more tolerant to chronic diseases, thus less emotionally affected by them when compared to women. This explains why higher quality of life was found among males compared to the females with chronic illness.

Impact of Illness Perception on Quality of Life among Chronically Ill Patients

The fifth hypothesis that there will be a positive relationship between illness perception and quality of life was supported. This finding means that patients who perceive control over their illness have better quality of life than those who perceive the illness to be beyond their care.

The positive relationship between illness perception and quality of life among chronically ill patients is in line with the results of other studies regarding illness perceptions in chronically ill patients. French, Cooper and Weinman (2006) concluded that chronically ill patients who have a strong illness identity and strong beliefs of lack of control regarding the consequences of their illness have worse health quality of life. In another study by Scharloo et al, (2000) chronically ill patients with decreased symptoms, and more positive beliefs about the effects and outcomes of

University of Ghana http://ugspace.ug.edu.gh

treatment and less strong emotional reactions were associated with higher health quality of life. Our data support these findings.

The finding is also in agreement with the study by Stafford, Berk and Jackson (2009) on the relationship between illness perception and quality of life among 193 patients with diabetes. The results indicated that greater perceived consequences predicted higher depressive symptoms at 3 and 9 months following hospital discharge. There was a positive relationship between having positive perception about the consequences of the illness and quality of life among the diabetics. Furthermore, Taylor, Gibson and Franck (2009) indicated a positive relationship between all the components of quality of life and illness perception. Participants who have positive perception were found to have higher quality of life than those who have negative perception about the treatment and control of the chronic illness.

The positive relationship between illness perception and quality of life can be explained with the cognitive model of therapy. According to the cognitive model of therapy, our core beliefs, automatic negative thoughts concomitant with a stressful situation lead to depression (Beck, 1995). These negative thoughts stem from pessimistic beliefs about oneself, one's future and one's relationship with others, and consist of negative self-statements. This means that chronically ill patients who have negative thoughts about the causes and control of the chronic sickness and perceive the illness negatively and as a result a negative consequences associated with the disease will experience higher level of depression which will affect their quality of life. Patients with chronic illness often feel powerless and hopeless, which interferes with effective treatment and self-care. Many patients have a low quality of life because of how they perceive

University of Ghana http://ugspace.ug.edu.gh

the illness. Patients ability to adapt to life often depends on how they perceive the illness. Patients who accept their illness and perceive it positively are more likely to comply with treatment and therefore should have a higher quality of life than those who perceives it negatively.

Relationship between Medication Compliance and Quality of Life

Effective control of chronic illness has been found to depend on medication compliance across a lifetime (Kaptein et al., 2008). Based on this, it was predicted that compliance with medication will have positive relationship with quality of life. The findings indicated that there is a significantly positive relationship between medication compliance and quality of life. This means as chronically ill patients comply with their medication or treatment, their level of quality of life improve tremendously.

The positive association between medication compliance and quality of life among chronically ill patients reveal inconsistencies with some previous studies such as the study by Ha, Duy, Le, Khanal and Moorin (2014). Ha, Duy, Le, Khanal and Moorin (2014) found no significant relationship between medication compliance and quality of life. Possible reasons for the disparate results can be due to the difference in the definition of treatment compliance. In our study, medication compliance was measured based on how one complied with medication whilst Ha, Duy, Le, Khanal and Moorin (2014) measured medication compliance in terms of treatment in general including regular visit to the hospital, abiding with medication, exercise etc.

The positive relationship between quality of life and medication compliance is in line with the study by Rafii, Fatemi, Danielson, Johansson and Modanloo (2014) that assessed the role of

University of Ghana http://ugspace.ug.edu.gh

compliance to treatment in quality of life among chronically ill patients. The results indicated that compliance with medication was positively associated with the wellbeing and quality of life of chronically ill patients. It is also in agreement with the study by Jannuzzi, Cintra, Rodrigues, Sao-Joao and Gallani (2004) that indicated a positive relationship between quality of life and medication compliance with 12.8% of the variability of quality of life explained by medication compliance.

The reason for the positive relationship between medication compliance and quality of life was professed by Antipolis (2014). According to Antipolis (2014) compliance to treatment is an important indicator for evaluating the successful management in chronic illnesses. Failure to comply with the medication will reduce the efficacy of the drug in regulating the sugar level and the abnormalities in the body. Complying with the dosage of the medication prescribed has the potential of maintaining the equilibrium of the body and hence reducing quality of life among patients.

Moderating role of Medication Compliance on the Relationship between Illness Perception and Quality of Life

The seventh prediction that the relationship between illness perception and quality of life will be mediated by medication compliance was supported. The finding indicated that the relationship between illness perception and quality of life was partially mediated by medication compliance

The finding is in line with the study by Schrier, Dekker, Kaptein and Dijkman (1990) which indicated that the relationship between illness perception and quality of life is influenced by compliance with medication and change in lifestyle. The result is also in agreement with

University of Ghana http://ugspace.ug.edu.gh

the study by Sweileh, Zyoud, Nab, Deleq, Enaia, Nassar and Al-Jabi (2014) that assessed the role of medication compliance on the relationship between illness perception and quality of life. Multivariate analysis showed that the relationship between illness perception and quality of life was influenced by medication compliance with medication compliance mediating the relationship between illness perception and quality of life.

The mediating role of medication compliance on the relationship between illness perception and quality of life can be explained with the Self-Regulation Model (Leventhal, Nerenz, & Steele, 1984). According to the self-regulation theory, promoting better health outcomes requires eliciting and discussing patient's beliefs and stimulating independent performance of health-related behaviours (Michie S, Miles & Weinman, 2003; Leventhal H, Brissette I, Leventhal EA. 2003). The Self-Regulation Model (SRM) postulates that it is the patient's individual set of cognitive representations (also referred to as personal illness model, illness beliefs, illness perceptions, or illness representation) and emotional representations (emotional responses generated by the illness) that determine his/her health behaviour. It is these behaviours that also determine the health state of the individual. This means that person cognitive beliefs indicated by his or her perception about the illness will determine their behaviour such as complying with medication. Complying with medication will intern determine a person's health such as quality of life.

Impact of Religiousity on Quality of Life among Chronically Ill Patients

The last prediction emphasized that highly religious chronically ill patients will have higher quality of life than low religious chronically ill patients. The predication was supported thus indicating that highly religious chronically ill patients had higher quality of life than low

University of Ghana http://ugspace.ug.edu.gh

religious chronically ill patients. The finding disagrees with the study by Janse, Sinnema, and Gemke (2012) that investigated the role of religiousity on quality of life among chronically ill patients. Results indicated that there was no significant relationship between religiousity and quality of life among chronically ill patients.

The finding is however in agreement with the study by Nagpal, Kumar, Kakar and Bhartia (2010) which found religiousity to significantly improve the quality of life among chronically ill patients. The positive impact of religiousity on quality of life can be explained with the risk and protective factor model. According to the Risk and Protective Factor Model, there are some factors which when present help improve an individual's quality of life. The Risk and Protective Factor Model views low socio-economic status and lack of compliance with medication as the causes of poor quality of life among chronically ill patients. According to this model, religiousity promotes social support which helps individuals not to engage in potentially harmful behaviour, and promote an alternative pathway (Spooner, Hall & Lynskey, 2001). Religion served as social support and helps people think positively about life no matter the situation. This subsequently reduces depression and anxiety associated with the illness and increases the quality of life among the patients.

5.2 Limitations and Recommendations of the Study

The results of this study have shown a remarkable leading factor in assessing the contribution the selected factors (socioeconomic status, gender, treatment compliance, religiousity and illness perception) have on quality of life among chronically ill patients. Notwithstanding the relevance of the results in achieving its aims and objectives, there were some limitations to this study that must be considered in future studies. This study is limited to only diabetics and hypertensives of

University of Ghana http://ugspace.ug.edu.gh

Korle Bu Teaching hospital and is based on cross sectional nature of study which is largely descriptive in nature.

The result of this study may only be applicable to diabetics and hypertensives who were the chronically ill patients selected for the study. The findings may not fit well with other chronic illness. This is largely because different chronic illnesses have different symptoms and effect. The impact of chronic illness on quality of life may differ based on the type of chronic illness one is suffering from. Furthermore all measures were questionnaires. It could be questioned whether a questionnaire is the best measure of illness perceptions because the development of perceptions is partially an unconscious process. Qualitative interviews might be preferable to questionnaires. In addition to the above, the internal validity of the results may be limited due to the nature of research design employed in this study. The study was cross sectional in nature. Cross sectional survey is not used to infer causality.

Although this study may pose limitation in terms of generalizability, however, it furthers our understanding by determining and testing the factors that relate and affect quality of life among chronically ill patients. Therefore, the study is an initiative towards a greater understanding of quality of life and predictive factors of quality of life among chronically ill patients. Given the cross sectional nature of study, it is suggested that future research should consider experimental or longitudinal approach and consider other chronic illness. A longitudinal approach may help in improving one's ability to make causal statements which will offer explanation on the underlying causes of quality of life among chronically ill patients.

University of Ghana http://ugspace.ug.edu.gh

5.3 Practical Implications of the Study

The study indicated that chronic illness is associated with poor quality of life. The study also implies that positive illness perception and religiousity alleviate the quality of life of chronically ill patients. Complying with medication was found to increase the quality of life among the patients. The implication of the findings is that chronic illness is associated with poor quality of life but complying with medication and having positive view about the illness can help improve the quality of life of the patient.

The ability of the medication compliance to increase the quality of life of chronically ill patients means that patients must comply with treatment regime of the physician. Counsellors and health workers must educate patients on the need to have positive view about the disease since it is this positive view that will persuade the patients to comply with medication.

This study has important implications for current policies and programs that are designed to enhance the quality of chronic disease management. When medication programs are complex, it put additional burden on them and prevents them from complying. Quality of life related to treatments will therefore be improved if we can simplify treatments through treatment innovations. Without such technological innovations, we may still be able to allay patient concerns by educating patients very early in their disease about the true nature of optimal chronic care, by incorporating their preferences into treatment decisions, and by acknowledging patient preferences and quality-of-life concerns in public health efforts to improve the quality of chronic care.

University of Ghana http://ugspace.ug.edu.gh

Even though the study had some limitations, it invariably yielded reliable results as it supported most of the studies conducted previously and added to the literature done the field of neuro and non-neuropsychological deficits associated with epilepsy. The key finding of this study is undoubtedly that seizure patients experience higher neuro and non-neuropsychological deficits in language skills, attention skills and executive functioning than control group without seizure disorders, depression and anxiety compared to healthy control group. Academic achievement and memory were the only deficits that significant differences were not observed between the seizure group and the healthy control group. Thus seizure patients can develop normal intelligence and memory with good measures in place.

Even though, the study has these unique contributions to the health service, expansion of the present study would allow greater knowledge into the factors that influence the quality of life among chronically ill patients. Future investigations should increase the sample size and adopt the longitudinal method to help infer cause and effect relationship. Further research should continue to examine other personal and chronic illness variables that influence the quality of life among chronically ill patients. To be able to extend the findings of this study, several areas for further research are recommended below:

a) Firstly, future research should investigate the quality of life among chronically ill patients by comparing them with other communicable diseases such as HIV/AIDS to find out whether the quality of life differs among patients with different illnesses.
b) Secondly, future research should engage in more eclectic approach by concurrently assessing numerous personal and chronically ill variables such as type of medication, duration of treatment, age, and belief systems in a single study. This will help to better explain the predictive relationships

University of Ghana http://ugspace.ug.edu.gh

c) Moreover, despite the robustness of most of our findings over one sample and time periods, statements about generalizability must await the results of research in additional settings.

d) Lastly, to fully pinpoint causality, an ideal study might sample different chronically ill patients aside the diabetics and hypertensives used to track their quality of life over a long period. This will help to know the course of the illness on quality of life.

In assessing these areas, the methodological limitations encountered in the present study need to be addressed. Future researches with these same variables and also exploring the areas recommended should employ either qualitative research approaches or both qualitative and quantitative approaches, for a better understanding of the interaction effects of all the variables in the study. Qualitative research should be considered because during data collection, the researcher realized participants were eager to explain their feelings further. A longitudinal design can also be adopted over the cross-sectional design, for a better understanding of the long term effect of the variables investigated in this study.

5.4 Summary and Conclusion

Throughout the previous chapters, the study has been looking at the health quality of life associated with chronically ill patients. The study has also been assessing the factors that influence chronically ill patients to experience low quality of life using diabetes, hypertension and healthy control group from Korle Bu Teaching Hospital. The entire research centered on three objectives: To examine quality of life among chronically ill patients. To assess whether quality of life associated with chronic illness would be predicted by factors such as religiousity, illness perception, socio-economic status, compliance with medication and the gender of the

University of Ghana http://ugspace.ug.edu.gh

patient and to investigate the mediating role of treatment compliance on the relationship between illness perception and quality of life.

In fulfilling the objectives, a number of literatures on factors influencing quality of life among chronically ill patients were reviewed. A total of 60 chronically ill patients and 30 healthy control participants took part in the study. Questionnaires were answered by respondents anonymously. In analysing the data, the predicted hypotheses were analyzed using the Pearson Product Moment Correlation Coefficients, the independent t-test, the mediating analysis and the ANOVA.

The results of the study showed that healthy participants had higher quality of life than hypertensives and diabetics. Diabetics also had lower quality of life than hypertensives. Chronically ill patients with higher level of socioeconomic status did not differ from chronically ill patients with lower level of socioeconomic status on quality of life. No significant difference was found in quality of life among chronically ill males and chronically ill females. There was a positive relationship between illness perception and quality of life. Compliance with medication had positive relationship with quality of life. The relationship between illness perception and quality of life was partially mediated by medication compliance. Highly religious chronically ill patients had higher quality of life than low religious chronically ill patients.

In conclusion, the findings of this study indicate the necessity for health professionals to pay more attention to patients' quality of life and helping the patients to abide with the treatment regime in general. This can be achieved by finding medical and social alternatives that have a favorable influence on quality of life as a whole, stimulating a better doctor/patient relationship

University of Ghana http://ugspace.ug.edu.gh

and the development of drugs that not only provide blood pressure control, but also show beneficial effects on quality of life.

University of Ghana http://ugspace.ug.edu.gh

References

Addae, S. (1996). *History of Western Medicine in Ghana*, 1880 – 1960. Durham: Durham Academic Press.

Adubofour, K. O. M., Ofei, F., Mensah-Adubufour, J., Owusu, S. K. (1997). *Diabetes in Ghana*. In: Gill G, Mbanya J-C, Alberti G, editors. Diabetes in Africa. Reach, Cambridge, UK: FSG Communications Ltd.

Agyei-Mensah, S. (2004). *Accra (Ghana) in Transition: Epidemiological change at the turn of the 21st century*; Paper presented at the Seminar on Health in African Cities, Harvard Centre for Population Studies, Harvard University; 31st March 2004; Cambridge.

American Heart Association (AHA, 2002): *Heart and stroke statistical update.* American Heart Association. Dallas, Texas.

Amoah, A.G.B., Owusu, K.O., Adjei, S. (2002). Diabetes in Ghana: a community prevalence study in Greater Accra. *Diabetes Research and Clinical Practice*, 56:197–205.

Antipolis, H. (2014). Physicians? communication of the common-sense self-regulation model results in greater reported adherence than physicians? use of interpersonal skills. *Br J Health Psychol* 2012, 17(2):244-257.

Archie, B. W. (2002). Cancer in older adolescents and young adults: epidemiology, diagnosis, treatment, survival, and importance of clinical trials. *Med Pediatr Oncol*, 38(1):1–10.

Atta, A. L. (2007). Homelessness and mental health in Ghana: Everyday experiences of Accra's migrant squatters. J Health Psychol, 12(5):761–778.

Ayedemir, O., Ozdemir, C. & Koroglu, E. (2005). The impact of co-morbid conditions on the SF-36: a primary-care-based study among Hypertensives. *Arch Med Res*, 36(2):136-41.

Babbie, E. & Mouton, J. (2001). *The practice of social research*. Cape Town: Oxford University Press

University of Ghana http://ugspace.ug.edu.gh

Bardage, C. & Isacson, D. G. (2001). Hypertension and health-related quality of life: an epidemiological study in Sweden. *J Clin Epidemiol*, 54(2):172-81.

Barr, R. D., Furlong, W., Dawson, S., Whitton, A. C., Strautmanis, I., Pai, M., Feeny, D. & Torrance, G. W. (1993). An assessment of global health status in survivors of acute lymphoblastic leukemia in childhood. *Am J Pediatr Hematol Oncol*, 15(3):284–290.

Barr, R. D., Simpson, T., Whitton, A., Rush, B., Furlong, W. & Feeny, D. H. (1999). Health-related quality of life in survivors of tumours of the central nervous system in childhood--a preference-based approach to measurement in a cross-sectional study. *Eur J Cancer*, 35(2):248–255.

Beune, E. J. A. J., van Charante, E. P. M., Beem, L., Mohrs, J. & Agyemang, C. O. (2008). Culturally Adapted Hypertension Education (CAHE) to Improve Blood Pressure Control and Treatment Adherence in Patients of African Origin with Uncontrolled Hypertension: Cluster-Randomized Trial. *PLoS ONE*, 9(3): 901-03.

Billson, A. L. & Walker, D. A. (1994). Assessment of health status in survivors of cancer. *Arch Dis Child*, 70(3):200–204.

Bosu W. K. (2005). *Ghana's National NCD Programme: history, prospects and challenges*; Paper presented at the 1st Annual Workshop, British Academy UK-Africa Academic Partnership on Chronic Disease in Africa, Noguchi Memorial Institute for Medical Research; 12th April 2005.

Bottomley A, (2002). EORTC QLQ-C30 scoring manual (3rd edition). Brussels: EORTC.

Broadbent, E. & Roberts, J. (2002). The brief illness perception questionnaire. *J Psychosom Res*, 60(6):631-637.

Broadbent, R. (2010). Changing illness perceptions after myocardial infarction: an early intervention randomized controlled trial. *Psychosom Med*, 64(4):580-586.

University of Ghana http://ugspace.ug.edu.gh

Buckingham, A. & Saunders, P. (1992). The survey methods workbook: from design to analysis. *Journal in survey research*, 273 – 422.

Chaveepojnkamjorn, W., Pichainarong, N., Schelp, F. P., & Mahaweerawat, U. (2008). Quality of life and compliance among type 2 diabetic patients. *Southeast Asian J Trop Med Public Health*, 39(2):328-34.

Churchill, G.A. (1992) *Marketing Research: Methodological Foundations*. London: The Dryden Press.

Cleeland, C. S., Gonin, R., Hatfield, A. K., Edmonson, J. H., Blum, R. H., Stewart, J. A. & Pandya, K. J. (1994). Pain and its treatment in outpatients with metastatic cancer. *N Engl J Med*, 330(9):592–596.

Cohen, A. (1998). An examination of the relationship between work commitment and work outcomes among hospital nurses. *Scandinavian Journal of Management*, 14: 1−17.

de Gusmao, J. L., Mion, D. & Pierin, A. M. G. (2009). Health-Related Quality of Life and Blood Pressure Control in Hypertensive Patients with and without Complications. *Clinics*, 64(7): 619–628.

de-Graft Aikins, A. (2007). Ghana's neglected chronic disease epidemic: a developmental challenge Ghana. *Med J*. 41(4): 154–159.

Dodu, S. R. A., de Heer, N. (1964). Health and Wellbeing. *Ghana Medical Journal*, 3: 75 - 76.

Eaelem, K. & & Johnson, J. A. (1994). Determinants of quality of life in adults with type 1 and type 2 diabetes. *Health and Quality of Life Outcomes*, 9(2), 115 - 117.

Eddy, C. M., Rickards, H. E. & Cavanna, A. E. (2011). The cognitive impact of antiepileptic drugs. *Advance Neurological Disorder*, 4(6): 385–407.

University of Ghana http://ugspace.ug.edu.gh

Eljedi, A., Mikolajczyk, R. T., Kraemer, A. & Laaser, A. (2006). Health-related quality of life in diabetic patients and controls without diabetes in refugee camps in the Gaza strip: a cross-sectional study. *BMC Public Health*, 6:268

Erickson, S. R., Brent, C., Williams, B. C. & Gruppen, L. D. (2004). Relationship Between Symptoms and Health-Related Quality of Life in Patients Treated for Hypertension. *Pharmacotherapy*, 24(3):344-350.

Feeny, D., Furlong, W., Torrance, G. W., Goldsmith, C. H., Zhu, Z., DePauw, S., Denton, M. & Boyle, M. (2002). Multiattribute and single-attribute utility functions for the health utilities index mark 3 system. *Med Care*, 40(2):113–128.

Feeny, D., Leiper, A., Barr, R..D., Furlong, W., Torrance, G. W., Rosenbaum, P. & Weitzman, S. (1993). The comprehensive assessment of health status in survivors of childhood cancer: application to high-risk acute lymphoblastic leukaemia. *Br J Cancer*, 67(5):1047–1052.

Fekkes, M., Theunissen, N. C., Brugman, E., Veen, S., Verrips, E. G., Koopman, H. M., Vogels, T., Wit, J. M. & Verloove-Vanhorick, S. P. (2009). Development and psychometric evaluation of the TAPQOL: a health-related quality of life instrument for 1-5-year-old children. *Quality Life Res*, 9(8):961–972.

Felder-Puig, R., Frey, E., Sonnleithner, G., Feeny, D., Gadner, H., Barr, R. D., Furlong, W. & Topf, R. (2000). German cross-cultural adaptation of the Health Utilities Index and its application to a sample of childhood cancer survivors. *Eur J Pediatr*, 159(4):283–288.

French, S. & Heijmans M. (2006). The role of patients' illness representations in coping and functioning with Addison's disease. *Br J Health Psychol*, 4(Part 2):137-149.

Funnell, M. M. S. (2002). Quality of life and insulin therapy in type 2 diabetes mellitus," Diabetes Care. *Journal of Quality of Life*, 20, 562–567

University of Ghana http://ugspace.ug.edu.gh

Gemke, R. J. & Bonsel, G. J. (1996). Reliability and validity of a comprehensive health status measure in a heterogeneous population of children admitted to intensive care. *J Clin Epidemiol*, 49(3):327–333.

Ghoname, E. A., Craig, W. F., White, P. F., Ahmed, H. E., Hamza, M. A., Henderson, B. N., Gajraj, N. M., Huber, P.J. & Gatchel, R. J. (1999). Percutaneous electrical nerve stimulation for low back pain: a randomized crossover study. *JAMA*, 3(9):818–823.

Glaser, A. W., Abdul Rashid, N.F., & Walker, D. A. (2002). School behaviour and health status after central nervous system tumours in childhood. *Br J Cancer*, 76(5):643–650.

Glaser, A. W., Davies, K., Walker, D., Brazier, D. (1997). Influence of proxy respondents and mode of administration on health status assessment following central nervous system tumours in childhood. *Qual Life Res*, 6(1):43–53.

Grootendorst, P. V., Feeny, D. H., & Furlong, W. (2008). Does it matter whom and how you ask? inter- and intra-rater agreement in the Ontario Health Survey. J. 2008

Ha, N., Duy, H., Le, N. H., Khanal, V. & Moorin, R. (2014). Quality of life among people living with hypertension in a rural Vietnam community. *BMC Public Health*, 14:833

Hill, P., Prados, M. C., & Liaño J. P. (2005). Health-related quality of life of patients with HIV: impact of sociodemographic, clinical and psychosocial factors. Qual Life Res.,14:1301-10.

Hodgman, C. H., McAnarney, E. R., Myers, G. J., Iker, H., McKinney, R., & Parmelee, D. (2002). Emotional complications of adolescent grand mal epilepsy. Journal of Pediatrics, 95, 309-312.

University of Ghana http://ugspace.ug.edu.gh

Huang, C. M., Shieh, J., & Lu, L. (2007). Determinants of quality of life in children with cerebral palsy: A comprehensive biopsychosocial approach. *Research in Developmental Disabilities*, 35, 520–528.

Imayama, I., Plotnikoff, R. C. Courneya, K. S. & Johnson, J. A. (2011). Determinants of quality of life in adults with type 1 and type 2 diabetes," Health and Quality of Life Outcomes, vol. 9, no. 1, p. 115, 2011.

Issa, B. A. & Baiyewu, O. (2007). Quality of life of patients with diabetes mellitus in a Nigerian Teaching Hospital," Hong Kong Journal of Psychiatry, vol. 16, no. 1, pp. 27–33

Jannuzziet, K. (2004) Behavioral exercise programs in the management of chronic obstructive pulmonary disease. *J Consult Clin Psychol* 1984, 52(4):591-603.

Janse, A. J., Gemke, R. J. B. J., Uiterwaal, C. S. P. M , van der Tweel, I., Kimpen, J. L. L., & Sinnema, G. (2004). Quality of life: patients and doctors don't always agree: a meta-analysis. *J Clin Epidemiol*, 57(7):653–661.

Jones, D. J., Beach, S. R.,& Forehand, R. (2008). Self-reported health in HIV-positive African American women: the role of family stress and depressive symptoms. J Behav Med.2003;26 :577– 599

Kerry, S. M., Micah, F. B., Plange-Rhule, J., Eastwood, J. B., & Cappuccio, F. P. (2005). Blood pressure and body mass index in lean rural and semi-urban subjects in West Africa. *Journal of Hypertension*, 23:1645-1651.

Khaw, W.F., Hassan, S.T.S. & Latiffah, A.L. (2011). Health-related Quality of Life among Hypertensive Patients Compared with General Population Norms. *Journal of Medical Sciences, 11: 84-89*

University of Ghana http://ugspace.ug.edu.gh

Khongsdir, S.1., George, C. E., Mukherjee, D. & Norman, G. (2015). Quality of Life in Patients with Diabetes and Hypertension in Karnataka- An Observational Study International *Journal of Medical and Health Sciences*, 4 (1), 98 - 102

Kiadaliri, A. A., Najafi, B. & Mirmalek-Sani, M. (2013). Quality of life in people with diabetes: a systematic review of studies in Iran, *Journal of Diabetes & Metabolic Disorders* 2013, 12:54

Klocek, M., Kawecka-Jaszcz, K. (2003). Quality of life in patients with essential arterial hypertension. *Part I: The effect of socio-demographic factors Przegl Lek*, 60(2):92-100.

Laweeka-Kaszez, L. (2003). The quality of life of HIV-infected women is associated with psychiatric morbidity. *AIDS Care*, 16:177-86.

Leventhal, H., Brissette, I., Leventhal, E. A. (2003). *The common-sense model of selfregulation of health and illness*. In: Cameron L, Leventhal H, eds. The Self- Regulation of Health and Illness Behaviour. New York, Routledge, 42–65

Leventhal, T., Brooks-Gunn, J., & Earls, F. J. (1982). Neighborhood Residence and Mental Health Problems of 5- to 11-Year-Olds. *Arch. Gen. Psychiatry*, *6*, 554–563.

Lewis, C.C., Pantell, R. H., Kieckhefer, G.M. (1989). Assessment of children's health status. Field test of new approaches. *Med Care*, 27(3); 54–S65.

Li, W., Liu, L., Puente, J. G., Li, Y., Jang, X., Jin, S., Ma, H., Kong, L., Ma, L., He, X., Ma, S. & Chen, C. (2005). Hypertension and health-related quality of life: an epidemiological study in patients attending hospital clinics in China. *J Hypertens*, 23(9):1635-6.

Lindsey, D. L., Heijmans M, Rijken M, Kaptein AA (2011). The development of and first experiences with a behavioural self-regulation intervention for end-stage renal disease patients and their partners. *J Health Psychol*, 16(2):274-283.

Litwin, M. S. (1995). *How to Measure Survey Reliability and Validity*. SAGE Publications.

University of Ghana http://ugspace.ug.edu.gh

Lowes, M. & Lyne, D. (2006). Above the glass ceiling? A comparison of matched samples of female and male executives. *Journal of Applied Psychology, 82*(3), 359-375.

Mant, J., Carter, J., Wade, D.T. & Winner, S. (2000). Family support for stroke: a randomised controlled trial. *Lancet*, 2, 808–813.

Mena-Martin, F. J., Martin-Escudero, J. C., Simal-Blanco, F., Carretero-Ares, J. L., Arzua-Mouronte, D., Herreros-Fernandez ,V. (2003). Health-related quality of life of subjects with known and unknown hypertension: results from the population-based Hortega study. *J Hypertens*, 21(7):1283-9.

Michie, S., Miles, J. & Weinman, J. (2003). Patient-centeredness in chronic illness: what is it and does it matter? *Patient Educ Couns*, 51:197–206.

Morisky, D. E., Green, L. W. & Levine, D. M. (2008). Concurrent and predictive validity of a self-reported measure of medication adherence. *J Clins Hypertens*, 10(5):348-354.

Moss-Morris R, Weinman J, Petrie K, Horne R, Cameron L, & Buick D. (2002). The revised Illness Perception Questionnaire (IPQ-R). *Psychology & Health* 2002, **17**(1)**:**1-16.

Nagpal, J., Kumar, A., Kakar, S. & Bhartia, A. (2010). The development of quality of life instrument for Indian diabetes patients (QOLID): a validation and reliability study in middle and higher income groups. *Journal of Association of Physicians of India*, 58, 295–304.

Nyanzi, R., Wamala, R. & Atuhaire, L. K. (2014). *Diabetes and Quality of Life:* A Ugandan Perspective.

Ogah, O. S. (2006). Hypertension in sub-Saharan African population: The burden of Hypertension in Nigeria. *Ethnicity and Disease*, 16:765.

University of Ghana http://ugspace.ug.edu.gh

Ogunlana, S. O. & Limsili, K. (2009). Performance and leadership outcome correlates of leadership styles and subordinate commitment. *Engineering, Construction and Architectural Management*, 15(2), 164-184.

Oppenhein, K. (1992). Diabetes Education and Self Management for Ongoing and Newly Diagnosed Collaborative: Effectiveness of the diabetes education and self management for ongoing and newly diagnosed (DESMOND) programme for people with newly diagnosed type 2 diabetes: cluster randomised controlled trial. *BMJ*, 336(7642):491-495.

Pobee, J. O. M. (2006). *Community Profile of Cardiovascular Diseases of a sub-Saharan African Country*. Accra: Commercial Associates Ltd. The Heart of the Matter.

Rafti, P. W. & Opony (2004). Predictors in changes in health-related quality of life among men with HIV infection in the HAART era. *AIDS Patient Car STDS*, 19:395-405.

Rosenstock, K. (1966). Stress and well-being among parents of children with rare diseases: A prospective intervention study. *Journal of Advanced Nursing, 53*(4), 392-402.

Rougier, P., Van Cutsem, E., Bajetta, E., Niederle, N., Possinger, K., Labianca, R., Navarro, M., Morant, R., Bleiberg, H., & Wils, J. (1998). Randomised trial of irinotecan versus fluorouracil by continuous infusion after fluorouracil failure in patients with metastatic colorectal cancer. *Lancet*, 31, 1407–1412.

Rowbotham, M., Harden, N., Stacey, B., Bernstein, P. & Magnus-Miller, L. (1998). Gabapentin for the treatment of postherpetic neuralgia: a randomized controlled trial. *JAMA*, 2, 1837–1842.

Rubin, R. R. & Peyrot, M. (1999). Quality of life and diabetes. *Diabetes Metab Res Rev*, 15, 205-18.

Scharloo, M. & Kaptein, A. (1977). Predictors of quality of life in ulcerative colitis: the importance of symptoms and illness representations. *Inflamm Bowel Dis*, 11:24–34.

University of Ghana http://ugspace.ug.edu.gh

Scharloo,M., Kaptein,A. A., Osser, M. & Pouwels, H. (2000). Illness Perceptions and Quality of Life in Patients with Chronic Obstructive Pulmonary Disease. *Journal of Asthma*, 44:575–581, 2007

Schrier, R. W. & Tan D. H. (1990). Prolongation and quality of life for HIV-infected adults treated with highly active antiretroviral therapy (HAART): a balancing act. *J Antimicrob Chemoter*, 61, 469-73.

Shamsi, A., Khodaifar, F., Arzaghi, S. M., Sarvghadi, F. & Ghazi, A. (2014). Is there any relationship between medication compliance and affective temperaments in patients with type 2 diabetes? *Journal of Diabetes & Metabolic Disorders*, 13: 96

Sneeuw, K. C., Aaronson, N. K., Sprangers, M. A., Detmar, S. B., Wever, L. D. & Schornagel, J. H. (1999). Evaluating the quality of life of cancer patients: assessments by patients, significant others, physicians and nurses. Br J Cancer. 1999 1(1):87–94.

Soni, R., Porter, A. C., Lash, J., & Unruh, M. (2010). Health-related quality of life in hypertension, chronic kidney disease and coexistent chronic health conditions. *Adv Chronic Kidney Diseases*, 17(4): 17–26.

Spooner, K. M., Crum, N. F., Riffenburgh, R. H., Wegner, S., Agan, B. K. & Tasker, A. S. (2011). Comparisons of causes of death and mortality rates among HIV-infected persons. *Journal of Acquire Immune Def Syndrome*, 41:194-200.

Srinivas, M. J., Snoei, L., & Hughes, B. M. (2014). 50 years of psychological research on patients with COPD–road to ruin or highway to heaven? *Respir Med*, 103(1):3-11.

Sronivas, M. & Tan, D. H. (2014). Prolongation and quality of life for HIV-infected adults treated with highly active antiretroviral therapy (HAART): a balancing act. *J Antimicrob Chemoter*. 2008;61:469-73.

University of Ghana http://ugspace.ug.edu.gh

Stafford, E., Cummings, G. G., Macgeregor, T., Davey, M., Lee, H., Wong, C. A., Lo, E., & Muise, M., (2009). Leadership styles and outcome patterns for the nursing workforce and work environment: A systematic review. International Journal of Nursing *Studies*, 47, 363-385.

Stein, R. E. & Jessop, D.J. (1990). Functional status II. A measure of child health status. *Med Care*, 28(11):1041–1055.

Stewart, A. L., Greenfield, S., Hays, R. D., Wells, K., Rogers, W. H., Berry, S. D., McGlynn, E. A. & Ware, J. E. (1989). Functional status and well-being of patients with chronic conditions. *JAMA* 262:907-13.

Sweileh, W. M., Zyoud, S. H., Nab, R. J. A., Deleq, M. I., Enaia, M. I., Nassar, S. M., & Al-Jabi, S. W. (2014). Influence of patients' disease knowledge and beliefs about medicines on medication adherence: findings from a cross-sectional survey among patients with type 2 diabetes mellitus in Palestine. *BMC Public Health*, 14: 94

Tabachnick, B. G. & Fidell, L. S (2007). *Multivariate analysis (3rd edition).* HarperCollins College Publishers (New York, NY)

Taylor, S. M. & Ridder, D. T. (2009). Does training general practitioners to elicit patients' illness representations and action plans influence their communication as a whole? *Patient Educ Couns*, 66(3):327-336.

Tetteroo, E., van der Graaf, Y., Bosch, J. L., van Engelen, A. D., Hunink, M. G., Eikelboom, B. C. & Mali, W. P. (1998). Randomised comparison of primary stent placement versus primary angioplasty followed by selective stent placement in patients with iliac-artery occlusive disease. Dutch Iliac Stent Trial Study Group. *Lancet*, 1(10):1153–1159.

Trudel, J. G., Rivard, M., Dobkin, P. L., Leclerc, J. M. & Robaey, P. (1998). Psychometric properties of the Health Utilities Index Mark 2 system in paediatric oncology patients. *Qual Life Res*, 7(5):421–432.

University of Ghana http://ugspace.ug.edu.gh

Walker, E., Hernandez, A. V., & Kattan, M. W. (2008). Meta-analysis: Its strengths and limitations. *Cleve Clin J Med,* 75(6): 431-9.

Ware, J.E. & Sherbourne, C. D. (1992). The MOS 36-item short-form health survey (SF-36). I. Conceptual framework and item selection. *Med. Care*, 30: 473-483.

Willig, C. (2012). Introducing Qualitative Research in Psychology. *McGraw-Hill International*, 210 – 235

Wilson, I. R. & Cleary, P. D. (1995). Linking Clinical Variables with Health-related Quality of life: a conceptual model of patients outcomes. *JAMA* 1995, 273:59-65.

World Bank, (2006). Debt relief for the poorest An evaluation update of the HIPC initiative. Washington DC.

World Health Organisation (2005). *Community-based rehabilitation*: CBR guidelines [Online]. Geneva: WHO. Available from: http://www.who.int/disabilities/cbr/guidelines/en/ [Accessed on 1 August 2013].

University of Ghana http://ugspace.ug.edu.gh

QUESTIONNAIRE

This questionnaire is part of a study about quality of life of chronically ill patients. The results of this research, based on your responses will be presented to the School of Graduate Studies, Methodist University. Thus, if you agree with the terms of this survey, please give accurate responses to the questionnaire below (You do not have to write your Name). Thank you for your help.

Demographic Variables

Age: **Sex:** **Age at onset:**

Age …….

Religion: ……..

WHOQOL-BREF (1997)

This questionnaire asks how you feel about your quality of life, health, or other areas of your life. Please answer all the questions. If you are unsure about which response to give to a question, please choose the one that appears most appropriate. This can often be your first response.

Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life in the last two weeks. You should circle the number that best fits how much support you got from others over the last two weeks. So you would circle the number 4 if you got a great deal of support from others.
Please read each question, assess your feelings, and circle the number on the scale that gives the best answer for you for each question.

1. Strongly disagree 2. Disagree 3. No idea 4. Agree 5. Strongly Agree

		1	2	3	4	5
1	I rate my quality of life as very good					
2	I am satisfied with my health					
3	I feel that physical pain prevents me from doing what I need to do					
4	I need medical treatment to function in my daily life					
5	I do not enjoy life as I am supposed to					
6	I feel that my life is meaningful					
7	I am able to concentrate					
8	I feel safe in my daily life					
9	I am healthy in my physical environment					
10	I have enough energy for everyday life					
11	I am able to accept my bodily appearance					
12	I have enough money to meet my needs					

University of Ghana http://ugspace.ug.edu.gh

13	Information that I need in my day-to-day life are readily available					
14	I have the opportunity for leisure activities					
15	I am able to get around well with others					
16	I am not satisfied with my sleep					
17	I am satisfied with my ability to perform my daily living activities					
18	I am satisfied with my capacity for work					
19	I am satisfied with myself					
20	How satisfied are you with your personal relationships?					
21	How satisfied are you with your sex life?					
22	I am satisfied with the support I get from my friends					
23	I am satisfied with the conditions of my living place?					
24	I am satisfied with my access to health services?					
25	I am satisfied with my mode of transportation					
26	I often have negative feelings, such as blue mood, despair, anxiety, depression?					

Compliance with medication scale
Never/rarely (0), Once in a while (1), Sometimes (2), Usually (3) and All the time (4).

		0	1	2	3	4
1	Do you sometimes forget to take your medicine?					
2	People sometimes miss taking their medicines for reasons other than forgetting. Thinking over the past 2 weeks, were there any days when you did not take your medicine?					
3	Have you ever cut back or stopped taking your medicine without telling your doctor because you felt worse when you took it?					
4	When you travel or leave home, do you sometimes forget to bring along your medicine?					
5	Did you take all your medicines yesterday?					
6	When you feel like your symptoms are under control, do you sometimes stop taking your medicine?					
7	Taking medicine every day is a real inconvenience for some people. Do you ever feel hassled about sticking to your treatment plan?					
8	How often do you have difficulty remembering to take all your medicine?					