REGIONAL INSTITUTE FOR POPULATION STUDIES (RIPS)

UNIVERSITY OF GHANA, LEGON

Psychosocial Well-Being of Individuals Living with Chronic Non-Communicable Diseases in Urban Poor Communities of Ghana.

BY

ALBERTA TEYE

THIS THESIS IS SUBMITED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF **MPHIL POPULATION STUDIES** DEGREE.

March 2013

ACCEPTANCE

Accepted by the Faculty of Social Studies, University of Ghana, Legon in partial fulfilment of the requirements for the degree of MPHIL. (Population Studies)

……..

Prof. Ama de-Graft Aikins

SUPERVISOR

Date……

……

Prof. Stephen Owusu Kwankye

CO-SUPERVISOR

Date……

DECLARATION

I ALBERTA TEYE do hereby declare that, except for the duly acknowledge citations of reference and ideas, this work is my original work undertaken at the United Nations Regional Institute for Population Studies, University of Ghana, from August 2011 to July 2012.

SIGNED …….

ALBERTA TEYE (STUDENT)

DATE…….

DEDICATION

I dedicate this work to my son, Lawrence Kissieh Agudey. Despite those hectic times with you, it's been fun having you around. Your affection motivated me to complete this work.

ACKNOWLEDGEMENT

Great and manifold are the blessing which the Almighty God has bestowed upon me. I am very thankful for HIS enablement, grace, and mercies. HE has taught me once again that, with HIM nothing is impossible!

I also owe much gratitude to my parents, Mr Joseph Teye Narh and Madam Beatrice Doe Boduwa, who had displayed a fervent wish to see me attain formal education at all costs.

I give my heartfelt gratitude and appreciation to my supervisors; Prof Ama de-Graft Aikins and Prof. Stephen Owusu Kwankye. I am grateful for your patience, inestimable guidance in kindness, corrections and useful suggestions without which, this very work would have been a mirage.

To all erudite Lectures of RIPS, I say thank you for your encouragement and timely counsel, without which, this work would have been stillborn.

I also appreciate the co-operations and assistance of the entire staff of RIPS throughout my course.

Finally, I would like to thank to all RIPS students (MPhil and PhD) of the 2011/2012 academic year, for their numerous contributions and encouragement.

ABSTRACT

Chronic non-communicable diseases pose a challenge to the achievement of developmental goals in low-income and middle-income countries. Over 9 million of all deaths associated with CNCDs occur among the economically active age group (WHO, 2011). Persons living with chronic disease(s) are confronted with psychosocial problems (de-Graft Aikins et al 2010).

The study used the 2011 EDULUNK and qualitative data gathered by the RIPS-NYU project, to explore the prevalence of CNCDs in the urban poor communities of Accra (Agbogbloshie, Ussher Town and James Town). The study also explores the psychosocial well-being of the persons living with CNCDs in these communities.

The analysis showed that about 5.6% of the urban poor community dwellers are living with either hypertension or diabetes. About 8.4% females and 2.2% males are living with at least one condition. As age increases so does the percentage of individuals living with CNCD.

The result also indicated that, the lived experience of individuals with CNCD is characterized by both positive and negative emotions. Most participants draw on faith as a coping strategy. Spouse, siblings and children are the main source of support for the chronically ill. Support for the chronically ill in these communities is inconsistent and inadequate.

TABLE OF CONTENTS

Chapter V

LIST OF TABLES

Table Page

LIST OF FIGURE

Figure Page

Topic

Psychosocial Well-Being of Individuals Living With Chronic Non-communicable Diseases in Urban Poor Communities of Ghana.

Chapter I

Introduction

1.1. Background

A Chronic non-communicable disease (CNCD) is a medical condition, which by definition is non-infectious, and non-transmissible between persons, it is of a slow progression and long duration. Diseases classified as chronic non-communicable include diabetes, hypertension, stroke, cancers, asthma, chronic kidney disease, osteoporosis, Alzheimer's disease and cataracts. About one-third of global deaths that occurred in 2008 were due to chronic non-communicable diseases (CNCDs); 36.1 million people died from conditions such as heart diseases, strokes, chronic lung diseases, cancers, hypertension and diabetes. Nearly 80% of these deaths occurred in low- and middle-income countries of Africa, Asia and Latin America (WHO, 2010).

Over nine million of all deaths associated with CNCDs occur among the economically active age group (below age 60); 90% of these "premature" deaths occurred in low- and middle-income countries of Africa, Asia and Latin America (WHO, 2011). According to the WHO Assistant Director-General for CNCDs Ala Alwan, CNCDs is a great loss, not just on an individual level, but also having a great effect on both the family and the country's workforce. Ala Alwan, further explains that, CNCDs ensures vicious circle of poverty, in the sense that, poverty contributes to CNCDs and CNCDs contribute to poverty (WHO, 2011).

Studies have shown that the poor may begin life with increased vulnerability to CNCDs (WHO, 2010). CNCDs are associated, to a large extent, with four behavioural risk factors: tobacco use, unhealthy diet, insufficient physical activity and the harmful use of alcohol. The greatest effects of these risk factors fall increasingly on low and middle-income countries, and on poorer people within all countries (WHO, 2011). The psychological and emotional stress associated with economic deprivation and conditions of poverty, predisposes an individual to risk factors of CNCDs such as smoking, excessive intake of alcohol and poor nutrition. For instance, in South Africa the poor are at greater risk of being exposed to a number of CNCDs risk factors, including second-hand smoke, excessive alcohol use and indoor air pollution (Bradshaw and Steyn, 2001). A study in India also revealed that tobacco use, hypertension and physical inactivity were notably more prevalent in the lower income groups (Reddy et al, 2007). Agyei- Mensah and de-Graft Aikins (2010) found that, poor communities of Ghana are living with a double burden of infectious and chronic diseases.

From the other end, high cost of treating and managing CNCDs can have a significant economic impact on individuals' and household budgets. The morbidity or mortality of breadwinner in a family can have a catastrophic impact on the family's finances, drawing such family into poverty. At the household level, unhealthy behaviours like smoking and excessive alcohol intake, can lead to loss of household income; since it is expensive to maintain such lifestyles. The World Health Report (2010) states that each year, 100 million people are pushed into poverty because they have to pay directly for health services in treating illnesses such as CNCDs. The report indicates that direct out-of-pocket payments still represent more than 50% of total

health expenditures in a large number of low- and middle-income countries. This means more than half of the total health expenditure in these countries is from the pocket of individuals. The findings of another study also revealed that one of every four families living in the world's poorest countries borrows money or sells assets to pay for health care (Kruk et al, 2009). In Ghana, the cost of managing a condition such as diabetes, is more than the average individual income (de-Graft Aikins 2007). This has the tendency of drawing families within the low income bracket into worst situations of poverty.

At the macroeconomic level, an analysis by the World Economic Forum (2008) estimated that countries such as Brazil, China, India and the Russian Federation lose more than 20 million productive life years annually to CNCDs. Also, Stuckler in 2008 estimated that a 10% rise in CNCDs is associated with a 0.5% lower rate of annual economic growth. According to this estimate, the expected 20% rise in CNCDs deaths predicted in Africa by 2020 would correspond to about a 1% loss in economic growth rates for a continent lagging in economic growth and development.

People often become ensnared in a vicious cycle where poverty and CNCDs continually reinforce one another. It is clear that, unless the epidemic of CNCDs is confronted, the global objective of reducing poverty will be hard to achieve (WHO, 2011).

There existed a clear evidence of not just the existence but also the increasing prevalence rate of CNCDs in Africa (de-Graft Aikins et al, 2010). This reveals that, the continent is experiencing an epidemiological transition of health, with many especially the poor communities living with the double burden of infectious and chronic diseases (Agyei-Mensah and de-Graft Aikins, 2010). The increasing prevalence rate has resulted in the continent (Africa) becoming the spot light by

current projections to experience the largest increase in CNCD deaths by 2020 (WHO, 2010). There is also clear empirical evidence of specific African countries like Ghana, Nigeria, Tanzania, Liberia, Cameron and South Africa having a high prevalence rate of hypertension (Francesco et al 2004). For instance, a non-communicable disease survey conducted in 1998 recorded a national prevalence of 27.8% of hypertension in Ghana (Bosu, 2007). Using the threshold of 140/90 mmHg for hypertension, Bosu (2010) has estimated a crude prevalence between 25% and 48% of hypertension in Ghana, though prevalence is higher in urban populations than in rural populations. A study conducted by Addo et al (2012) reported a prevalence rate of between 19.3% and 54.6% of hypertension.

People living with CNCDs in Ghana have been increasing over time. Meanwhile, prevalence rate and living experience vary with respect to rural and urban centres (de-Graft Aikins 2004; Agyemang 2006). Studies conducted in Ghana revealed that, CNCDs such as hypertension and diabetes are important public health problems (de-Graft Aikins et al, 2010) in both urban and rural settings. However, rural populations showed very little or no increase in blood pressure with increasing age (Agyemang et al 2006). The study by Amoah (2003) on the Socio-demographic variations in obesity among Ghanaian adults found that, some risk factors of CNCDs such as rates of overweight and obesity has higher rates in females than males. The study also found that there were more overweight and obese in the urban high-class residents compared with the low-class residents and in more urban than rural residence. A recent study by Dake et al (2011) revealed that, the overall prevalence of obesity and overweight increased from 25·5 % in 2003 to 30·5 % in 2008. Obesity varied directly with age from 20 to 44 years. Women

with higher education had the highest rate of obesity. Obesity was more common among women from wealthy households compared to women from poor households.

Persons living with CNCDs go through a lot of body changes and conditions, overcoming fear each day being one of the essential parts of living with the illness (Asa, 2011; Brynja, 2006). Living with, and management of most CNCDs involves complex interactions of psychological, social, economic, ethnic, and biological functions.

Studies have shown that, people living with chronic disease(s) are faced with psychosocial problems. One of such studies, conducted by Rabkin et al. (1983) revealed a 3-fold higher frequency of major depression in patients treated for hypertension. Depression has also been related to an increased rate of death in patients with established coronary heart disease (CHD), breast cancer, and HIV-AIDS (Schneiderman, 2004). CNCDs also cause disruptions to the physical capabilities, social identities and life trajectories of sufferers (de-Graft Aikins et al, 2010). The burden of caring for diabetes, for example, includes managing complications, adhering to dietary restrictions, and monitoring glucose levels, can significantly diminish quality of life and contribute to psychosocial problems (Wayne Katon, 2008).

As Desiderius Eramus rightly put, “Prevention is better than cure”, prevention or interventions not only avert human suffering, but also control the tremendous economic costs associated with illness. In general, prevention usually grouped into three categories – primary, secondary and tertiary – aimed at reducing health risks or threats to health. Primary prevention seeks to protect healthy people from developing illness in the first place by educating people about good nutrition, the importance of regular exercise, the danger of alcohol and tobacco use, and government legislation to reduce major risk factors. Secondary prevention seeks to halt or slow

the development of disease by systematically identifying and detecting it at the earliest stages, and intervening before full symptoms develop. Prescribing statins to reduce cholesterol, low-dose aspirin to prevent a first or second heart attack or stroke, taking measures to reduce high blood pressure and diet regulation are all examples of secondary prevention. Tertiary prevention focuses on helping people manage complicated, long-term health problems such as diabetes, heart disease, hypertension, and chronic pain. The goals include preventing further physical deterioration and maximizing quality of life. Patient support groups, cardiac or stroke rehabilitation and chronic pain management programmes are examples of tertiary prevention. (http://www.libraryindex.com/pages/50/Prevention-Disease.html)

The WHO has continually emphasized the need for an integrated approach that will target all major common risk factors of CNCDs since this is the most cost-effective way to prevent and control CNCDs (WHO, 2002). Hence, it's imperative that an integrated approach will not only respond to the need of intervention on major common risk factors with the aim of reducing premature mortality and morbidity of CNCDs, but also the need to integrate secondary and tertiary prevention, and related programmes across sectors and different disciplines to improve quality of life of people living with CNCDs, with particular focus on developing countries.

Good secondary and tertiary interventions require empirical evidence of the lived experience of those already living with the disease. There is therefore a need to examine the psychosocial life of persons living with the disease. This is the main objective of the study.

This study seeks to explore the following questions: What is the prevalence of CNCDs in the urban poor communities of Ghana? What is the distribution of the psychosocial status of the

people living in the urban poor communities in Ghana? Are, persons living with CNCDs faced with psychosocial burdens? These research questions will be answered through the use of both quantitative and qualitative methods.

1.2. Statement of the Problem

According to the WHO's 2010 report, there was a 15% increase in CNCD deaths at the global level, but Africa happens to be one of the WHO's regions that recorded a much higher increase of 20% in CNCD deaths. According to the 2010 Global status report on CNCDs, in Africa, CNCD deaths are rising and are projected to exceed communicable, maternal, perinatal and nutritional diseases as the most common cause of death in 2030. Cardiovascular diseases, cancers, respiratory diseases and diabetes being the major killers, account for around 80% of all CNCDs deaths and these four groups of diseases share four risk factors: tobacco use, the harmful use of alcohol, unhealthy diets and physical inactivity. Over 80% of cardiovascular and diabetes deaths, and almost 90% of deaths from chronic obstructive pulmonary disease, occur in low- and middle-income countries of Africa, Asia and Latin America.

Socio-economically, CNCDs threaten progress towards the attainment of the UN Millennium Development Goals. Poverty is closely linked with CNCDs. The rapid rise in CNCDs is predicted to impede poverty reduction initiatives in low-income countries, particularly by forcing up household costs associated with health care (Global Status Report, 2010).

In many developing countries like Ghana, harmful drinking and unhealthy diet and lifestyles occur both in higher and lower income groups. However, high-income groups may be able to access services and products that protect them from the greatest risks while lower-income groups especially the urban poor can often not afford such products and services (WHO 2011).

CNCDs have enormous implications for the health of the population and for the healthcare system in general. Hypertension and type 2 diabetes are silent killers responsible for the shortened life expectancy of many people (WHO, 2010).

In low-resource settings, health care costs for hypertension and diabetes can quickly drain household resources, driving families into poverty. The exorbitant costs of CNCDs, including often lengthy and expensive treatment and loss of breadwinners, are forcing 100 million people into poverty annually, stifling development (WHO, 2011). According to de-Graft Aikins (2007), without health insurance, managing a condition such as diabetes in Ghana, can cost more than the average individual earns, this further pushes households deeper into poverty.

Mortality among vulnerable and socially disadvantaged people like the urban poor becomes higher, as they get sicker and die sooner than people of higher social positions. This is because the urban poor are at greater risk of being exposed to harmful products, such as tobacco, smoke exposure from the use of inefficient cooking stoves for indoor cooking or unhealthy food, and have limited access to health services (WHO, 2011).

All these problems associated with CNCDs can lead to psychosocial issues which could then lead to a hindrance to interventions and treatment of the disease.

1.3. Research Questions

The following are the research questions:

- What is the prevalence of CNCDs in the selected communities
- What is the distribution of psychosocial wellbeing of the individuals in the selected communities,
- What is the psychosocial status of individuals living with CNCD

1.4. Rationale

The increasing prevalence rate of CNCDs such as diabetes and hypertension in Ghana calls for a study that examines the relationship between living with CNCD(s) and a person's psychosocial well-being for a complete and holistic health intervention. This is imperative as a good health includes mental and social well-being and not only a good physical state (de-Graft Aikins 2007; WHO, 2005).

In Africa, a number of studies have been conducted on the lived experience of chronic illnesses. Most of these studies are small-scale with insight, but are not population based. Examples are that of de-Graft Aikins (2005) on "Healer Shopping" among persons living with chronic diseases in Ghana and that of Kolling et al, (2010) which focused on the structural context on diabetes,

current status of biomedical and ethno-medicine and health-seeking among the urban poor living with diabetes in Tanzania.

There is a great gap in literature on the psychosocial well-being of the urban poor living with CNCDs especially from a population-based study. The study seeks to fill this gap in the literature.

For a deeper understanding of the lived experience of persons living with CNCDs, there will be the need for a larger community based-study in order to understand the relationship between living with a disease and the sufferer's psychosocial wellness. This will help in developing good secondary interventions for the sufferers.

In all, this study will add to the literature on the lived experience of persons living with CNCD. The study will also fill the gap in literature on CNCD lived experience from both population based and small scale perspective. The study will also serve as a baseline for holistic policy intervention on CNCDs.

1.5. Objectives

The general aim of this study is to examine the psychosocial well-being of individuals living with Chronic Non Communicable Disease(s) in selected urban poor communities of Ghana.

The specific objectives are:

- Identify the prevalence of CNCDs in the urban poor communities of Ghana,
- Explore psychosocial well-being of people in urban poor communities of Ghana,
- Examine the psychosocial well-being of persons living with CNCDs in urban poor communities in Ghana.

The first objective seeks to examine the prevalence of CNCDs in the urban poor communities by first looking at the prevalence in the entire population of the study area and among sub-groups. The prevalence of CNCDs among men and women will be examined. The prevalence among the various age groups, among the married and the various marriage categories as well as the various ethnic groups will also be examined.

The second objective is to explore the psychosocial status of the population. That is to examine the percentage of persons living with extremely poor psychosocial wellbeing and the percentage living with close to perfect psychosocial well-being. The study further examines the psychosocial status of the population among the various subgroups.

Objective three explores the psychosocial well-being of people living with CNCDs.

1.6. Literature Review

Generally, CNCDs are diseases of long duration and slow progression. According to the WHO (2011), cardiovascular diseases (CVD); cancers; chronic respiratory diseases and diabetes account for around 80% of all CNCDs deaths globally.

Furthermore, the epidemic of these diseases is being driven by factors such as demographic ageing, rapid unplanned urbanization, and the globalization of unhealthy lifestyles with all regions of the world being affected (WHO, 2011). The report also revealed that, low- and middle-income countries of Sub-Sahara Africa, Asia and Latin America currently bear about 80% of the CNCDs burden.

Earlier studies have shown evidence of the presence of CNCDs in Africa (Feachem et al., 1991) with some countries experiencing higher percentage rates. In Tanzania for instance CNCDs like hypertension and stroke contribute to about 50% of adult death (Njelekela et al 2001). The study of Kolling et al (2010) also showed that diabetes is also significantly high in Tanzania. In the review of the burden of chronic diseases in Ghana, de-Graft Aikins (2007) noted that in 2003, hypertension, stroke, diabetes and cancers had become top ten common causes of death in Ghana.

Experts like de-Graft Aikins (2007) and Agyei-Mensah and de-Graft Aikins (2010) argued extensively that, there is irrefutable evidence of Ghana living with the double-burden of high CNCDs rates and infectious disease. However, little attention is given to CNCDs interventions by policy makers. de-Graft Aikins (2007) made clear, the fact that the prevalence rate of CNCDs is higher than some infectious diseases; comparing HIV/AIDS which at the time (2006)

had a prevalence rate of 3.2% with hypertension having a very high prevalence rate of 28.7% , yet the former has received more attention than the latter. The paper, gave a comprehensive history of the rising prevalence of CNCDs in Ghana, showing that, in 2003, CNCDs formed part of the top ten in-patient cause of death in 32 sentinel hospitals in the 10 regions of Ghana.

In 2010, de-Graft Aikins and colleagues on an editorial titled “Tackling Africa's chronic disease burden: from the Local to the Global” indicated that, stigma is a significant psychological stressor on people living with CNCDs. In addition, social identities, disruption of physical capabilities, depression, chronic unhappiness, spiritual distress, psychiatric disturbance, and 'suicidal ideation’ also form part of the living experience of people living with chronic disease. The study further revealed that, care givers are not left out in the share of the psychosocial burden that comes along with the management of the disease. Other studies of non-African based populations have indicated higher suicide risk linked with various CNCDs, take account of cancer (Allebeck et al., 1989), diabetes (Tsang, 2004), end-stage renal disease (Kurella et al., 2005), epilepsy (Christensen et al., 2007) and stroke (Teasdale & Engberg, 2001). Egede (2007) after studying 1-year prevalence of depression in 10,500 patients with chronic diseases with 19,460 age-matched healthy controls in the US found that, rates of depression were double in diabetes, hypertension, coronary artery disease and heart failure, and three times in end-stage renal failure, chronic obstructive pulmonary disease (COPD) and cerebrovascular disease compared with healthy controls. These stark findings indicate the importance of examining the psychosocial well-being of individuals with CNCD(s). The study further reviews the literature on diabetes and hypertension since these are the most common CNCDs found among Ghanaians and many people living with diabetes suffer from hypertension as well. The combination of

diabetes and hypertension can cause severe complications including premature death. (Addo et al 2012; William et al 2011).

1.6.1. Literature review on Diabetes

The WHO defines diabetes as having a fasting plasma glucose value ≥ 7.0 mmo1/L (126 mg/dl) or being on medication for rise blood glucose (WHO, 2010). A person with diabetes has a condition in which the quantity of glucose in the blood is too elevated (hyperglycaemia). This is because the body either does not produce enough insulin (a hormone that is produced by the pancreas), produces no insulin, or has cells that do not respond properly to the insulin the pancreas produces. This results in too much glucose building up in the blood. This excess blood glucose eventually passes out of the body in urine. So, even though the blood has plenty of glucose, the cells are not getting it for their essential energy and growth requirements. In 1921, a team of medical researchers led by Dr. Frederick Banting, discovered insulin. The discovery of insulin served as the key to diabetes salvation for millions of patients worldwide. For now diabetes is one of the diseases that cannot be cured but managed (William. et al 2011)

Type 1 diabetes**,** sometimes called insulin-dependent, immune-mediated or juvenile-onset diabetes, is caused by an autoimmune reaction where the body's defence system attacks the insulin-producing cells. People with type 1 diabetes produce very little or no insulin. Type 2 diabetes also called non-insulin dependent diabetes or adult-onset diabetes is characterized by insulin resistance and relative insulin deficiency (International Diabetes Federation, 2012).

Research has shown that, genetic and environmental factors, longevity, changes from active to sedentary lifestyles, and over-eating are among the leading causes of diabetes (Hjelm et al. 2003).

Although diabetes can be treated very effectively today ignorance of the disease and how to manage it can result in complications like amputations of limbs and loss of eyesight. Longer term complications could be cardiovascular disease, retinal damage, chronic kidney failure, nerve damage, poor healing of wounds, gangrene of the feet which may lead to amputation, and erectile dysfunction (WHO, 2010).

Diabetes causes 4.6 million deaths per year, accounting for 8.2% of global all-cause death. It is estimated that 366 million adults have diabetes (IDF, 2011). The global mortality burden of diabetes is not evenly distributed, with low and middle income countries carrying a higher burden. It is projected that by 2030 about 82.5% of people with diabetes will live in developing countries (IDF, 2011). In the year 2010, 12.1 million people were estimated to be living with diabetes in Africa, and this is projected to increase to 23.9 million by 2030.

Studies have revealed that, that Type 2 diabetes accounts for well over 90% of diabetes in Sub-Saharan Africa, and population prevalence proportions ranged from 1% in rural Uganda to 12% in urban Kenya. Reported type 1 diabetes prevalence was low and ranged from 4 per 100,000 in Mozambique to 12 per 100,000 in Zambia. Gestational diabetes prevalence varied from 0% in Tanzania to 9% in Ethiopia. Proportions of patients with diabetic complications ranged from 7-63% for retinopathy, 27-66% for neuropathy and 10-83% for micro albuminuria. In Ghana, the prevalence falls within 0-7% (Hall et al, 2011)

Ingadóttir (2006) revealed that, persons living with diabetes go through the struggle of balancing the regimen with physical and psychosocial well-being. This study indicates that the psychosocial life of people with a chronic disease or diseases is one that would need a special attention in research. Fear has also been seen as the most common emotion among adults with diabetes (DeCoster, 2003).

Another key report by (Anderson et al, 2001) demonstrated that individuals with diabetes have at least twice the risk of developing depression compared to those without diabetes. Having both diabetes and depression increases the risk of developing diabetes complication like cardiovascular disease. A report by (Moussavi et al, 2007) has clearly shown that the co-existence of a chronic disease and depression has the greatest negative impact on quality of life compared to chronic disease or depression alone.

Furthermore, a review conducted by Leone et al. (2012) revealed that, two hypotheses attempt to explain the causal pathway between diabetes and depression. One hypothesis asserts that depression precedes type 2 diabetes, with depression occurring as a result of increased counter regulatory hormone release and action, alterations in glucose transport function and increased immune-inflammatory activation. These physiologic alterations are thought to contribute to insulin resistance and beta islet cell dysfunction, leading to the development of type 2 diabetes. The second hypothesis is that depression in patients with both type 1 and type 2-diabetes results from chronic psychosocial stressors of having a chronic medical condition. The review also shows that, lower education is associated with depression among people with diabetes. Leone et al (2012) further revealed that, there exists an undiagnosed burden of psychiatric disorders in

persons living with diabetes, with an increased risk among those from low socioeconomic strata and the elderly.

A study conducted by Ashraf (2010) in South Africa indicated that, persons living with diabetes go through the same emotional disorder as persons with hypertension and HIV. Ashraf (2010) further argued that, the distressing nature of living in poverty which characterizes the majority of people in the study could explain this finding.

A study conducted by Kelleher (1988) in London with 30 people living with diabetes revealed that, diabetics who worry and agonize were more likely to regard themselves as unhealthy and fret about their diabetes. According to Kelleher (1988) such persons were also more likely to be female and were unable to accept living with diabetes as a normal part of their life. However, Kelleher (1988) found that the majority of people though living with diabetes, identified themselves as healthy. According to the author, this feeling of well-being was not related to medical diagnosis but to a wider set of meanings like being able to pursue valued activities.

In Tanzania, Kolling et al (2010) found that living with diabetes or caring for someone with diabetes was very much a family matter whether in terms of acquiring medicine, accompanying a family member to a health clinic or in the provision of a healthy diet.

In Cameroon, Awah et al observed that there were multiple indigenous labels for diabetes which was referred to as sugar disease or disease that is sweet. Awah and et al (2009) noted that these indigenous labels for diabetes subsequently influenced self-diagnosis and management both in traditional and modern biomedical settings. Also, indigenous diagnostic tools like divination were also found to be important in guiding the naming, diagnosis and management of diabetes (Awah et al., 2009). These findings underscore how diabetes straddles modern lifestyles and

traditional beliefs and how their socio-cultural knowledge may influence treatment seeking choices and practices. Similarly, in Ghana, de-Graft Aikins (2003; 2004) observed the Twi term '*esikyere yare*', which literally means 'sugar disease', was used to describe diabetes with the notion of '*esikafoo yare*' ('disease of the wealthy') used simultaneously to link diabetes to wealthy lifestyles. According to de-Graft Aikins (2003), rural respondents and low-income urban respondents argued that 'since sugary and fatty foods were common among the rich, in terms of access and acquired taste, diabetes was likely to be more prevalent within this social group.' These eclectic sources of knowledge informed multiple illness action for diabetes whether in relation to drug treatment, dietary management or spirituality. Like diagnosis, culture also influences caring behaviours. de-Graft Aikins (2003) finally found that, in Ghana, diabetes disrupted five interrelated dimensions of everyday life: body-self, social identity, personal agency, economic circumstance, and nutrition.

The International Diabetes Federation in 2005 has published the Global guideline for type 2 diabetes which includes the assessment of psychological states. A conducive healing environment can only be built if the psychosocial perspective is integrated into all phases of interventions, so that policy makers, caregivers, healthcare providers are aware of how they can contribute to an affected person's well-being.

1.6.2. Literature on hypertension

Hypertension is a chronic medical condition that occurs when the pressure inside the blood vessels becomes too high, while hypotension is the opposite; it is when the blood pressure is too low. The normal level of blood pressure ranges from 90/60 to 119/79, where a numerator represents the systolic measurement (peak pressure in the arteries) and a denominator represents the diastolic measurement (minimum pressure in the arteries). Blood pressure between 120/80 and 139/89 is called pre-hypertension (to denote increased risk of hypertension), and a blood pressure of 140/90 or above is considered hypertension (Blood Pressure Association England, 2008).

Isezuo et al (2011) suggested that, pre-hypertension may be largely genetically determined, and support the concept that it could increase the risk of hypertension given suitable environmental conditions, chiefly obesity which is said to contribute to high blood pressure through neurohormonal (renin–angiotensin and sympathetic nervous systems) activation. Hypertension has also been identified as a major risk factor for risk of ischemic heart disease (Lewington et al, 2002), stroke and heart failure (O'Brien et al2007).

According to the World health statistics 2012 report, one in three adults worldwide, has a raised blood pressure (hypertension) – a condition that causes around half of all deaths from stroke and heart disease. Hypertension is also one of the important causes of premature death worldwide (WHO, 2009)

Studies have shown that, hypertension is present in Africa (Kaufman et al, 1996). Historically, the reported prevalence of hypertension in rural African communities has been relatively low,

ranging from 2% to 13% (Spencer et al, 2005). More recently, studies have revealed that hypertension is on the rise with prevalence rates approximating 28% (Amoah, 2003). This rate represents a substantial rise in the reported prevalence of hypertension in sub-Saharan African countries. This rising rate of hypertension parallels increasing rates of obesity globally. In Nigeria, Isezuo et al (2011) found that only 13.9% were aware of their high blood pressure status. Research by Bosu (2010) indicated that less than one-third of hypertensive subjects in Ghana were aware they had hypertension. Similarly Amoah et al (2000) demonstrated that 33% of persons living with hypertension in Ghana were aware of their diagnosis, 18% were treated, and 4% had adequate blood pressure (BP) control.

A study conducted in Ghana by Aryeetey et al, (2011) reveals that, the risk of hypertension increases with age and also very high among married people, meanwhile education made no difference to the incidence of hypertension. The incidence of hypertension has significantly increased in Ghana, for instance in 1985, hypertension was the 14th most reported disease from Out- Patient-Department (O.P.D) records, but had become the 5th most reported disease in 2002 (de-Graft Aikins, 2007). A community prevalence study in Greater Accra, also showed that, facility cases of hypertension increased by 67 per cent, from 58,677 in 1989 to 97,980 in 1998 (Amoah et al, 2002).

A study conducted by Rabkin et al. (1983) revealed a 3-fold higher frequency of major depression in patients treated for hypertension. That of Everson et (2000) carried among 616 initially normotensive men, in a 4- year follow-up prospective study in Finland, found that, Men reporting high levels of hopelessness at baseline were 3 times more likely to become hypertensive than men who were not hopeless, after adjustments for age, body mass index,

baseline resting BP, physical activity, smoking, alcohol consumption, education, and parental history of hypertension.

According to Samranbua (2011) fear, worry and anger are the most common emotions represented by living with hypertension. Ashraf (2010) in a study conducted in South Africa found that, the levels of emotional distress among persons living with diabetes and hypertension is not significantly different from those living with HIV/AIDS. The distressing nature of living in poverty which characterizes the majority of the population was one of the plausible reasons for this finding by Ashraf (2010).

Strahl (2003) stated that unpleasant and painful symptoms resulting from hypertension restricts the daily life of persons living with the illness. The study further reveals that nearly two thirds of people with hypertension state that they are temporarily limited in performing their daily activities due to illness. It was explained that, a high blood pressure attack may range between a few hours up to a week and longer. During this time, patients are unable to work, require rest, and should avoid emotional arousal until the illness subsides. For women, cooking can be especially dangerous. This rule is clearly problematic for women not only because they are responsible for food preparation in their own families, but also because many women (including most women in our sample) cook and prepare additional food as an outside source of income. Strahl (2003) also found that, many elderly patients fear a drastic fall in their living standards as their health condition progresses, preventing them from engaging in income-generating activities. Feelings of uselessness and loneliness were pervasive among these study participants.

Kaufman et al, (1996) after studying the determinants of hypertension in West Africa from a population-based survey in southwest Nigeria made the following suggestions: “Further research

should concentrate, however, on measures of social status, social and economic stress, and social integration. These are relevant to women living in these social contexts, since established physiological risk factors are apparently not highly predictive of disease status for this group"

1.7. Theoretical and Conceptual Framework

Bury (1982) introduced the concept of "biographical disruption" in 1982. According to Bury, chronic illness constitutes a disruption, a discontinuance of an ongoing life. The present daily life is hampered, possibly blocked altogether. The life of a person living with a chronic disease is completely disrupted and full of uncertainties; this makes the ill-person to have erased logical boundaries with more focus on bodily state.

Bury's notion of chronic illness as a biographical disruption has dominated studies of chronic illness as a theoretical framework (Marr 1991, Rajaram 1997, Buki et al 2005, and Faircloth et al 2004).

In Ghana, de-Graft Aikins (2003) used Bury's notion of biographical disruption in the study of adults living with diabetes in rural and urban Ghana. de-Graft Aikins' (2003) study used Bury's theory of meaning of chronic illness to guide its interview process, as well as the data analysis to show how diabetes disrupted, the body self, social identity, family and social relationships and economic circumstance of participants.

Similar to de-Graft Akins' study, Walker in 2008 employed Bury's (1982) view of chronic illness as a biographical disruption together with Paterson's (2001) shifting perspective model of chronic illness as the theoretical frameworks of her study. One of the interesting findings that came out of Walker's study was that diabetes exerted a large influence on the women's life choices and career decisions.

The study of Faircloth et al (2004) has also shown that, for some persons, the onset of a chronic illness may not be seen as an imminent invader of everyday life, but rather part of an ongoing life story. The study showed that, the life of a person living with a chronic condition is not inevitably disrupted. According to the authors, the knowledge (in terms of history of the disease) of the person living with the disease is important in helping the person to provide a unique orientation of the illness and its effect. Living with co-morbidity and seeing the illnesses as part of one's age among others are all important in determining whether the person will be disrupted or not. Faircloth et al (2004) term their theory as the biographical flow.

In addition to the above studies, Carricaburu and Pierret (1995), on the everyday life of HIV positive men (though communicable disease) also argued that, chronic illness (HIV) reinforced specific aspects of the person's biography rather than disrupting it. They also alerted that the social context of an illness is also important because it may not be disruptive. For instance, individuals with the illness who are actively involved in political activism concerned with the illness crises as homosexuals, have their sexuality, gender and community reinforced by the illness.

The notion of Shifting Perspectives Model was developed by Paterson in 2001, after a meta-synthesis of 292 qualitative studies of chronic illness. According to this model, a person with a chronic illness can assume one of two perspectives; the illness in the foreground perspective, or the wellness in the foreground perspective.

Assuming an illness in the foreground perspective, means the individual focuses on his or her sickness and the troubles, anguish, and loss related with it, seeing the illness as disruptive. According to her, this perspective is typically assumed by individuals who have been newly diagnosed.

The second perspective that individuals may assume is the wellness in the foreground perspective. With this perspective, the individual sees him/herself as a healthy being by accepting any limitation that comes as a result of living with the illness after reconciling the self-identity with the new identity (Paterson, 2001).

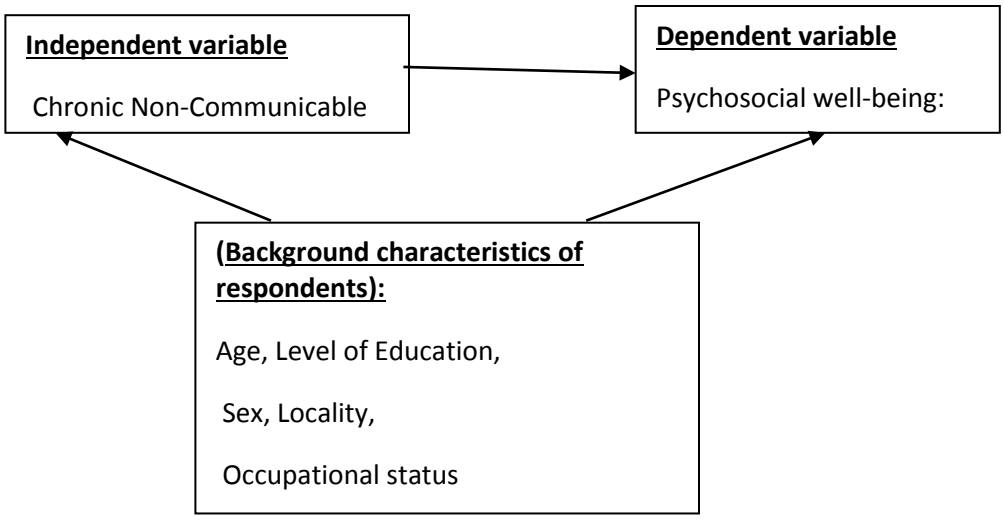
However, it has been observed that a particular theory may not fit all chronic illnesses. A theory may apply to one particular illness and not all chronic illnesses. Furthermore, a theory applicable to a particular chronic disease may not transcend time nor have a universal application. For instance, the theory of "biographical reinforcement" was built by Carricaburu and Pierret (1995) using HIV positive men while Bury's "biographical disruption" was propounded with a study of rheumatoid arthritis patients. Hence, it can be argued that, differences in findings could be as a result of different illness samples used.

This study uses the shifting perspectives model; because the shifting perspectives model incorporates both positive (wellness in the foreground) and negative (illness in the foreground)

psychosocial effects. At the negative end, illness disrupts, and at the positive end, illness liberates. People can shift between positive and negative experiences depending on the illness, its duration and the context.

After the review of literature and the above theories of the lived experience of people living with CNCDs, the following conceptual framework has been developed.

Figure 1.1 Conceptual Framework for CNCDs and Psychosocial well-being



(Authors Construct, 2013)

The literature suggests that, background characteristics of an individual both influence CNCD and psychosocial status. It is also revealed in literature that, CNCD influences psychosocial status of sufferers. For instance, the age variable helps in determining a person's accumulated exposure to the disease in question's risk factors. The age variable also helps in determining ways of controlling the illness and measures of cure. Aging is associated with frailty and the

period for the onset of several chronic illnesses (Mba, 2006). According to Eliopoulos (2010), increasing age causes changes to the body which makes older people vulnerable to many diseases, especially hypertension. The Accra women's health survey conducted in 2008-2009 report indicated that age has a strong effect on all eight domains of mental health measured in the survey. Therefore, the study used question like "How old is "Name"? To elicit information on ages of household members from their household heads. Eligible individuals were also asked to provide information on the month they were born, the year they were born and how old they were on their last birthday.

Furthermore, studies have shown that, there are sex-specific chronic diseases such as prostate and ovaries cancer that affects men and women respectively (de-Graft Aikins, 2010). There are also specific conditions that, because of the biological exclusivity of males and females, can only occur in one or other sex (e.g., Pregnancy-related conditions in women; testicular disorders in men).

Studies have also shown that tobacco use, hypertension and physical inactivity were more prevalent in lower education groups, lower education levels are strongly associated with an increased risk of diabetes (Reddy KS et al 2007 ; Yang W et al 2010). The questionnaire obtained information on educational attainment of household members by asking household heads if each member has ever attended a school. A follow up question on the member's highest level of education if the first question is answered "yes". Educational attainment of eligible respondents is obtained by the following question "have you ever attended school"? If the respondent answers "Yes" then he/ she is asked of the highest level and grade he/she attained.

Highest level of educational attainment was categorized into “No education”, “Primary Education”, “Middle/ Junior High” “Senior High” and “Higher education”

In addition, marital status can both affect and be affected by health outcomes (ASPE, 2007) Other findings have also confirm a positive association between marriage and physical health (Prior and Hayes, 2003; Lerman, 2002) Studies comparing the mental health of stably married adults to those who remain unmarried find that those who are stably married have fewer depressive symptoms (and smaller increases in these symptoms as they grow older), even after controlling for baseline mental health. (Kim et al, 2002; Robbn, 2002). Marriage also may provide emotional fulfilment, intimate relationship, satisfying the need for social connection, which could have implications for both physical and mental health (House et al. 1988). However de-Akins (2006) found that, some women living CNCD are abandoned by their partners

Now using the above conceptual framework, the study explores the prevalence of CNCD in the study area. The distribution of psychosocial status of residents in the study area was also explored. In addition, the relationship between background characteristics and living with CNCD, as well as the relationship between living with CNCD and the respondent’s psychosocial status was also explored. Relationship between two variables was explored by running a cross-tabulation between the variables. The CNCDs that were explored include hypertension (high blood pressure) and diabetes (high blood sugar).

1.8. Definition of key terms:

1.8.1. Psychosocial well-being

The term psychosocial reflects the dynamic relationship between psychological and social processes. Psychological processes are internal; they include thoughts, feelings, emotions, understanding and perception. Social processes are external; they are comprised of social networks, community, family and environment. The psychological and social processes are intrinsically intertwined in that what happens in one of these areas will affect aspects of the others. How an individual feels internally affects how he relates to the external environment around him. The questions used by the study in measuring psychosocial well-being are exhibited in the methodology section of the study.

1.8.2. Chronic Non-communicable diseases

A Chronic non-communicable disease (CNCD) is a medical condition which by definition is non-infectious and non-transmissible between persons and is of a long duration. Diseases classified as Chronic Non-communicable in the study are diabetes and hypertension. This study only considers persons who have been diagnosed as living with hypertension, diabetes or both, as having a CNCD.

1.9. Methodology

Quantitative and qualitative methods were both employed in the analysis. Details of the two methods are presented in the subsequent sections.

1.9.1. Quantitative Analyses

1.9.1.1. Source of Data

The study uses the second round of data collected by the Population Training and Research Capacity Development project (EDULINK) in three communities in Accra. EDULINK is a project undertaken by the Regional Institute for Population Studies (RIPS), University of Ghana with collaborations from Southampton University (UK), Cape Coast University (Ghana), University of Ibadan (Nigeria), Fourah Bay University (Sierra Leone). The aim of the project is to integrate real-life fieldwork into the teaching and learning of population sciences among students and staff in participating African and UK Higher Education Institutions (HEIs). The focus of the data collection was directed towards urban poverty and health around the research areas (Jamestown Ussher town and Agbogbloshie). The first round data were collected between November and December 2009. The second round of data which are being used in this study were gathered between November and December 2011. About 58 trained field workers were used in the collection of the data. The questionnaires were practiced and pre-tested in the old Ashongman community by field workers before moving to the study area.

1.9.1.2. Sampling Technique

The sample was drawn from 29 enumeration areas (EAs), each with 20 households systematically chosen to make up a total sample size of 580 households distributed over the three localities. The number of EAs and households in each locality was proportionate to the population size of that locality. There were five EAs from Agbogbloshie, eight from James Town and sixteen from Ussher Town. The head of each household gave an account of all their household members using the household questionnaire. In each household chosen, every female from the ages of 15 to 49 years and every male of age of 15-59 years was eligible to be interviewed. The household heads accounted for a total number of 2,524 household members. About 1010 of the household members were eligible for interview. After weighting the data and deleting missing cases, the sample size of the eligible respondents was 955. Only eligible respondents were to answer questions on psychosocial well-being.

1.9.1.3. Method of Analysis

The study uses SPSS version 16 in the data analysis. Frequencies were run to analyse the background characteristics of household members and eligible respondents. The prevalence of CNCDs was also analysed using SPSS. In the analysis, re-categorization was done for some of the variables so as to aid simplification of analysis. For instance, the “age” variable, originally in single years, was re-categorized into five-year age grouping starting from 0-4 years for household members and 15-19 years for eligible respondents. A variable was also computed for persons living with either diabetes or hypertension. And the individual is classified as living with

a condition he/she affirms that, he/she has ever been told or diagnosed by a health professional of high blood pressure (hypertension) or diabetes (high blood sugar).

Three sub-scales with eleven questions from the psychosocial section of the EDULINK were developed to measure psychosocial well-being. The sub-scales with the questions that fall under them are seen in the next paragraphs.

1. ***Mental Health Sub-Scale***

How much time during the past 4 weeks…

(a) Have you been a very nervous person?

(b) Felt so unhappy and not yourself that nothing could cheer you up?

(c) Felt calm and peaceful?

(d) Felt downhearted and let down

(e) Have you been a happy person

2. ***Emotional Functioning Sub-Scale***

How much time during the past 4 weeks…

(f) Did you feel full of life and bounce?

(g) Have a lot of energy?

(h) Did you feel worn out?

(i) Have you felt worthless or hopeless?

(j) Do you feel content?

3. ***Perceived Health Sub- scale***

(k) How do you see your health?

Psychosocial well-being was generally analysed with the questions above adapting the RAND 36 scale. The RAND 36 item health survey taps eight health concepts: physical functioning, bodily pain, role limitation due to physical health problems, role limitation due to personal or emotional health problems, emotional well-being, social functioning, energy/fatigue and general health problem.

In this study, first the pre-coded numeric values of the responses are re-coded per the scoring key in Table 1.1 All scores are coded so that a high score represents a more favourable psychosocial status. In addition each response is scored on a 0 to 100 range so that the lowest and highest possible range is set at 0 and 100 respectively. The scores represent a percentage of the total possible score achieved. In step two, all the responses under the same sub-scale are averaged together to create each sub scale score (Mental Health, Emotional functioning and Perceived Health) for psychosocial well-being. Questions that were not answered (missing data) were not taken into account when calculating the scale score. Hence, the scale score represents the average for all the responses to all the questions in the scale that the respondent answered.

Example, having each of the questions with five response choices, a high score (response choice 5) on question (a) indicates extreme limitation in psychosocial well-being while a high score (response choice 5) on questions (f) indicates absence of limitations in psychosocial well-being. Table 1.1 shows that responses 1 through 5 for questions (a) should be recoded 100, 75, 50, 25, 0, respectively and responses 1 through 5 for questions (f) should be recoded 0, 25, 50, 75, and 100, respectively. All items were averaged together to form the psychosocial well-being scale.

Cross tabulations were run between the background characteristics and living with a CNCD, also a cross tabulation between background characteristics and a person's total score of psychosocial well-being was run.

Table 1.1 scoring key of re-coded responds

QUESTION ITEM (S) CHANGING ORIGINAL RESPONSE CATEGORY TO RECODED VALUE

(a), (b), (d), (i)	1 (none of the time)	→	100
	2 (A little of the time)	→	75
	3 (Some of the time)	→	50
	4 (most of the time)	→	25
	5 (all the time)	→	0
(c), (e),(f),(g),(h),	1 (none of the time)	→	0
	2 (A little of the time)	→	25
	3 (Some of the time)	→	50
	4 (most of the time)	→	75
	5 (all the time)	→	100
(j)	0 (not at all)	→	0
	1 (a little bit)	→	25
	2 (moderately)	→	50
	3 (quite a bit)	→	75
	4 (extremely)	→	100
(k)	0 (poor)	→	0
	1 (quite good)	→	25
	2 (good)	→	50
	3 (very good)	→	75
	4 (excellent)	→	100

1.9.2. Qualitative Analyses

1.9.2.1. Data and Participants

This study uses a qualitative data gathered by the RIPS-NYU (Regional Institute for Population Studies and New York University) project, with the EDULINK respondents serving as its participants. The RIPS-NYU project is a project undertaken by a collaborative group of researchers from RIPS and NYU. As part of a broader research between NYU and University of Ghana, six sub- projects were undertaken, four (A1-A4) related to non-communicable diseases, NCD, with the other two being a project on emergency Medicine's effort in Accra and a project to create a Data Repository of existing epidemiological databases in Accra (B) and the development of the twin cities concepts determining and comparing the characteristics of the Ghanaian population in NYC and Accra (C). A sub project under NCD includes, digitization of the medical records at the National Diabetes Centre (A1), task-shifting program for cardiovascular risk assessment and development of dietary assessment tool in faith-based organizations in Ghana (A2), the Twin-Cities Study Dietary Assessments Tools in Accra and New York City (A3) and understanding the relationship between oral health and diabetes mellitus (A4). Qualitative data on diabetes and hypertension fall under the project on task-shifting.

The data were in a form of a semi-structured interview with EDULINK (2011) respondents who self-reported that they were living with a chronic disease. The data were collected in January 2012, three weeks after the EDULINK data collection by four students from New York University and seven students from the University of Ghana.

Twenty qualitative individual interviews gathered from the study area were used in the analysis. The participants were made up of 16 women and 4 men. 10 of the participants were living with hypertension while the remaining 10 lived with diabetes.

1.9.2.2. Developing a Coding Frame

The coding frame was theoretically conceived, and guided by themes identified in the analysis. Attride-Stirline's (2001) thematic network approach informed the analyses. Attride-Stirline's (2001) thematic network approach is a qualitative research analytical tool that details a method for carrying out thematic analysis of qualitative material. The approach presents a step-by-step guide of the analytic process, with the aid of an empirical example. The analytic method presented employs established, well-known techniques. The approach proposes that thematic analysis can be usefully aided by and presented as thematic networks. The thematic networks technique is a robust and highly sensitive tool for the systematization and presentation of qualitative analyses. Thematic networks of web-like illustrations that summarize the main themes identified by the analyses are presented in Appendix C**.**

The study by de-Graft Aikins (2003) on diabetes experience in Ghana guided the selection of deductive codes (codes from theory or existing literature). De-Graft Aikins (2003) was used in the selection of deductive codes because, its analyses were based on the theory of "biographical disruption". Another study that influenced the coding was Atobrah (2012) on young patients' perceptions and meanings of chronic illness and their implications for medical care. The study of Atobrah has been included because; its findings suggest that people are normally relieved and

happy after they are diagnosed. The sick person normally does not care if the illness is chronic or not, rather what matters most is, knowledge of what actually is wrong with him or her. These two studies guided the selection of codes because both are studies conducted in Ghana. Other literature that influenced the selection of deductive codes includes (Asa K, 2011), (Brynja, 2006), (Walker, 2008) and (Samranbua, 2011). The codes may not be the exact words found in the literature but what the literature portrays. There were also new issues raised by the respondents and these were used to generate my inductive codes (codes developed by the data/research). This hybrid approach impels a more rigorous thematic analysis through integrating inductive and deductive codes to inform the final coding frame.

1.9.2.3. Data Analysis

A thematic analysis was used to analyse the data. The analysis identified five main themes which form the subsection of this chapter. The first part focused participants' "emotional well-being"; the second section was based on the "mental well-being" of participants; the third theme identified by the analyses is "spiritual well-being" the fourth theme identified the "source and quality of social support" for participants and the last theme explored participant's perception about health. Participant's health perception includes his or her personal definition of health and his or her perceived health status. A section of the thematic network is presented before finding from a particular theme. This is to present a clear understanding of the analyses. Pseudonym replacing participant's real names is used in the analyses. Details of participant's socio-demographics can be found in **appendix A.**

1.10. Study Limitations

Two key limitations are perceived from the study. The prevalence of hypertension (CNCD) found in the communities is an underestimation. This is because only persons who were ever diagnosed were considered as those living with CNCD. The second limitation is that, most of the household members that fall outside the eligible age (15-49 for women and 15-59for men) did not get the opportunity to answer the EDULINK questions on the psychosocial well-being. This could limit the interpretations of the result.

1.11. Organisation of study

Chapter one of the study looks at the background of the study through to study limitation. Chapter two focuses on the background of the study. The background of the study includes the background of the study area, background information of household members and socio-demographic characteristics of qualitative interview respondents. Analysis on the prevalence of CNCD is in urban poor communities in Ghana is found in chapter three. In addition, the distribution of psychosocial well-being of persons living in urban poor communities of Ghana and psychosocial well-being of those living with CNCDs can also be found in chapter three.

Analysis of the qualitative interview exploring the psychosocial well-being of persons living with CNCD is found in chapter four. Chapter five concentrates on the summary, recommendation and conclusion.

Chapter II

Background Information about Study area and participants

This chapter presents the background information on the study in three sections. The first section gives background information of the study area. The second section provides information about household members and the eligible respondents (15-49 years for women and 15-59 years for men). The last section also provides the socio-demographic characteristics of in-depth interview participants.

Information about background characteristics of household members is deemed important in the interpretation of the study's findings. An individual's health is known to be influence by age. The analysis of the characteristics of household members can also show the quality of the sample and indicate whether or not it is representative of the population. The age of household members, sex, level of education, marital status, ethnicity, locality and current occupational status are what this chapter seeks to analyse.

2.1. Background of the Study Area

Accra is the capital and largest city of Ghana, with an urban population of 1,848,614 according to the 2010 census (Ghana Statistical Service, 2012). Accra is one of the leading and fastest-growing cities in Africa, with an annual growth rate of 3.36%. Accra serves as the nation's economic and administrative hub.

The main study areas form part of central Accra. Located directly east of the Korle Lagoon, Jamestown and Ussher town are the oldest districts in the city of Accra, and emerged as

communities around the 17th century. These districts were heavily developed by the end of the 19th century, and following the rapid growth of the city during the 20th century, they became areas of a dense mixture of commercial and residential use. Jamestown and Ussher town remain fishing communities inhabited primarily by the indigenous Ga.

Agbogbloshie is a suburb of Accra. The town covers approximately four acres and is situated on the banks of the Korle Lagoon, northwest of Accra's Central Business District. 40,000 Ghanaians inhabit the area (Ghana statistical service, 2012) most of whom are migrants from rural areas. The population of Agbogbloshie consists of economic migrants from northern and rural parts of Ghana. Figure 2.1 is the map showing the study area.

Figure 2.1 Map showing the study area.

2.2. Background Characteristics of Household members:

2.2.1. Distribution Household members by age

The age variable helps in determining a person's accumulated exposure to the disease in question's risk factors. The age variable also helps in determining ways of controlling the illness and measures of cure. Table 2.1 presents the ages of members of all households while table 2.2 presents the distribution of the ages household members with ages 15 and 59. All ages up to 64 years are presented in five year groupings.

Observation from table 2.1 shows about 10.5% of selected household members are under 5 years old (0-4). The table also shows that about 10.8% and 10.6% are within ages 5-9 and 10-14 respectively. The analysis shows that approximately 32% of household members are under 15years. The results also show that about 2.4% of household member are within ages 60-64. About 6.2% are also above 65years. From the analysis, about 8.6% of household members are above 59years.

The results in table 2.2 indicate that, 15.1% of eligible members who responded to the individual EDULIK questionnaire are within 15-19years. Table 2.2 also showed that 20-24years has the highest percentage (18.2%) of eligible respondents followed by 25-29years (17.1%). The results in table 2.1 revealed that, 55-59year has the least percentage (0.9%) of eligible respondents.

Table 2.1 Distribution of all household members by age

Age	Frequency	Percent
0-4	264	10.50%
5_9	272	10.80%
10_14	268	10.60%
15-19	246	9.70%
20-24	260	10.30%
25-29	224	8.90%
30-34	192	7.60%
35-39	147	5.80%
40-44	141	5.60%
45-49	125	5%
50-54	105	4.20%
55-59	62	2.50%
60-64	61	2.40%
65 and above	157	6.20%
Total	2524	100%

Table 2.2 Distribution of eligible household members by age

Age groups	Frequency	Percent
15-19	146	15.10%
20-24	175	18.20%
25-29	165	17.10%
30-34	142	14.70%
35-39	104	10.80%
40-44	101	10.50%
45-49	91	9.40%
50-54	31	3.20%
55-59	9	0.90%
Total	964	100%

2.2.2. Distribution of household members by sexes

To understand and respond to most human health and sickness issues, clarifying the difference between the sex factor is critical. Consequently, the distribution of all household members by sex is shown in Figure 2.2 while Figure 2.3 shows the percentage distribution of eligible respondents by sex.

It could be observed from the Figure 2.2 that 55.8% of the all selected household members are females while 44.2% are males. The results in Figure 2.3 also show that, 56.1% of the eligible respondents are females whiles the remaining 43.9% are males.

Figure 2.2 Distribution of all Household members by Sexes

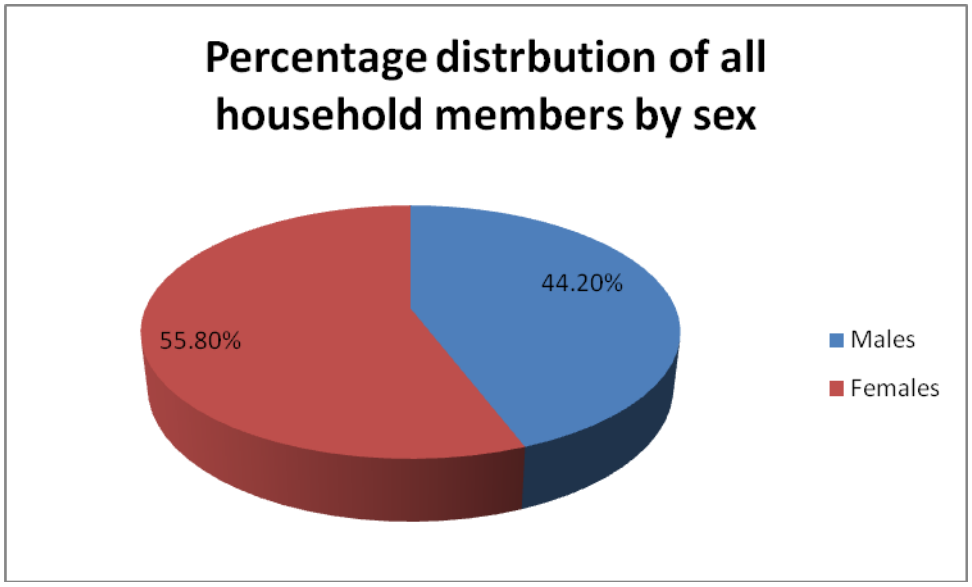
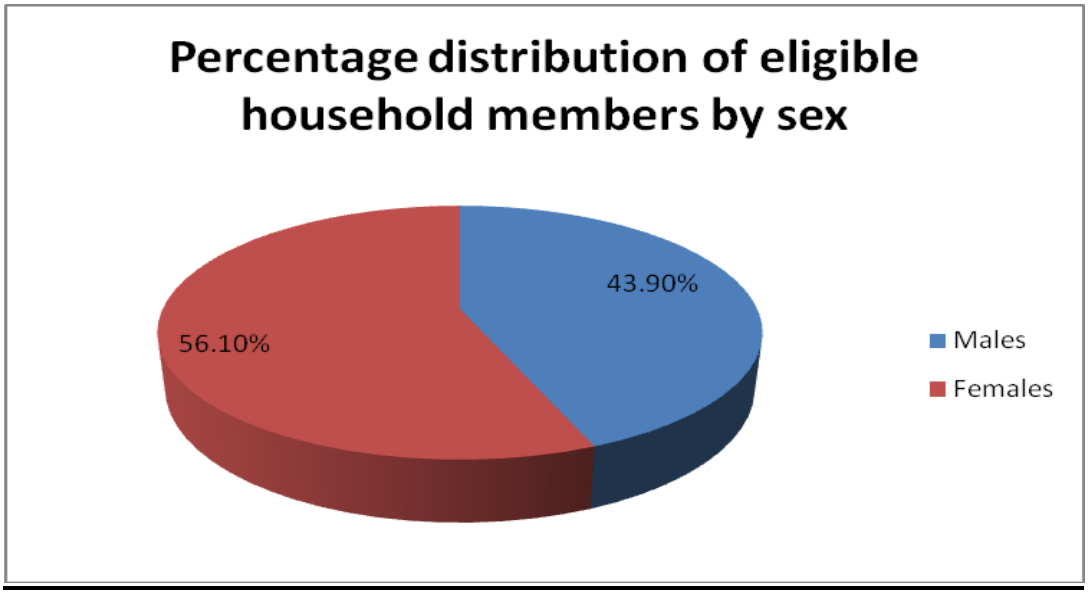


Figure 2.3 Percentage distribution of eligible household members by sexes



2.2.3. Educational attainment of household members

Education gives us knowledge of the world around us. It helps us build opinions and have points of view on life matters. Education broadens knowledge and shapes behaviour.

Figure 2.4 shows the result of the percentage distribution of the educational attainment of all members of the selected household while Figure 2.5 presents educational attainment of eligible respondents.

Observation from the Figure 2.4 shows that, most of the household members (30.5%) have Middle/ junior high education followed by higher education with a percentage distribution of 27.5%. Primary education has the least percentage distribution of people (9%) whiles 15.4% of household members have secondary education and 17.6% having no formal education.

The result in Figure 2.4 shows that, 44.2% of the eligible respondents have attained middle/JHS with 24.6% having secondary education. The result also indicates that, 20.7% have primary education with 4.6% having higher education and 5.9% having no education

Figure 2.4 Distributions of all Household members by Level of Education

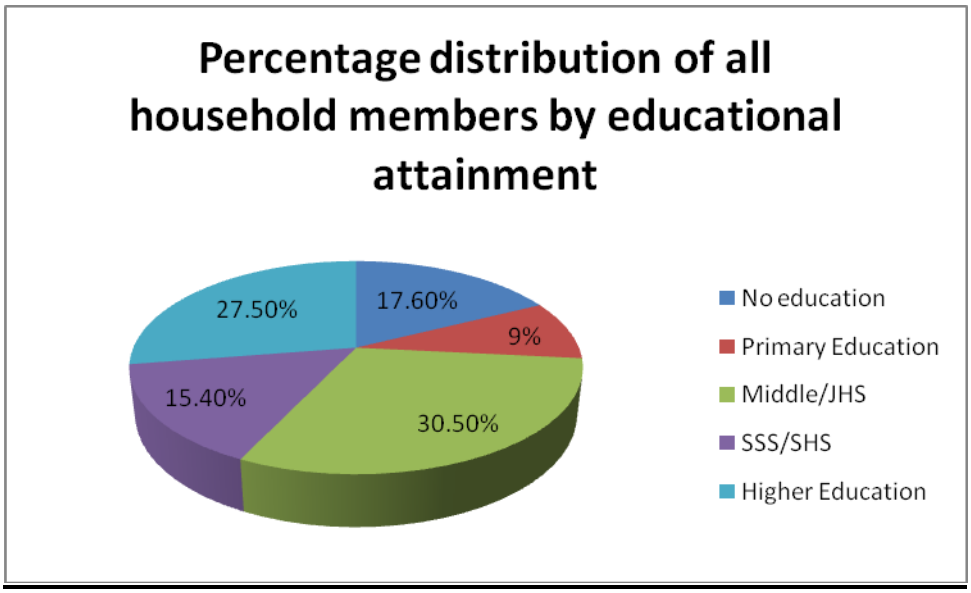
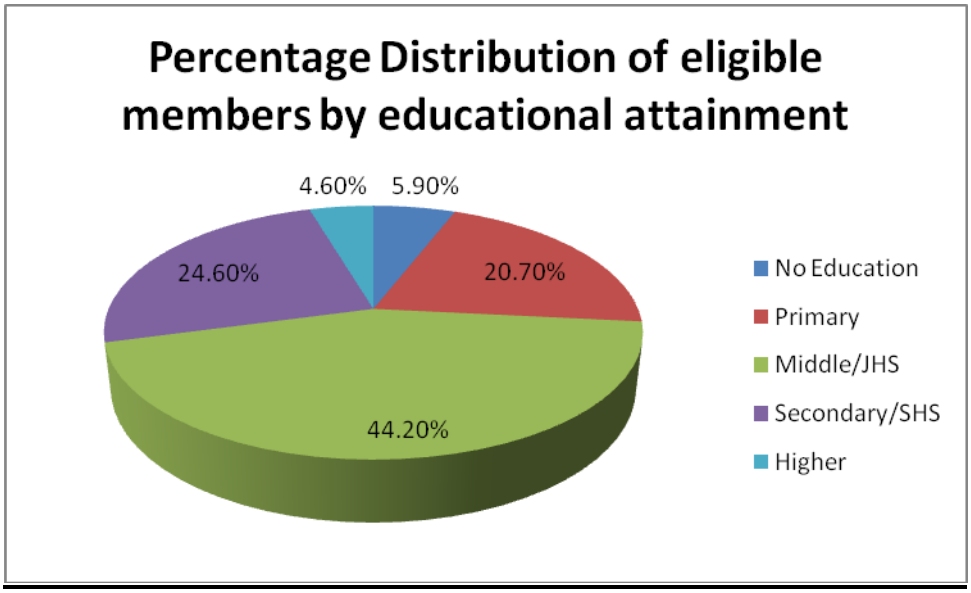


Figure 2.5 Distribution of eligible respondents by Educational attainment



2.2.4. Percentage Distribution of Household members By Place of Residence (Locality)

In studying any demographic phenomenon or health issue, location or the place of residence of the participant is an important variable that cannot be ignored. It directs policy formulations and shows specific areas where interventions should be channelled towards. The research communities -Agbogbloshie, Ussher Town, and James Town- are characterized by poor structural housing conditions, severe overcrowding, and deficient sanitation. Additionally, toilets are often publicly owned and pay-per-use, as a result, many residents (especially of Ussher Town), resort to defecating in the open or in plastic bags, human waste can be found in plastic

bags or out in the open in the gutters of these communities . The percentage distribution of all household members with respect to their localities is shown in Figure 2.6 while Figure 2.7 shows the percentage distribution of eligible respondents.

The Figure 2.6 shows that the majority of people are in Ussher Town, thus 54.8% and 30.8% from James Town with 14.4% from Agbogbloshie.

The analysis shows that, 51.2% of the eligible respondents are in Ussher Town while 31.8% are from James Town. The result also shows that, 17.1% of the eligible respondents are from Agbogbloshie.

Figure 1.6 Distribution of all Household members by Locality

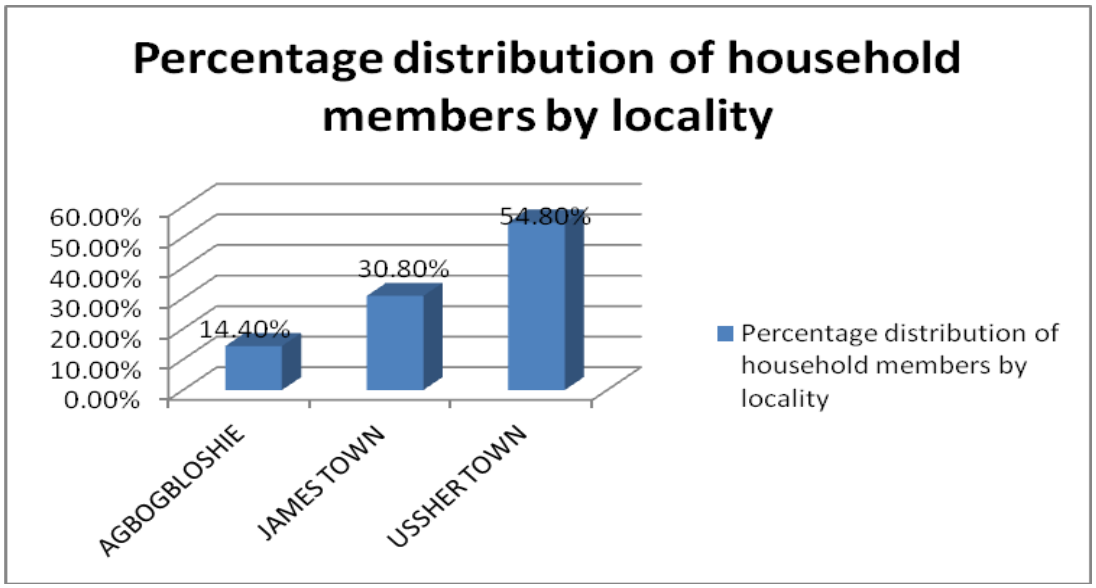
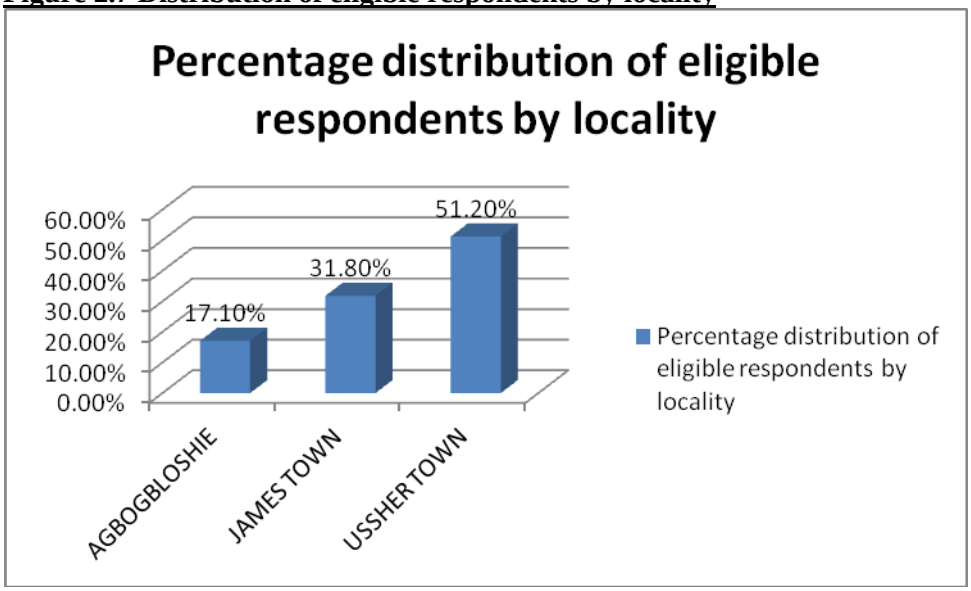


Figure 2.7 Distribution of eligible respondents by locality



2.2.5 Percentage Distribution of Household members By Marital Status

The marital status of a person is also an important variable to be considered. This is because partners sometimes provide social support and also serve as a source of social capital (Opong et al, 2009). Figure 2.8 shows the percentage distribution of all household members by their marital status. And Figure 2.9 shows the percentage distribution of eligible respondents by their marital status.

The study puts marital status in four categories which are (i) Yes currently married, (ii) Yes living with a partner (household members who are living with a partner but no bride price has been paid) (iii) Never married, and (iv) Formerly married - this category comprises the widow, divorced and separated.

Results from Figure 2.8 show that more of the household members (57.4%) have never been married. This rather high percentage is because 31.9% of household members are children and are below the reproductive age (15years). The results in Figure 2.8 also indicate that, about 17% are married. The analysis also shows that, 10.3% of the people are living with a partner while about 15.2% have been formerly married.

Findings from Figure 2.9 show that, 39.5% of the eligible respondents are “never married”. About 23.8% of the eligible respondents are married while about 20.9% are living with a partner. The results also show that, 15.7% of the eligible respondents have been formerly married.

Figure 2.8 Distribution of all Household members By marital status

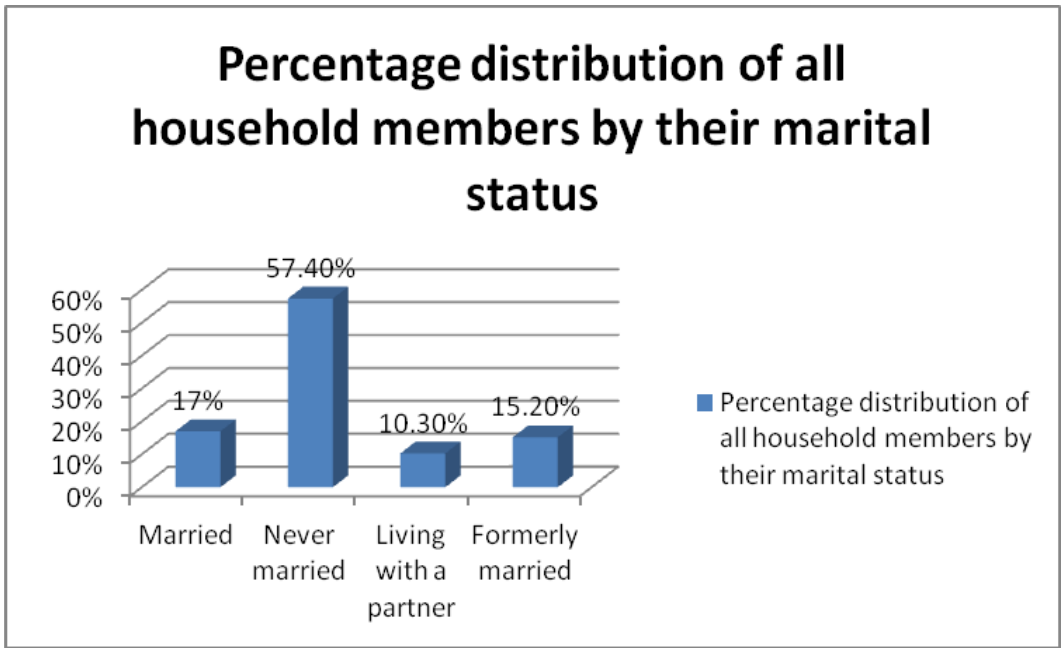
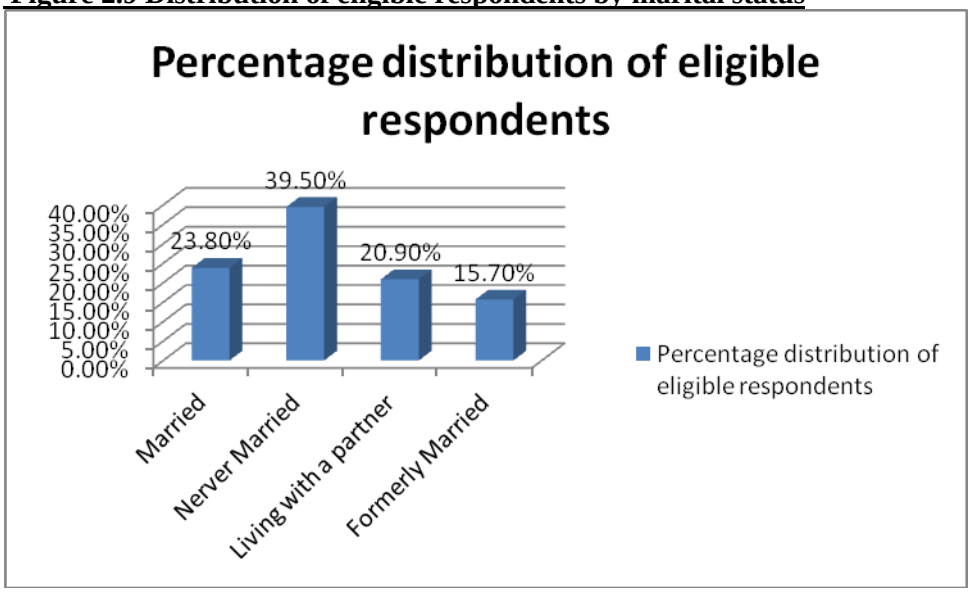


Figure 2.9 Distribution of eligible respondents by marital status



2.2.6. Distribution of household members by their current occupational Status

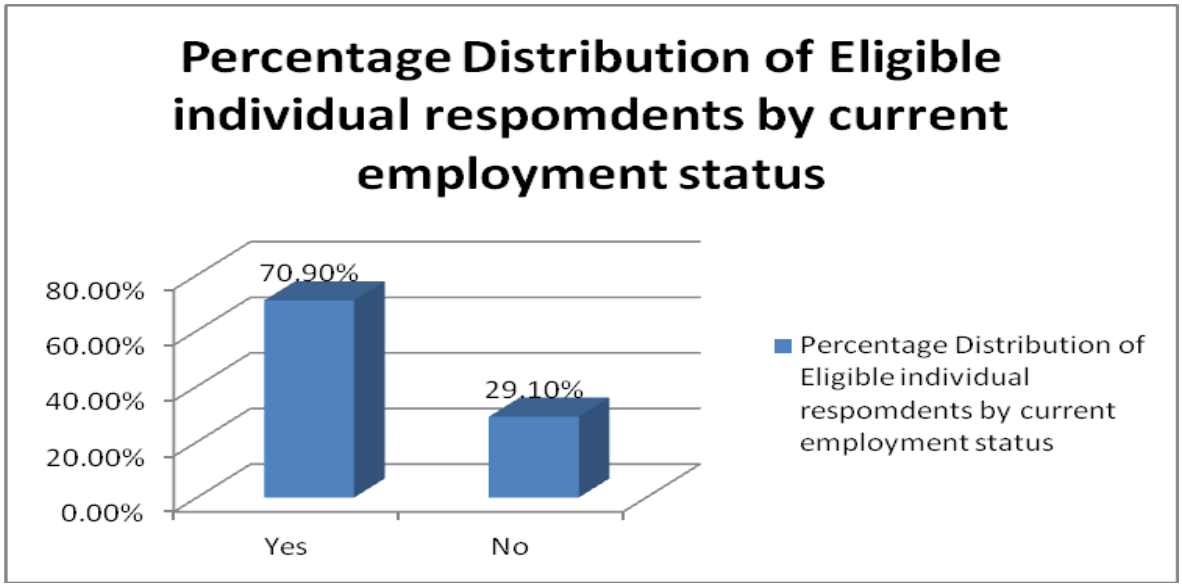
One's occupation can influence the person's health, not only by exposing the person to physical conditions that have health effects, but also by providing a setting where healthy activities and behaviours can be promoted. In addition to features of one's occupation, the nature of the occupation and how it is organized also can affect the person's physical and mental health. Occupation can also provide social support.

Occupation is one of the variables that need to be considered when dealing with issues about health and well being. A review conducted by Law et al (1998) has shown that there is moderate to strong evidence that occupation has an important influence on health and well-being.

Figure 2.10 shows the percentage distribution of all household members by their current occupational status. The household questionnaire of the EDULINK data did not enquire about the current employment status of the household member. The study therefore only accounts for the current employment status of the eligible individual respondent. "Are you currently working"? was used in measuring the current occupational status of which the respondent is to answer "Yes" or "No"

The Figure 2.10 shows that 70.9% of the eligible individual respondent are currently employed while 29.1% are not currently employed.

Figure 2.10 Distribution of household members by occupational Status



2.2.6. Distribution of household members by their Ethnicity

Ethnicity may have an indirect effect on health outcomes by influencing health beliefs, the manner in which symptoms are expressed, physical functioning, entry into health service delivery systems, and medical treatment processes (Williams and Jackson, 2000). The strength of the relationship between ethnicity and health outcomes appears to be influenced by "acculturation," that is, the extent to which members of an ethnic group have adopted the beliefs and practices of another ethnic group

Figure 2.11 shows the percentage distribution of the household members by their ethnicity. From Figure 2.11, 61.10% of the household members are Ga-Adangbes this could be attributed to the fact that two of the communities (James Town and Ussher Town) are indigenous Ga communities. Observations from the Figure also show that Akans forms about 23.5% of the all household members while Ewes form 5.2%. The analysis also shows that about 3.2% of the

household members are Mole-Dagbani with 4.7% of selected household members forming other ethnicity.

Figure 2.12 also shows the percentage distribution of eligible respondents by their ethnicity. From the Figure, about 57.1% of the eligible respondents are Ga-Dangbe while about 27.3% are Akan. The results again indicate that, 5.3% are Ewe with about 2.6% being Mole-Dagbani. About 5.7% are from the other ethnicity.

Figure 2.11 Distribution of household members by Ethnicity

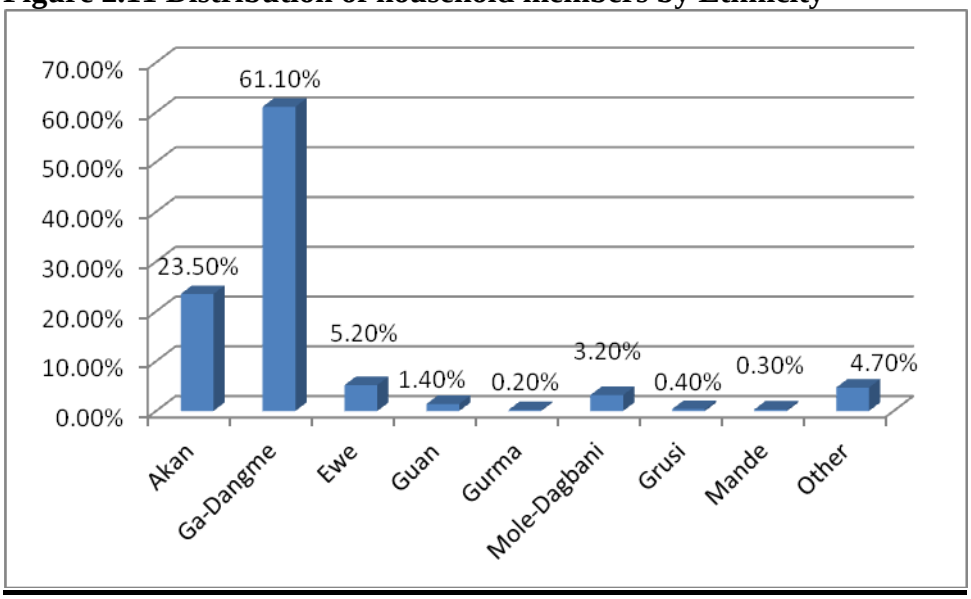
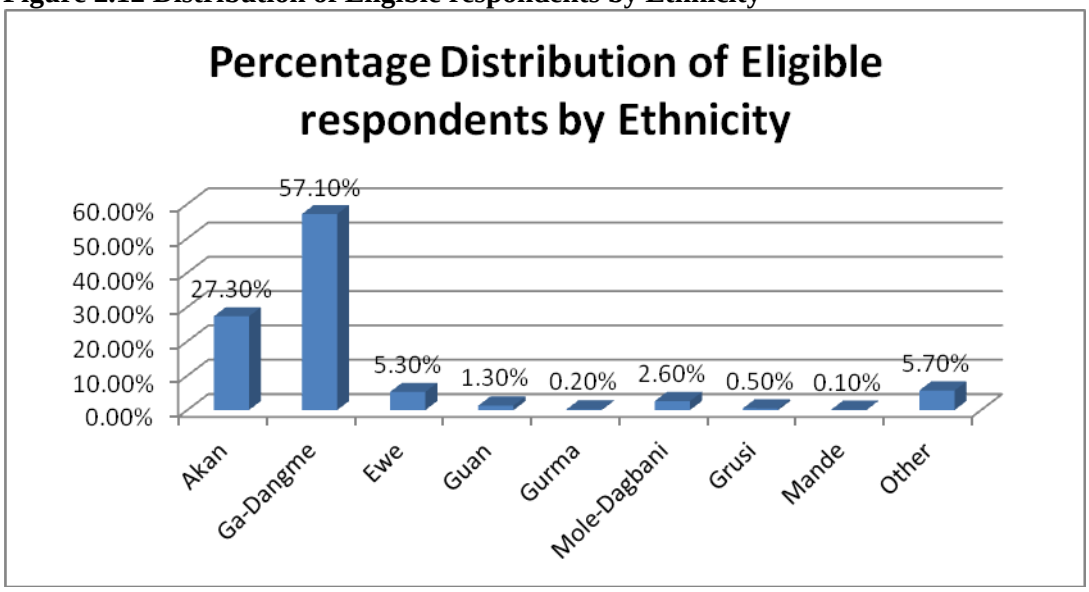


Figure 2.12 Distribution of Eligible respondents by Ethnicity



2.3. Socio-demographic characteristics of Qualitative interview participants

Twenty qualitative individual interviews gathered from the study area were used to analyse the psychosocial well-being of individuals living with CNCDs. This section presents the socio-demographic characteristics of the in-depth interview participants.

The participants were made up of 16 women and 4 men. Ten of the participants were living with hypertension at the same time the remaining 10 also were living with diabetes. About 11of the participants are residents of James Town with 9 being residents of Ussher Town. 5 participants are between the ages of 40 and 50 years with 4 of them being women and a man. 5 of the participants, all women are within ages 51-60 years. 10 participants (seven women and three men) are above age 60.

Five (5) of the participants (4 women, 1 man) had no formal education, while 4 of them (all women) had middle level education. In addition, 1 man and 1 woman had secondary education.

The analyses also show that, 12 women are employed while 4 are unemployed as at the time of the data collection. 2 of the men are also unemployed. Details of the socio-demographic characteristics of participants can be found in table 2.3

Table 2.3 Socio-demographic characteristics of Qualitative interview participants

	Total Number	Female(s)	Male(s)
Age			
40-50	5	4	1
51-60	5	5	
61+	10	7	3
Education			
No Education	5	4	1
Primary	7	6	1
Middle	4	4	
Secondary	2	1	1
Higher	2	1	1
Employment status			
Employed	14	12	2
Not Employed	6	4	2
Illness status			
Hypertension	10	7	3
Diabetes	10	9	1
Locality			
Ussher Town	9	7	2
James Town	11	9	2

Chapter III

Prevalence of CNCDs and Psychosocial Well-being of Urban Poor Residents in Ghana.

This chapter focuses on the prevalence of CNCDs in the urban poor communities of interest (Agbogbloshie, Ussher Town and James Town). Firstly, the study examines the prevalence of CNCDs in the communities (among household members and eligible respondents) and among sub-groups of the eligible respondents. Secondly, the psychosocial well-being of individuals in urban poor communities has been examined. The psychosocial status was also analysed both within the general urban poor population and among sub-groups. It was only the eligible respondents who had the privilege of answering the EDULINK (quantitative) questions on psychosocial well-being. The analysis within the sub-groups will include, analysing CNCDs and psychosocial status among respondent's sex, age group, levels of education, marital status, current occupational status, ethnicity and locality.

3.1.1 Prevalence of CNCDs in Urban poor communities of Ghana

The study explores the prevalence of CNCDs (hypertension and diabetes) in the studied communities. First the prevalence among the selected households and among eligible respondents was examined. The prevalence of CNCDs among sub-groups of the eligible respondents was also examined. The household heads were asked if a household member was

ever told or diagnosed with diabetes or hypertension. In order to find out if an eligible respondent has the illness or not, they were asked, if they have ever been told or diagnosed of any of the following disease; high blood pressure (hypertension) and diabetes (high blood sugar). The respondents are expected to answer "Yes" or "No". A "Yes" answer from the respondent will then mean that he or she is living with the disease. The result of the prevalence of the diabetes and hypertension is presented in table 3.1

Observations from table 3.1 show that, 134 (5.3%) of the people in the selected household are living with hypertension. The result also shows that, 34 (3.6%) of the eligible respondents have hypertension. From the analysis, 22 (0.9%) of the people from the entire selected household have diabetes while 5 (0.5%) of the eligible respondents are living with diabetes. 14 (0.6%) of selected household members are living with co-morbidity (diabetes and hypertension). In all, about 142 (5.6%) of household members are living with either Diabetes or hypertension while 39 (4.2%) of the eligible respondents are either living with diabetes or hypertension.

The prevalence rates found in other populations and studies seem to be higher than what was found in the three urban poor communities in this study. For instance, Amoah (2003) found the prevalence rate of hypertension in Accra to be 28.3% while Francesco et al (2004) found a prevalence rate of hypertension to be 28.7%. Using the threshold of 140/90 mmHg for hypertension, Bosu (2010) has reported a crude prevalence between 25% and 48% of hypertension in Ghana, with an acknowledgement that, a higher prevalence exists in urban populations than in rural populations. A recent study by Addo et al (2012) also reported a prevalence rate of 19.3% to 54.6% of hypertension using the same baseline for BP. Awuah

(2012) using the EDULINK 2011 data and a threshold of 140/90 mmHg for hypertension, recorded a prevalence of 28.3%. The low prevalence rate in this study, compare to others, may be due difference in sample's representativeness. Another plausible reason could be that, this study used only those who have been diagnosed or those who are aware they are living with the condition. This is consistent with Isezuo et al (2011) whose findings show that, of those with hypertension, only 13.9% were aware of their high blood pressure status. Also results from a study by Bosu (2010) indicated that less than one-third of hypertensive subjects were aware they had hypertension. Hence, there may be people in these communities with the condition that may not be aware of their condition. Notwithstanding, these rates must be taken seriously since these prevalence rates could get worse if interventions are not put in place to properly manage the disease. This is because; there is evidence that, there is high increasing rate of CNCDs in Sub-Saharan Africa due to poor control (Addo et al 2007). For example, at Korle-Bu hospital in Ghana, 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 (de-Graft Aikins, 2007).

Table 3.1 Prevalence of CNCDs (Hypertension, Diabetes) in urban poor communities of Ghana

Type of CNCD	Respond	Among all selected households		Among eligible respondents	
		Number	Percentage (%5)	Number	Percentage (%)
Hypertension	Yes	134	5.30	34	3.60
	No	2390	94.70	889	96.20
Diabetes	Yes	22	0.90	5	0.50
	No	2502	99.10	918	98.50
Hypertension and Diabetes	Yes	14	0.60	1	0.10
	No	2510	99.40	922	99.90
Diabetes or hypertension	Yes	142	5.60	39	4.20
	No	2382	94.40	884	95.80

3.1.2. Prevalence of CNCDs among the urban poor by sex

This section of the study examines the prevalence of CNCDs among male and females. While it is generally, true that in most societies women live longer than men (Carrero, 2010) the results of this study shows that, women are more affected by CNCDs. The result also shows that the sex of the respondent has an influence in determining the person's condition of living with CNCD. The results demonstrated in table 3.2 show that, 8.4% of the females and 2.2% of the males are living with a condition.

3.1.3. Prevalence of CNCDs among the urban poor by age

Age is a very important variable when it comes to health issues. The prevalence of CNCDs among the various age groups in the urban poor communities of Ghana is presented in this section. Details of the result can be found in table 3.2. From the analyses, none of the respondents age 15-19years is living with CNCD while about 21% of persons ages 45-49 years are living with the condition.

Clearly from table 3.11 ages greatly varies with the percentage of persons living CNCD. The chi square value of P = 0.00 shows a very strong relationship between age and having a CNCD. From table 3.2, persons living with CNCD started from age 25-29. From age 25-29, as age increase so does the percentage of persons living with CNCD, This implies that age increases the exposure or susceptibility to CNCD. This is understandable because age is a non-modifiable risk factor of CNCDs, consequently together with certain lifestyle practices; age increases the likelihood of CNCDs.

The result from this analysis agrees with findings of William et al (2011) where death among people living with diabetes is very high in the middle and older age groups.

3.1.4. Prevalence of CNCDs among the urban poor by level of education

The level of education of a person, also measures the level at which a person is exposed to information and also the quality of life of an individual. The table 3.2 shows the prevalence of CNCDs among the various levels of education.

From the analyses, level of education is significantly related to CNCD. The results show that, 10.3% of selected household members with no education are living with CNCD while 3.6% of those with higher education are living with at least one CNCD. The analyses further demonstrate that, 0.9%, 6.4%, 5.2%, of selected household members with primary, middle/JHS and secondary education respectively are having a CNCD.

3.1.5. Prevalence of CNCDs among the urban poor communities of Ghana by marital status

Findings from studies suggest that, the association between marriage and health represents as a combination of “selection” and “protection” (Lillard and Panis 1996; Murray 2000; Waite 1995). The results are displayed in table 3.2. Marital status had a strong effect on having a CNCD according to the analyses. Observation from the table shows that, 9.1% of the selected household members who are married, are living with CNCD while 0.4% of the Never married are living CNCD. According to the analyses, about 23.4% of the formerly married, are living with CNCD.

The results show, the never married has the least percentage of people living with CNCD while the formerly married has the highest percentage of people with CNCD. These findings agree with other studies which say that getting divorced (included in formerly married by this study) increases symptoms of poor health (Kim et al, 2002; Robbin, 2002 and Lamb et al 2003).

3.1.6 Prevalence of CNCDs among the urban poor by ethnicity

Ethnic labels may provide guidance in targeting illness interventions or research efforts. The study of Sheth et al (1999) found striking differences in disease- specific mortality rates between groups defined on the basis of ethnicity. In addition, Dreyer et al (2008) found significant disparities between the major ethnic groups and diabetes prevalence and management.

The prevalence of CNCDs among the various ethnic groups was also examined in this study. The result is detailed in Table 3.2. The results reveal that, the Ga-Dangbe recorded the highest percentage (6.6%) of persons living with CNCDs followed by the Guan with about 5.6% of the living with CNCD. About 4.7% of the Akan and 3.8% of the Ewe are living with CNCD. The findings in this study did not show any significant relationship between ethnicity and having a CNCD which is contrary to findings in other studies (Sheth et al, 1999 and Dreyer et al, 2008). The differences in findings could be explained by the fact that, studies investigating the relationship between ethnicity and disease did not take potentially confounding factors such as socioeconomic status into account.

3.1.7 Prevalence of CNCDs among the urban poor by locality

Though the three communities are urban poor communities, there exist some variations in their characteristics. For instance, Ussher Town is densely populated than the other two communities.

The Analysis shows that, Ussher Town has the highest percentage (6.4%) of persons living with CNCDs followed by James Town (6.2%). Agbogbloshie has about 1.6% of people living with CNCDs.

Table 3.2 Prevalence of CNCDs among sub groups in urban poor communities of Ghana

	Yes		No		Total	
Sex	Number	Percentage %	Number	Percentage %	Number	Percentage %
Male	24	2.2	1091	97.8	1115	100
Female	118	8.4	1291	91.6	1409	100
Total	142	5.6	2382	94.4	2524	100
Age						
0-4	0	0	264	100	264	100
05-9	0	0	272	100	272	100
10_14	0	0	268	100	268	100
15-19	0	0	246	100	246	100
20-24	0	0	260	100	260	100
25-29	1	0.4	223	99.6	224	100
30-34	4	2.1	188	97.9	192	100
35-39	4	2.7	143	97.3	147	100
40-44	13	9.2	128	90.8	141	100
45-49	16	12.8	109	87.2	125	100
50-54	13	12.4	92	87.6	105	100
55-59	13	21.0	49	79.0	62	100
60-64	19	31.1	42	68.9	61	100
65 and above	59	37.6	98	62.4	157	100
Total	142	5.6	2382	94.4	2524	100
Level of Education						
No education	46	10.3	400	89.7	446	100
Primary Education	2	0.9	226	99.	228	100
Middle/JHS	49	6.4	720	93.6	769	100
SSS/SHS	20	5.2	368	94.8	388	100
Higher Education	25	3.6	668	96.4	693	100
Total	142	5.6	2382	94.4	2524	100
Marital status						
Married	39	9.1	390	90.9	429	100
Never married	6	0.4	1444	99.6	1450	100
Living with a partner	7	2.7	254	97.3	261	100
Formerly married	90	23.4	294	76.6	384	100
Total	142	5.6	2382	94.4	2524	100
Ethnicity						
Akan	28	4.7	565	95.3	593	100
Ga-Dangbe	101	6.6	1440	93.4	1541	100
Ewe	5	3.8	125	96.2	130	100
Guan	2	5.6	34	94.4	36	100
Gurma	0	0.0	6	100	6	100
Mole-Dagbani	1	1.2	80	98.8	81	100
Grusi	0	0.0	11	100	11	100
Mande	0	0.0	7	100	7	100
Other	5	4.2	114	95.8	119	100
Total	142	5.6	2382	94.4	2524	100
Locality						
AGBOGBLOSHIE	6	1.6	358	98.4	364	100
JAMES TOWN	48	6.2	730	93.8	778	100
USSHER TOWN	88	6.4	1294	93.6	1382	100
Total	142	5.6	2382	94.4	2524	100

3.2.1. Psycho-social well-being of urban poor community residents in Ghana.

This section looks at the analyses of the psychosocial well-being of the urban poor community dweller. Three domains of psychosocial status are presented; health- Mental Health Sub, Emotional Functioning and a single item that provides an insight of the individual's perceived health status. The SF-36 scale was adapted in analysing the questions which have been enlisted under the methodology section in chapter one. The age-standardized scales range from scores of 100 (perfect health) to (extremely poor health).

The table 3.3 displays the percentage destruction of respondents by score categories.

The analyses show that, 0.2% of the respondents fall within extremely poor health under the mental health sub scale while 20.9% report perfect health. Moreover, a greater percentage of about 57.9% scored between 51-75 (moderate health) under the mental health sub-scale.

Observations from the table 3.2.0 shows that, 0.6% scored 0-25 while 62.4% scored between 51-75 with 25.4% scoring between 76-100 under the Emotional Functioning Sub Scale. Under the perceived health sub scale section, 11.3%, 34.6%, 38.4% and 15.6% score between 0-25, 26-50, 51-75 and 76-100 respectively. The analysis reveals a trend showing that the majority of respondents fall between the two extreme score indicators (i.e. Perfect health and extremely poor health).

Table 3.3 psycho-social status (well-being) of urban poor community residents in Ghana.

Core	Percentage		
	Mental Health sub Scale	Emotional Functioning Sub Scale	Perceived Health Sub Scale
0-25 (extremely poor health)	0.20%	0.60%	11.30%
26-50 (poor health)	20.90%	11.60%	34.60%
51-75 (moderate health)	57.90%	62.40%	38.40%
76-100 (close to perfect health)	20.90%	25.40%	15.60%
Total	100%	100%	100%

3.2.2. Psychosocial well-being of respondents by sex

One of the objectives of the study is to examine the psychosocial status of the respondents among the various subgroups. Under this section, the study looks at the percentage distribution of the psychosocial well-being scores of the respondents by sex. The result of the psychosocial well-being scores of respondents by sex is displayed in tables 3.4 and 3.5

Table 3.4 Distribution of respondents by psychosocial status among sub-groups

Background characteristics	**Mental health sub scale**					**Emotional functioning sub scale**			
Sex	**0-25**	**26-50**	**51-75**	**76-100**		**0-25**	**26-50**	**51-75**	**76-100**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Female	0.20	22.31	59.56	17.93		0.60	11.55	64.14	23.71
Male	0.25	19.21	55.91	24.63		0.49	11.58	60.34	27.59
Total	0.22	20.93	57.93	20.93		0.55	11.56	62.44	25.44
Age Groups									
15-19	0.70	15.20	63.04	21.01		0	5.80	67.39	26.81
20-24	0	18.47	58.60	22.93		0.64	12.10	61.14	26.12
25-29	0.64	17.20	55.41	26.75		0	10.19	56.69	33.12
30-34	0	19.85	59.56	20.59		1.47	13.97	58.83	25.74
35-39	0	26.80	57.73	15.46		1.03	14.43	68.04	16.50
40-44	0	27.27	54.54	18.18		0	9.09	68.69	22.22
45-49	0	29.76	53.57	16.67		0	17.86	60.71	21.43
50-54	0	17.24	68.97	13.79		3.45	13.79	62.07	20.69
55-59	0	27.27	36.36	36.36		0	9.09	54.55	36.36
Total	0.22	20.93	57.93	20.93		0.55	11.56	62.44	25.44
Level of education									
No Education	0	22.64	66.04	11.32		0	24.53	60.34	15.09
Primary Education	0.54	23.24	61.62	14.59		0.54	13.51	68.65	17.30
Middle/JHS	0.25	22.64	57.71	19.40		0.25	9.95	65.67	24.13
Senior Secondary	0	15.79	54.39	29.82		1.32	8.77	54.82	35.09
Higher Education	0	20	52.50	27.50		0	17.50	47.50	35
Total	0.22	20.93	57.93	20.93		0.55	11.56	62.44	25.44
Marital status									
Currently Married	0.45	27.93	51.35	20.27		0.90	12.61	65.32	21.17
Living with a partner	0	20	61.10	18.95		0.53	8.95	70	20.53
Never married	0.29	16.29	60	23.43		0.29	10.57	60.86	28.29
Formerly married	0	22.60	58.90	18.49		0.68	15.75	52.05	31.51
Total	0.22	20.93	57.93	20.93		0.55	11.56	62.44	25.44
Employment status									
Working	0.15	20.56	58.27	21.02		0.46	10.97	63.52	25.04
Not working	0.38	21.84	57.09	20.69		0.77	13.03	59.77	26.44
Total	0.22	20.93	57.93	20.93		0.55	11.56	62.44	25.44
Ethnicity									
Akan	0.40	23.48	55.06	21.05		0.81	12.55	59.51	27.13
Ga-Dangbe	0.19	19.35	59.20	21.26		0.57	11.49	61.49	26.44
Ewe	0	18.75	50	31.25		0	4.17	72.92	22.92
Guan	0	18.18	81.81	0		0	0	90.91	9.09
Gurma	0	100	0	0		0	0	100	0
Mole-Dagbani	0	5	90	5		0	5	90	5
Grusi	0	50	0	50		0	50	25	25
Mande	0	100	0	0		0	0	100	0
Other	0	26.42	56.60	16.98		0	16.98	60.38	22.64
Total	0.22	20.93	57.93	20.93		0.55	11.56	62.44	25.44
Locality									
Agbogbloshie	0.00	24.80	56.70	18.50		0.60	12.70	63.10	23.60
Ussher Town	0.20	18.70	57.80	23.20		1.40	12.20	60.80	25.50
James Town	0.20	20.90	57.90	20.90		0.00	10.80	63.20	26.00
Total	0.20	20.90	57.90	20.90		0.60	11.60	62.40	25.40

Table 3.5 Percentage distribution of psychosocial status among sub-groups

Background characteristics	perceived health sub scale			
	0-25	**26-50**	**51-75**	**76-100**
Sex	**%**	**%**	**%**	**%**
Female	13.35	36.85	38.84	10.96
Male	8.86	31.77	37.93	21.43
Total	11.34	34.58	38.44	15.64
Age Group				
15-19	8.70	36.00	37.68	17.39
20-24	6.37	36.31	40.76	16.56
25-29	8.28	31.85	43.95	15.92
20-34	13.24	30.15	36.76	19.85
35-39	9.28	34.02	42.26	14.43
40-44	15.15	34.34	37.37	13.13
45-49	22.62	39.29	27.38	10.71
50-54	17.24	37.93	31.03	13.79
55-59	18.18	45.45	36.36	0
Total	11.34	34.58	38.44	15.64
level of education				
No Education	8	11	25	9
Primary Education	13.51	41.62	33.51	11.35
Middle/JHS	11.69	33.08	41.79	13.43
Senior Secondary	8.77	33.33	34.65	23.25
Higher Education	7.50	42.50	37.50	12.50
Total	11.34	34.58	38.44	15.64
Marital status				
Yes Currently Married	12.16	35.15	39.19	13.51
Yes Living with a partner	12.11	34.74	41.05	12.11
Never married	8	35.71	37.71	18.57
Formerly married	17.12	30.82	35.62	16.44
Total	11.34	34.58	38.44	15.64
Employment status				
Working	11.00	34.80	40.00	14.20
Not working	12.30	34.10	34.50	19.20
Total	11.30	34.60	38.40	15.60
Ethnicity				
Akan	10.50	32.00	42.90	14.60
Ga-Dangbe	11.70	35.20	35.80	17.20
Ewe	10.40	27.10	50.00	12.50
Guan	36.40	36.40	18.20	9.10
Gurma	0.00	0.00	100.00	0.00
Mole-Dagbani	5.00	30.00	45.00	20.00
Grusi	25.00	75.00	0.00	0.00
Mande	25.00	75.00	0.00	0.00
Other	9.40	47.20	35.80	7.50
Total	11.30	34.60	38.40	15.60
Locality				
Agbogbloshie	6.90	28	46.50	15.90
Ussher Town	13.30	40.60	30.80	15.40
James Town	10.80	33.10	40.40	15.70
Total	11.30	334.60	38.40	15.60

From the table 3.4 it could be observed that, 0.2% of the females scored between 0-25 under the mental health sub scale which is similar to what is happening in the general population. The results also show that about 60% of the females scored between 51-75 under the mental health sub scale. 0.6% and about 13% of the female scored between 0-25 under the emotional function and perceived health sub scales respectively. In addition, 64% and 39% of the female respondents scored between 51-75 under emotional functioning and perceived health sub scales respectively.

The results also show that, 0.25%, 0.49% and 8.86% of the men score 0-25 under the mental health, emotional functioning and perceived health sub scales respectively. This shows that, relatively, more of the men seem to have extremely poor health perceptions about themselves. It is clear from the analyses that, about 25%, 28% and 21% of the men, respectively seem to be having perfect health under the mental health, emotional functioning and perceived health sub scales.

3.2.3. Psychosocial well-being of respondents by age

The results of the percentage distribution of respondent's psychosocial well-being scores are displayed in tables 3.4 and 3.5. Though other studies (Accra women's health survey, 2010) indicate that age has a strong effect on all eight domains of health measured in their study, the results from this study is not showing so. The difference could be due to the fact that the Accra women's survey only examines women while this study looks at men and women all together.

Another explanation for this difference could be due to the fact that the Accra women's survey considers the entire women population in Accra whiles this study concentrated on selected urban poor communities in Accra. If the second point is taken as the explanation for the difference, then it could also be explained that what happen in a general population may not necessarily reflect in selected populations.

Upon further analysis, it came out that, with exception to ages 15-19years and ages 25-29years, nobody seems to be having extremely poor health under the mental health sub scale section. That is to say, 0.7% and 0.64% of the respondents within ages15-19 years and ages 25-29 years respectively scored between 0-25 under the mental health sub scale section the score is 0% for the other age groups.

Besides these, some of the age groups also have none of their respondents scoring between 0-25 under the emotional functioning sub scale section. For instance 0% of respondents within age brackets of 15-19 years, 45-50years and 55-59 years scored between 0-25 under the emotional functioning sub scale.

The results in table 3.5 also show that none of the respondents within ages 55-59years seems to have perfect health perceptions of themselves. About 8.7%, 36% and 37.68% of the respondents within ages 15-19years scored between 0-25, 26-50 and 51-75 respectively for the perceived health sub scale.

3.2.4. Psychosocial well-being of respondents by educational attainment

The results show a very strong effect of level of education on all three domains of psychosocial well-being measured in the study. The analyses show that, about 8% of the respondents with no education scored 0-25 under the perceived health section while none of the respondents no education scored 0-25 for the other two sub scales (mental health and emotional functioning sub scales). Observations from tables 3.4 and 3.5 reveals that, about 11%, 15% and 9% of those with no education score between 76-100 under the mental health, emotional functioning and perceived health sub scales respectively.

The results also show that, 0.54% of respondents with primary education scored 0-25 for both mental health and emotional function sub scales while about 13% of respondents with primary education scored between 0-25 for the perceived health sub scales. About 15%, 17% and 11% of the respondents with primary education scored 76-100 under the mental health, emotional functioning and perceived health sub scales respectively.

The results also show that, respondents with secondary and higher education recorded relatively the greater percentage score (35%) for the score of 76-100 under the emotional functioning sub scale. The trend in the results also shows that the majority of the respondents for all levels of education scored between 50-75 under all the three domains of health measured in the study.

3.2.5. Psychosocial well-being of respondents by marital status.

The results in Table 3.4 and 3.5 show that, 0% of the respondents living with a partner and those formerly married scored 0-25 whiles about 18.95% of those living with a partner and 18.49% of the formerly married scored 76-100 under the mental health sub scales.

The results revealed that, about 0.9%, 0.5%, 0.3%, 0.7% of the currently married, living with a partner, never married and the formerly married respectively score 0-25 under the emotional functioning sub scale section. The analyses also show that, about 65%, 70%, 61%, 52% of the currently married, living with a partner, never married and the formerly married in that other scored 50-75 still under the emotional functioning sub scale section. In addition, about 21% 20.5% 28% and 32% of the currently married, living with a partner, never married and the formerly married in that other scored 76-100 for the emotional functioning sub scale

Furthermore, it is evident from the analyses that, about 12% of the currently married and those living with a partner scored 0-25 for perceived health. Moreover, 12.11% of those living with a partner also scored 76-100 for perceived health. A further revelation from the analyses shows that, about 39%, 38%, 41% and 36% of the currently married, living with a partner, never married and the formerly married in that other scored 50-75 for perceived health.

3.2.6. Psychosocial well-being of respondents by employment status

Tables 3.4 and 3.5 also demonstrate the results of the percentage distribution of psychosocial well-being among respondents by employment. The findings show that, 0.15%, 0.46% and 11% of the respondents currently working score between 0-25 for mental health, emotional functioning and perceived health sub scale respectively. The findings also reveal that, about 58.27% of the respondents currently working scored 50-75 under the mental health sub scale section while about 63.52% of the working respondents scored 51-75 for emotional functioning sub scale. The results also show that, about 40% of the working respondents scored 51-75 for perceived health. Besides, about 21%, 25% and 14% of the working respondents scored 76-100 for mental health, emotional functioning and perceived health sub scale in that order.

The results also show that, among the non-working respondents, 0.38% and 20.69% scored 0-25 and 76-100 for the mental health sub scale. From the analyses, 0.77%, 13.03%, 59.77% and 26.44% of the non-working respondents scored 0-25, 26-50, 51-75 and 76-100 respectively for emotional functioning sub scale. Lastly, 12.3%, 34.1%, 34.5% and 19.2% of the respondents currently not working scored 0-25, 26-50, 51-75 and 76-100 in that order for the perceived health sub scale.

3.2.7. Psychosocial well-being of respondents by ethnicity

From the analyses, apart from the Akans and the Ga-Dangbes no respondent scored between 0-25 for both mental health and emotional functioning sub scales. The results show that, 0.4% of the Akans and 0.19% of the Ga-Dangbes scored between 0-25 for the mental health sub scale

while 0.81% of Akans and 0.57% of the Ga-Dangbes scored 0-25 for the emotional functioning sub scale. The analysis also shows that, 10.4% of the Ewes, 36.4% of the Guans and 25% of Grusi and Mande scored 0-25 for the perceived health sub scale.

The findings also revealed that, about 21% of the Akan, 21% of the Ga-Dangbe, 31% of the Ewe and 50% of Grusi scored 76-100 for the mental health sub scale. About 27.1% of the Akan, 26.4% of the Ga-Dangbe and 22.9% of the Ewe scored 76-100 under the emotional functioning sub-scales. A relatively lower percentage was recorded for other groups: 14.6% of the Akan; 17.2% of the Ga-Dangbe; and 12.5% of the Ewe all scored 76-100 under the perceived health sub scale. About 9% of the Guans scored 76-100 for the emotional functioning and perceived health sub scale.

3.3. Psychosocial well-being of persons living with CNCDs

This section of the study presents the analysed result of the percentage distribution of the psycho social well-being of persons living with CNCDs. The detail result is displayed in Table 3.6

The analysis demonstrated that, both mental health and emotional well-being has no significant relationship with living with CNCD ($p > 0.05$) whereas there exist a significant relationship between perceived health and living with CNCD ($p=00$).

From the analysis, none of the people with CNCD scored between 0-25 (extremely poor health) under the mental health sub scale. About 20.6% of persons living with CNCD scored between

26-50 (poor health) under the mental health sub scale. About 48.7% of people with CNCD scored between 51-75 (moderate heat) under the mental health sub scale.

The result also shows that, 20.5% and 2.6% had poor an extremely poor health respectively under the emotional well-being sub scale. Also about 56.4% and 20.5% of persons living with CNCD respectively having moderate and close to perfect health.

Furthermore, analysis under the perceived health sub scale shows that about 42.1% of the people perceive themselves to have extremely poor health. About 36.8% and 21.1% had poor and moderate health respectively. None of the persons with CNCD had close to perfect health under the perceived health sub scale.

Key findings from this chapter indicated that, most of the persons living with CNCDs are having moderate health (48.7% for mental health and 56.4% for emotional functioning). Apart from the perceived health sub scale, smaller percentages of the people fall to the extreme ends of all sub scales. For instance nobody scored between 0-25 under the mental health sub scale and only 2.6% scored between 0-25 under the emotional well-being sub scale. There was no relationship between CNCD and having extremely poor mental and emotional well-being. However there exists a relationship between living with CNCD and having an extremely poor perception of health. It will be interesting to know if these findings are as a result of artefact of the method or the affirmation of the shifting perspective model, which states that, people can shift between positive and negative depending on illness duration and context. Could it be that persons living with CNCDs are not affected by extremely poor psychosocial well-being? Or they provided information on what they were feeling at the time of the interview. Or could it be that, the

poverty nature of these people is more distressing than living with CNCD (Ashraf, 2010)? These questions have driven the in-depth investigation of the psychosocial well-being of twenty of the persons living with CNCD. Findings from the in-depth interview are presented in the next chapter.

Table 3.6 Distribution of psycho social wellbeing among persons living with CNCDs

	Mental Health sub scale scores P= 0.816				
Living with CNCD	0-25	26-50	51-75	76-100	Total
Yes	0.00%	25.60%	48.70%	25.60%	100.00%
No	0.30%	20.60%	48.10%	30.90%	100.00%
Total	0.30%	20.80%	48.20%	30.70%	100.00%
	Emotional functioning Sub scale score P=0.215				
Yes	2.60%	20.50%	56.40%	20.50%	100.00%
No	0.30%	21.00%	54.80%	23.80%	100.00%
Total	0.40%	21.00%	54.90%	23.70%	100.00%
	Perceived Health sub scale score P=000				
Yes	42.10%	36.80%	21.10%	0.00%	100.00%
No	10.40%	34.70%	38.50%	16.40%	100.00%
Total	11.70%	34.70%	37.80%	15.70%	100.00%

Chapter IV

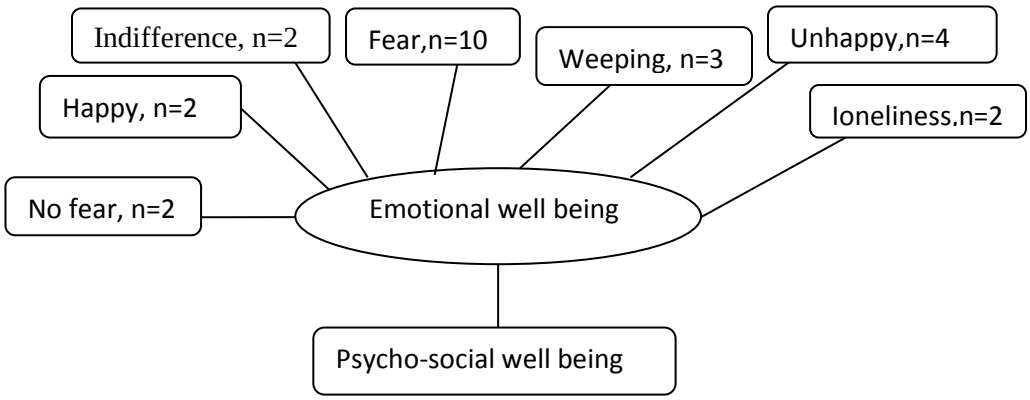
Results from qualitative analyses

Presented in this chapter, is the analysed result of the in depth interview with the persons living with CNCDs.

The analysis identified five major themes in relation to the psychosocial well-being of participants. The themes include emotional well-being, mental well-being, and spiritual well-being, perception about health and source and quality of social support. Relevant sections of thematic network are presented before presentation and discussion of each theme with the full thematic network in **Appendix C**

4.1 Emotional well being

Figure 4.1 Section of thematic network showing emotional well-being of participants



Fear dominated the lived experiences of respondents. Analysis showed that most of the participants especially the women were having fear and worry as part of their diabetes or

hypertension lived experience. This is consistent with Kelleher (1988) that, females were more likely to worry about their illness (diabetes). Awareness of possible complications has often been a source of fear and worry to respondents. This confirms Strahl's (2003) findings that, knowledge of possible complications has often been a source of fear for people with hypertension. Adom in expressing her fears said:

> *"I got very nervous and afraid when I was told I had the illness because those who get it their legs become sore and at times their legs get amputated. So in fact everything I was asked not to do, I wasn't doing it because I was afraid. It even got to a point where I had sore under my breast and got very scared and someone told me it's the illness".*(Adom)

The fear caused most of the participants to cry and weep even during the interview sections. Indications show that the weeping was not only at the interview section; it is something that characterizes their daily life because they are actually living with of some complications resulting from their condition(s). This was illustrated by one respondent who said.

> *"I was afraid because all my eyes were no longer good I always needed someone to help. I became handicapped. [Starts to cry].My daughter operates a food joint across the street, when she is not available, I man the place. Sometimes I even do her shopping for her with the help of these head porters. Now all of a sudden I could not see anymore, how you can even eat if you cannot see. Even if one of your eyes goes bad, you can at least see with one". (*Awula)

Unhappiness also came out strongly as one of the negative emotions expressed by participants. Most of the participants especially the men are not happy because they are living with the

disease. The men were more likely to say they are unhappy about their condition(s) than to say they are afraid. The source(s) of their unhappiness is quite similar to the source of fear for the women. This was how Okpoti a male participant who said he was not a happy man because he has the disease expressed it.

> *"well, you see these two things (hypertension and diabetes) when you have them you will never feel happy, because every time you are scared. You almost every day have to be taking some drugs. Even now I am on this Lantus… you see eh, almost, you use almost all that you have every time in buying drugs and it never made me happy …. I I never felt happy and even now I am not a happy man. I'm not. Even 'sex-wise' sex wise you see you are unable to go in for it"*. (Okpoti)

One of the participants also expressed that her main problem of living with the illness is a feeling of loneliness. She expressed that, she had no friends, no one visits her and even when she attempts to visit, she is always left alone. This is what she has to say:

> *My only problem is that I have no friend and I do not like to visit. I used to visit my sister in Legon but even there, I just sit around doing nothing. So that is my problem.* (Woyomenor)

The above negative emotions expressed by participants is consistent with Michael Bury's concept of "biographical disruption" (Bury, 1982). Fear, continuous weeping and unhappiness constitute some kind of disruption, or a discontinuance of an ongoing life. However, the question is do these negative emotions hamper or possibly altogether block the present daily life of individuals with the condition(s)? Could the shifting perspective play a role here? In the sense

that, the negative emotions are only at a particular stage of the illness or not all persons living with CNCD have negative emotions. Could it also be that, the negative emotions are just for the reasons provided by the participants and that there could be another reason that make participants have other emotions other than negative ones?

In spite of the negative emotions expressed by the persons living with CNCDs, there were some positive emotions expressed by the participants. Some said they had no fear of living with the condition. Faith and religious discussions, living with other conditions that are perceived by respondents as more serious caused participants to view living with diabetes or hypertension as a normal way of life. Thus, living with co-morbidity made participant not to feel disrupted by the illness. This caused them to have no fear. This finding was consistent with Faircloth et al (2004) theory of biographical flow. A participant illustrated it this way

> *"I was not afraid… Because for me, I am bold, I had faith in God. I also listen to preaching and discuss the bible with some Christians …. and I pray to God always"*. (Gbetor)

There were two striking emotional expressions by participants. First, T.T a male participant expressed happiness when he was diagnosed.

> *"ehm for their (the health practitioners) ability to tell me what was wrong with me, I was happy. I got to know what to do exactly about the situation"*.

This particular finding is consistent with Atobrah (2012) which demonstrated that, persons with chronic illness express happiness at diagnoses.

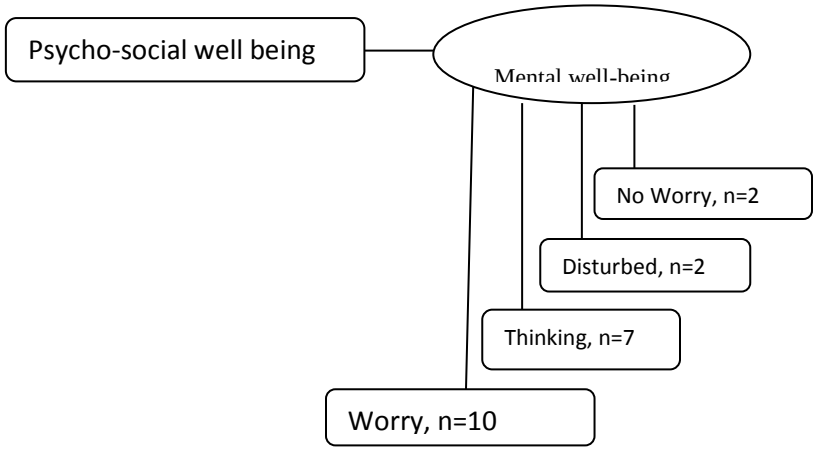
The second is that lack of knowledge about illness caused participants to have an indifference attitude at the initial stage of diagnoses, as illustrated by the participant

> *"you see, I actually didn't know about it and didn't know how it will affect me so I did not take it all that serious. I thought it is just some sickness that could be cured and all those things but later on,.. I realised it was that type of a disease that could not be cured"*(Okpoti)

4.2 Mental well being

A second theme that emerged from the analyses is mental well-being. As observed under the emotional well-being theme, participants expressed both positive and negative mental functioning. Worry, thinking, and disturbed came out as negative mental state of participants.

Figure 4.2 Section of thematic network showing mental well-being of participants



Most participants reported they were worried because of the cost involve in managing the disease. The cost of adhering to the recommended dietary intake also forms the basis of their worry. Below are illustrations from two of the respondents;

> *"Buying of the drugs is now the problem because as you can see, I just went to buy some drugs and when I don't have money, when it has been prescribed for me, I am not able to buy a drug costing Gh¢20 and beyond but I can only buy Gh¢5 or Gh¢10 out of it so money problems worry me a lot. Business too is not going on well".* (Asempaye)

> *"I'm not happy about it. Because at times, you have no money, so what they have prepared, and you have to eat and you don't have the money to go and buy the special food that you will take…That's my only…ehm… worry about the disease".*(Ayele)

Most participants have asserted thinking about their illness(s) is something they do a lot. Their thinking is mainly about their condition(s) for different reasons. For instance, according to Afi one of the female participants she was not worried about her condition when she was diagnosed but for the fact that she was living with other conditions makes her to think. Her experience demonstrated that, co-morbidity can cause both anxiety and a sense of peace. This is how she expressed it:

> *"at times I do think about it. I always think of why one person like me should contract three different kinds of illnesses. I can't also see properly and can't walk so it really bothers me a lot… but the fact that one person like myself has three different types of diseases. It really bothers me"*(Afi)

Though some of the participants agreed that thinking could exacerbate their condition, they are unable to avoid it because they fear complication that could result from the illness. Knowledge and fear of complications are the major reasons why some participants made thinking of the illness part of their life. A participant illustrates it this way;

> *"I think a lot about it. I will not be telling the truth if I tell you I don't think about it because I have seen people who have the disease. I think about it because I know I must be very careful. I was scared they might amputate my leg"* (Adom)

Disturbed is another way a man and a woman (both living with diabetes) described their mental well-being as they were diagnosed and daily lived experience. According to the woman, she is disturbed because she is aware that diabetes is a disease contracted by the rich and affluent in society. The woman's assertion that diabetes is an illness for the rich points to the fact that she does not only agree that she is living in an urban poor community but that she is poor. This alone made her to see no reason why she should contract such an illness. This is how she puts it;

> *"When I was told, I got very disturbed and worried and really cried when I got home because I have been told earlier that this illness is mostly contracted by the rich… Because I have kids going to secondary school without any support from their father and have grand children without their fathers support and I am the only person catering for them. I wondered how I could support myself when I'm buying expensive drugs and paying school fees at the same time"*. (Derla)

However, the man said he is very disturbed by the illness as a result of complications he is experiencing. According to him, diabetes has weakened his sexual prowess. This complication has made him to feel disturbed as he spoke about it in a most lamentable manner;

> *"I was rather more disturbed… I am not a happy man. I'm not. Even 'sex-wise' sex wise you see you are unable to go in for it. That alone makes you feel.., get too disturbed"*. (Okpoti)

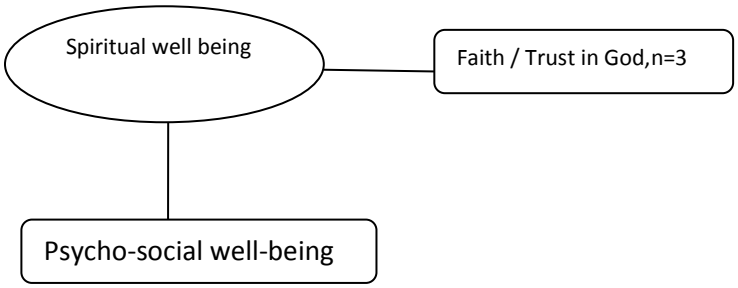
The analyses also identified that, some participants did not only express negative mental well-being, but also some positive ones. Even in the same interview, a participant says that she was not worried when diagnosed. Nevertheless, this same participant said she thinks a lot for having more than one condition. The reason that made her not worry at the time of diagnosed, is what makes her to worry and think about her status afterwards. Once again Afi's expression shows that emotions can change over time. Below is her illustration;

> *"I was not worried. It didn't bother me at all… because I already have the asthma and B.P, I took this one as normal. I mean it wasn't much of a problem… at times I do think about it. I always think of why one person like myself should contract three different kinds of illnesses. I can't also see properly and can't walk so it really bothers me a lot. The fact that one person like myself has three different type of diseases. It really bothers me"*. (Afi)

4.3 Spiritual well-being

The third theme identified by the analyses is spiritual well-being. This third theme seems to mediate the positive and negative emotional and mental well-being. Faith in God is what makes most of the participants not to worry nor fear.

Figure 4.3 Section of thematic network spiritual well-being of participants



Few participants also made mention that, faith and trust in God is what they live by because they have no one to turn to. The nature of their conditions as incurable also made them to resort to faith and total dependence on the healing power of God. The findings are in line with de-Graft Akins (2005), stating that low income people, especially those on expensive insulin treatments, the consequences of living with diabetes are more severe; this group has least access to biomedical and regulated ethno-medical services, they cannot afford recommended foods, and they are likely to gravitate towards spiritual response to chronic suffering.

A diabetic participant in expressing her faith in the healing power of God has this to say;

> *"Whether I like it or not, it has already come upon me so my prayer is that God will heal me as I continue taking of my medicine and prayers"* (Tazan)

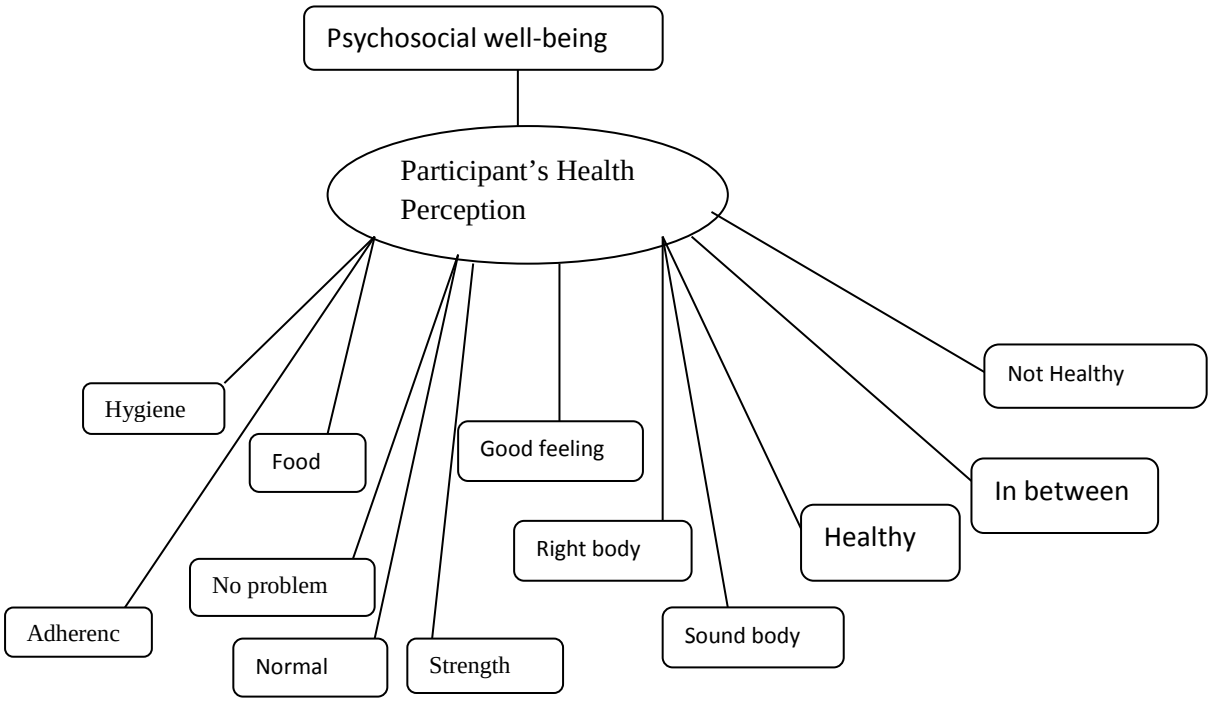
Another participant with hypertension expressed faith in God based on the fact that, as a blind woman, she has no one helping her. For this reason her total dependence is on God and this is what she has to say;

"There is no one to help me. Sometimes there is nobody to help me. I turn to God. There is no one by my side what would you do?"

4.4 Participants' Health Perception

Participants' Health Perception is third theme that resulted from the analysis. The health perception includes participants own definition of health and his or her perceive health statutes (healthy or not healthy).

Figure 4.4 Section of thematic network participant's health perception



Most of participants define health as having physical strength. According to them, when a person is physically strong, such person is healthy. Diagnosis of any illness is not enough to classify someone as sick, if the person is physically strong. This definition of health is consistent with Kelleher (1988) findings, where majority of people living with diabetes identified themselves as healthy. This feeling of well-being was not related to medical diagnosis but to a wider set of meanings like being able to pursue valued activities. In contrast, being physically weak even without any diagnosis is enough reason to classify someone as unhealthy

Some other participants defined health as having right or sound body, while others see health as the ability to adhere to medical treatment. Some equated health to good feeling. About three participants said being normal is health. One participant as a definition for health also used hygiene. Below are some illustrations of how some participants responded when they were asked how they would define health in their own ways.

> *"Then it means the person is strong and can do all things without any pains. Nothing is actually wrong with the person. At the moment I can't lift or carry a bucket "*(Tazan)
>
> *"someone who is strong and has no problem"*(Dzefa)
>
> *"as a human being you need to know how you feel. If you do not feel good in your body you should know you are not healthy. Sometime when you wake up you are free, health is good for everyone. When you wake up healthy you give glory to God sometimes you feel pains because you worked the previous day. When someone is strong the person can just bath and go to work"* (T.T)

"Oh, when you are healthy there is no problem. You don't have any problem, you see. You get sick then it means you are not healthy. But when you are normal and there is nothing wrong with you, then you are healthy. You don't have problems" (Serwa)

"ehm, how, yes. Health is something which men should live normal, you see. When you are healthy, you can do anything, you see. Yes, but health is normal, normal life, you see".(Fudzi)

"health? A sound body (laughs)". (Okpoti)

The analysis shows that, participants deduce their health status from how they define health and what their present conditions are. Most of them said they are "healthy" or "not healthy" base on what they were feeling in their body at the time of the interview. Each person's health status was according to his or her definition of health (strong, normal, good or sound).

There were some participants who in spite of living with diabetes or hypertension, saw themselves as strong. The reason was not different from the reason provided by those who saw themselves as not healthy.

Other participants classified their status as being in between health good and bad health. The reason being that, they can't tell if they are strong or not

Participant's perception of their health status is in agreement with the shifting perspective model which states that, people can shift between positive and negatives depending on illness duration and context. This shows that illness does not always disrupt the individual's life but will depend on the context of the illness. Here are illustrations from some participants on their health status;

"I will say I am not healthy. I have been operated before. The operation coupled with diabetes I can say I am not healthy". (Dzefa)

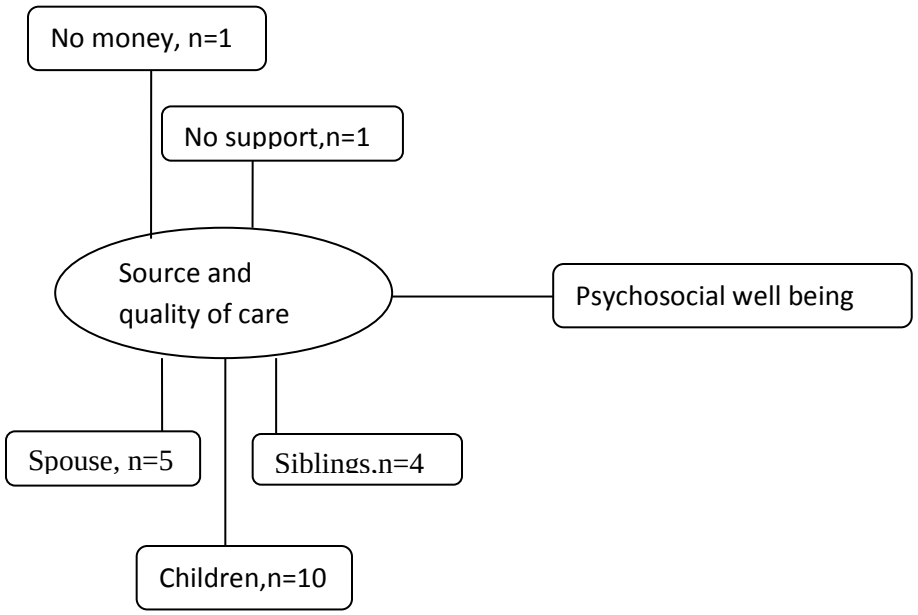
"ehm current am healthy, we have different kinds of health. I am healthy but sometimes you might wake up not feeling fine, sometimes pains in your leg, just like my knee or sometimes you wake up with a headache or with the flu. When you wake up and you don't have any pains then you can say you are healthy". (T.T)

"well, I may say both, good and bad health, you see, yes (laugh). Sickness comes and goes so you can say you are normal. Ehm"(Ayele)

4.5 Sources and quality of care.

The interview also explores the source and quality of care for the individuals living with diabetes or hypertension. Figure 4.5 shows the portion of the thematic network that relates to the sources and quality of care of participants

Figure 4.5 Section of thematic network showing sources and quality of care



4.5.1 Source of care

Siblings, spouses and children were the key sources of care and support for most of the participants. Most of the care giving is done by female siblings and children. Notwithstanding some of the female participants said that, their brothers sometimes support them with money. Most of the participants especially the women do get their support from the siblings, spouse and children. The women do get their support from both their nuclear and extended family members.

Unlike the women, the men hardly get any care from extended family members. Most of them do not have any source of support and care with relation to their illness. The reason being, these men hardly share or tell other family members of their illness. Some of these men only rely on what their doctors tell them. The few men who share normally do it with their wives. This leaves the wives and at times children becoming the only support and care giver. Below are some illustrations respectively by a female and a male participant.

> *"No one really supports me financially because they all have their personal problems. Sometimes my husband, I or when my children are working they help. Previously, I don't even pay when I visit the hospital, it was free because I was on the insurance but ever since it expired, I pay for the services. I have just renewed it; I went for it today"*. (Asempaye)

> *"Nobody, nobody. I'm on my own because my wife for instance is also a pensioner, on retirement so the little that we get we try to live on it. And not forgetting I have to be paying some of my boy's school fees. Eerr, it is not easy, it is not easy. Sometimes you have to be going borrowing and all those things*". (Okpoti)

4.5.2 Quality of care

Most care and support received by participants were in the form financial support. The financial supports were given in the form of gifts by the givers. The participants receive these handouts as and when the giver has, and is willing to give. There is no means of constant and reliable

financial support for participants. Below illustrates how Awula, a women who became blind because of her illness expressed it:

> *"my eyes are all spoilt what can I do?My daughter, I do not see anything, I do not see the food I am given be it good or bad, You will eat it like that … my only worry is that all my children are gone. There is no one to help me. Sometimes there is nobody to help me but they usually come around in the morning but as for today a relative has lost the child so all my children are there [sneezes] Death should take me away [Sobbing]".* (Awula)

The illustration shows the awful nature and inadequate care received by this woman makes her to feel depressed and even wish she was dead. When this woman was asked what will make her happy and not feel depressed again? Her answer was:

> *"my problem is that I do not have money and when people are not around me".*(Awula)

This clearly shows though she is living with a chronic disease, if she could have adequate financial and emotional support she would not be feeling depressed. The case is not different for most respondents.

Below is the summary of the key findings from this chapter:

- There exist gendered differences in terms of reporting psychosocial status
- Co-morbidity can cause both anxiety and a sense of peace
- Psychosocial status changes over time. For the same individual there good days and bad days.

- Definition of health and perception of health status influence individual psychosocial status.

Methodological implications show that, qualitative research provides deeper insight to lived experience of CNCDs and psychosocial outcomes. It also shows that qualitative highlights the need for longitudinal research.

Chapter V

Summary, Recommendations and Conclusions

Summary and conclusion

Chronic non-communicable diseases (CNCDs) account for about 3.6 million of global deaths. The greatest effects of these risk factors of CNCDs fall increasingly on low and middle-income countries, and on poorer people within all countries (WHO, 2011). There is evidence of the existence and increasing prevalence rate of CNCDs in Ghana (de-Graft Aikins, 2007).

In low-resource settings, health care cost for hypertension and diabetes is draining household resources, driving families into deeper into poverty.

Mortality among vulnerable and socially disadvantaged people like the urban poor becomes higher, as they get sicker and die sooner than people of higher socio-economic status. This is because the urban poor are at greater risk of being exposed to harmful products, such as tobacco, smoke exposure from the use of inefficient cooking stoves for indoor cooking or unhealthy food, and have limited access to health services (WHO, 2011).

Living with, and managing most CNCDs involves complex interactions of psychological and social functions. Studies have shown that, people living with chronic disease(s) are faced with psychosocial problems.

The study used the 2011 EDULINK data (household and individual files) in the quantitative analysis. A total of 2524 household members and 955 eligible respondents were used in the study. Twenty qualitative in-depth interviews with persons living with hypertension and diabetes gathered by the RIPS-NYU project were also used in the analysis.

The aim of the study was to identify the prevalence of CNCDs in the urban poor communities of Ghana, explore psychosocial well-being of people in urban poor communities of Ghana, and examine the psychosocial well-being of persons living CNCDs in urban poor communities in Ghana.

Findings from the study show that, about 5.3% and 0.9% of household members are living with hypertension and diabetes respectively. The result also shows that, 3.6% of the eligible respondents have hypertension, and 0.5% are living with diabetes. Of the selected household members, 14 (0.6%) are living with co-morbidity (diabetes and hypertension). In all, about 142 (5.6%) of household members and 39 (4.2%) of eligible respondents are living with at least one condition.

The analysis shows that CNCDs are more prevalent among women than men and as age increases so does the percentage of persons living with CNCD. The analysis further demonstrated that, level of education and marital status are significantly related to having a CNCD.

The quantitative analysis reveals that the psychosocial well-being of a majority of the people falls between the two extreme well-being indicators (close to perfect health and extremely poor health).

The analysis demonstrated that, both mental health and emotional well-being have no significant relationship with living with CNCD ($p > 0.05$) whereas there exists a significant relationship between perceived health and living with CNCD ($p=0$).

The qualitative analysis identified five main themes in relation to the psychosocial well-being of participants. The themes include, emotional well-being, mental well-being, and spiritual well-being, perception about health, and source and quality of social support.

Fear, worry, unhappiness were some of the negative emotions expressed by participants. Some participants also said although they were living with a chronic disease, they neither worry nor fear. Some participants said they were happy that their doctors were able to diagnose them. Most of the participants who expressed positive emotions were men.

Apart from the fact that most of the participants feel disturbed about their illness some said they are not able to avoid thinking about their illness. Most of them said they resolved to faith as a coping strategy.

Most of the participants defined health as having physical strength. According to them, when one is physically strong, the person can be classified as healthy. Diagnosis of any illness is not enough to classify someone as sick if the person is physically strong. Most of them said they are “healthy” or “not healthy” based on what they were feeling in their body at the time of the interview.

Siblings, spouses and children were the key source of care for most of the participants. Participants received financial support in the form of gifts. There was no means of consistent and constant financial support for participants.

Based on the findings, the study makes four recommendations. Firstly, the urban poor must be incorporated in programmes that aim at reducing CNCD related deaths. Secondly, educational programmes that aim at enhancing the psychosocial well-being of individuals with CNCDs must be incorporated into policies for intervention. Thirdly, social, psychological and welfare services must be part of the health care services in Ghana. Lastly, future studies must aim at examining the psychosocial well-being of "urban poor" living with CNCDs on a large scale.

In conclusion, hypertension and diabetes are prevalent in the urban poor communities of Ghana. Most of the individuals living with CNCDs are faced with emotional, mental and social challenges. The individuals living with CNCDs may say they are healthy or not based on their bodily feeling at the time of the investigations. Findings from the study agree with the Shifting Perspectives Model developed by Paterson in 2001.

REFERENCES

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

Addo J, Agyemang C, Smeeth L, De-Graft Akins A, Edusei A.K and Ogedegbe O (2012). a review of population-based studies on hypertension in Ghana: *Ghana Medical Journal*: pp 4-11

Addo J, Smeeth L, Leon DA. (2007) Hypertension in sub-Saharan Africa: a systematic review. *Hypertension.*; 50:1012–1018.

Adubofuor, K.O.M., Ofei, F., Mensah-Adubofour, J., Owusu, S.K. (1993) Diabetes in Ghana: a morbidity and mortality analysis. *International Diabetes Digest* 1993; 4(3), 90-92.

Adubofour K.O., Ofei, F., Mensah-Adubufour J, Owusu SK. Diabetes in Ghana. In Gill G, Mbanya J-C, Alberti G (Eds), *Diabetes in Africa*. 1997; FSG Communications Ltd, Reach, Cambridge, UK. (pp. 83-88)

Agyei-Mensah S. and de-Graft Aikins A. 2010, Epidemiological Transition and the Double Burden of Disease in Accra, Ghana: *Journal of Urban Health*: Bulletin of the New York Academy of Medicine, Vol. 87, No. 5

Agyemang C, Bruijnzeels MA, Owusu-Dabo E (2006). Factor associated with hypertension awareness, treatment, and control in Ghana. *Journal of Human Hypertension* ; 20: 67-71.

Alberts WM, do Pico GA (1996) Reactive airways dysfunction syndrome. Chest. 1996;109:1618–1626.

Allebeck, P., Bolund, C. & Ringbäck, G. (1989) Increased suicide rate in cancer patients. A cohort study based on the Swedish Cancer-Environment Register, *Journal of Clinical Epidemiology*, 42, 611–616.

Amoah A.G.B (2003). Sociodemographic variations in obesity among Ghanaian adults; Public Health Nutrition: 6(8), 751–757

Amoah AGB, Owusu KO, Adjei S. Diabetes in Ghana: a community prevalence study in Greater Accra. Diabetes Research and Clinical Practice. 2002;56:197–205

Anderson RJ, Freeland KE, Clouse RE, Lustman PJ(2001). The Prevalence of co-morbid depression in adults with diabetes. 1069-78.

Aryeetey R. and Ansong J. (2011). Overweight and hypertension among college of health sciences employees in Ghana. *African Journal of food, Agriculture, Nutrition and Development*, 11(6), 445-456

Asa K . 2011, Learning to live with diabetes – as experiencing an expanding life world; From Department Of Clinical Sciences, Danderyds Hospital: Karolinska Institutet, Stockholm, Sweden

Ashraf K. (2010). Psychological distress among persons living with HIV, hypertension, and diabetes: AIDS Care, 22: 12, 1517 — 1521

ASPE Research Brief (2007). The Effects of Marriage on Health A Synthesis of Recent Research Evidence. U.S Department of health and human service

Atobrah D. (2012): When darkness falls at mid-day: Young patients' perceptions and meanings of chronic illness and their implications for medical care. *Ghana Medical Journal*, P; 46-53

Attride-Stirline J (2001). Thematic networks: an analytic tool for qualitative research. SAGE Publications (London, Thousand Oaks,CA and New Delhi) vol. 1(3): 385-405.[1468-7941(200112) 1:3;385-405; 019991]

Awuah R.B (2012). Prevalence and Risk Factors of High Blood Pressure in Urban Poor Communities in The Greater Accra Region Of Ghana: Unpublished thesis from (RIPS) University of Ghana.

Awah P, Unwin N, Phillimore P (2009). Diabetes Mellitus: Indigenous naming, indigenous diagnosis and self-management in an African setting. *BMC Endocr Disord*, 9:5.

Babe-Ruth C. (2011), Chronically ill: the Body and Merleau-Ponty, University of Pennsylvania: a paper presented at the 10th Global Conference " Health, Illness and Disease"

Blood Pressure Association England (2008): Introducing high blood pressure; Website: www.bpassoc.org.uk

Bosu W.K. Ghana's National NCD Programme (2007): 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

Bosu W.K.(2010) Epidemic of hypertension in Ghana: a systematic review. BMC Public Health; 10:418.

Bradshaw S, Steyn K. (2001) Poverty and chronic diseases in South Africa. Cape Town, Medical Research Council of South Africa and WHO

Buki L.P et al (2005) in the midst of a hurricane: A case study of a couple living with AIDS. Journal of counseling and Development, 83, 470-479

Bury M (1982) Chronic illness as Biographical disruption. Sociology of Health and Illness, 4, 167-182.

Carrero J.J (2010) Gender Differences in Chronic Kidney Disease: Underpinnings and Therapeutic Implications: Kidney Blood Press ; 33:383–392

Carricaburu D. and Pierret J. (1995) From biographical disruption to biographical reinforcement: the case of HIV positive men. Sociology of Health and illness,17, 65-88

Christensen, J., Vestergaard, M., Mortensen, P. B., et al. (2007) Epilepsy and risk of suicide: a population-based case-control study. Lancet Neurology, 6, 693–698.

Close K. L (2009). Psychosocial Aspects of HIV/AIDS: Children and Adolescents; p 319-332

Dake F.A, Tawiah E.O, Badasu MD (2011) Sociodemographic correlates of obesity among Ghanaian women: Public Health Nutr. ;14(7):1285-91

DeCoster, V. (2003). The emotions of adults with diabetes. Social Work in Health Care, 36(4), 79-99.

de-Graft Aikins A (2003): Living with Diabetes in Rural and Urban Ghana: A Critical Social Psychological Examination of Illness Action and Scope for Intervention J Health Psychol ;8:557-72.

de-Graft Aikins A (2005) Healer Shopping, New evidence from the rural-urban qualitative studies of the Ghanaian diabetes experience: *British Medical Journal* P 331-737

de-Graft Akins A (2005) Living with Diabetes in rural and urban Ghana: A critical social, psychological examination of illness action and scope for interventions. *Journal of Health Psychology*, 8, 557-572

de-Graft Aikins A (2006). Reframing applied disease stigma research: a multilevel analysis of diabetes stigma in Ghana. *Journal of Community and Applied Social Psychology*.16(6):426–441.

de-Graft Aikins A., Unwin N., Agyemang C., Alloyey P, Campbell C. and Arhinfull D. (2010) Tackling Africa's chronic disease burden: from the local to the global: Globalization and Health 2-7 6:5

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

Dreyer G., Hull S., Aitkin Z., Chesser A., Yaqoob M.M (2008). The effect of ethnicity on the prevalence of diabetes and associated chronic kidney disease: *Oxford Journal of Medicine Volume* 102 issue 4; pp 261-269

Egede, L. E. (2007) Major depression in individuals with chronic medical disorders. Prevalence, and correlates and association of health resource utilisation, lost productivity and functional disability. General Hospital Psychiatry, 29, 409–416

Faircloth C.A et al (2004) Sudden illness and biographical flow in narrative of stroke recovery. Sociology of Health and Illness, 26, 242-261.

Fawibe E.A. (2008) Management of Asthma in sub-Saharan Africa: the Nigerian Perspective; African Journal of Respiratory Medicine: 17-21

Francesco P. Cappuccio, Frank B. Micah, Lynsey Emmett, Sally M. Kerry, Samson Antwi, Ruby Martin-Peprah, Richard O. Phillips, Jacob Plange-Rhule and John B. Eastwood (2004) Prevalence, Detection, Management, and Control of Hypertension in Ashanti, West Africa, American Heart Association.43:1017-1022

Ghana Ministry of Health (1996) Health Sector 5 Year Programme of Work. Accra: MOH;

Hall V, Thomsen R. W, Henriksen O, Lohse N (2011). Diabetes in Sub Saharan Africa 1999-2011: Epidemiology and public health implications. A systematic review; BMC Public Health 11:564

Hausmann -Muela S, Ribera J M, Nyamongo I, (2003) Health-seeking behavior and the health system response: anthropology and medicine

Hjelm K., Mufunda E., Nambozi G. & Kemp J. (2003) Preparing nurses to face the pandemic of diabetes mellitus: a literature review. Journal of Advanced Nursing, 41(5), 424–434.

House J.S., D. Umberson, and K.R. Landis. (1988) “Structures and Processes of Social Support.” *Annual Review of Sociology*, vol. 14, pp. 293-318.

House, J.S., Stretcher, V., Metzner, H.L. & Robbins, C. (1986). Occupational stress and health in the Tecumseh Community Health Study. *Journal of Health and Social Behavior*, 27:62-77.

House, J.S., Wells, J.A., Landerman, L.R., McMichael, A.J. & Kaplan, B.H. (1980). Occupational stress and health among factory workers. *Journal of Health and Social Behavior*, 20:139-160.

http://www.libraryindex.com/pages/50/Prevention-Disease.html retrieved on 5th November, 2012

International Diabetes Federation; http://www.idf.org/types-diabetes retrieved on 3 November 2012

Isezuo1 S.A., Sabir1 A.A, Ohwovorilole A.E. and Fasanmade O.A (2011) Prevalence, associated factors and relationship between prehypertension and hypertension: a study of two ethnic African populations in Northern Nigeria. *Journal of Human Hypertension*, 25, 224–230

Karasek, R.A., Baker, D., Marxer, F. Ahlbom, A. & Theorell, T. (1981). Job decision latitude, job demands, and cardiovascular disease: a prospective study of Swedish men. *American Journal of Public Health*, 71:694-705.

Katon, Wayne J., M.D. (2008) “The Comorbidity of Diabetes Mellitus and Depression.” *American Journal of Medicine* 121: S8–S15

Kaufman J.S. Erne E. O. Sherman A. J. Rotimi C.N. and Cooper R.S. (2006). Determinants of Hypertension in West Africa: Contribution of Anthropometric and Dietary Factors to Urban-Rural and Socioeconomic Gradients. American Journal of Epidemiology, 143(12), 1203-1218

Kelleher, D. (1988). Coming to terms with diabetes: coping strategies and non-compliance, in Anderson R, & M. Bury M. (Eds.), Living with chronic illness. London: Unwin Hyman

Kim H.K., and McKenry P. (2002). "The Relationship between Marriage and Psychological Well-Being." *Journal of Family Issues*, vol. 23, no. 8, pp. 885-911.

Kolling M, Winkley K, von Deden M (2010)."For someone who's rich, it's not a problem". Insights from Tanzania on diabetes health-seeking and medical pluralism among Dar es Salaam's urban poor. *Global Health* : 10.1186/1744-8603-6-8.

Kratzer J (2012) Structural Barriers to coping with Type 1 Diabetes Mellitus in Ghana: experiences of diabetic youth and their families. *Ghana Medical Journal*, 46, 39-45.

Kruk ME, Goldmann E, Galea S (2009) Borrowing and selling to pay for health care in low- and middle income countries. *Health Affairs*, 28(4):1056-66

Kurella, M., Kimmel, P. L., Young, B. S., et al. (2005) Suicide in the United States end-stage renal disease program. *Journal of the American Society of Nephrology*, 16, 774–781.

Lamb K.A., Gary R.L, and DeMaris A (2003). "Union Formation and Depression: Selection and Relationship Effects." *Journal of Marriage and Family*, vol. 65, pp. 953-962.

Law M. Steinwender S. Leclair L. (1998) . Occupation, health and well-being: *Canadian Journal of Occupationa*l: V 65; 81-91

Leone T, Coast E, Narayanan S, de Graft Aikins A (2012). Diabetes and depression comorbidity and socioeconomic status in low and middle income countres (LMICs) : mapping for the evidence: *Globalization and Health* 8:39pp 1-10

Lerman, Robert. (2002) “Marriage and the Economic Well-Being of Families with Children: A Review of the Literature.” Washington, DC: The Urban Institute and American

Leserman, J., Petitto, J.M., Golden, R.N., Gaynes, B.N., Gu, H.,Perkins, D.O., Silva, S.G., Folds, J.D., & Evans, D.L. (2000). Impact of stressful life events, depression, social support, coping, and cortisol on progression to AIDS. *American Journal of Psychiatry*,157, 1221–1228.

Lewington S, Clarke R, Qizilbash N, Peto R, Collins R (2003). "Age-specific relevance of usual blood pressure to vascular mortality: a meta-analysis of individual data for one million adults in 61 prospective studies". *Lancet.* 2003 Mar 22;361(9362):1060

Lillard, Lee A., and Constantijn W.A. Panis.(1996) "Marital Status and Mortality: The Role of Health." *Demography*, vol. 33, no. 3, pp. 313-327.

Mba, C.(2006) The Health Condition of Older Women in Ghana: A Case Study of Accra City. *Journal of International Women's Studies*; 8(1): 171-184.

Mapp CE, Miotto D, Boschetto P. (2006) Occupational asthma. Med Lav.97(2):404–9.

Mare, R.D. (1990). Socioeconomic careers and differential mortality among older men in the United States. Pp. 362-387 in *Measurement and Analysis of Mortality*, edited by Vallin, J., D'Souza, S. & Palloni, A. Oxford: Clarendon Press

Marr J. (1991) the experience of living with chronic illness. *Journal of Neuroscience Nursing*, 23, 325-9

Marshall I.J, Wolfe D.A.C, McKevitt C (2012): Lay perspectives on hypertension and drug adherence: systematic review of qualitative research; *British Medical journal*; 344: e3953

Moore, D.E. & Hayward, M.D. (1990). Occupational careers and the mortality of elderly men. *Demography*, 27:31-53

Moussavi S, Chatterji S, Verdes E (2007). Depression, chronic disease, and decrements in health: results from the World Health Surveys, 370; 851-8

Murray, John E.(2000) "Marital Protection and Marital Selection: Evidence from a Historical-Prospective Sample of American Men." *Demography*, vol. 37, no. 4, pp. 511-521.

Narayan D et al 2000. Voices of the Poor: Crying Out for Change. NY, Oxford University Press

O'Brien, Eoin; Beevers, D. G.; Lip, Gregory Y. H. (2007). ABC of hypertension. London: BMJ Books. ISBN 1-4051-3061-X.

Odhiambo JA, Ng'ang'a LW, Mungai MW, Gicheha CM, Nyamwaya JK, et al. (1998) Urban-rural differences in questionnaire-derived markers of asthma in Kenyan school children. Eur Respir J 12: 1105–1112

Oppong C, Antwi P, Waerness K (2009). Care for the seriously sick and dying; Perspective from Ghana. Printed by Allkopi, Bergen, Norway: ISBN 978-82-7453-078-2

Paterson, B. L. (2001). The shifting perspectives model of chronic illness. Journal of Nursing Scholarship, 33(1), 21-26.

Prior P.M, Heyes C.B (2003). The Relationship between Marital Status and Health; An Empirical Investigation of Differences in Bed Occupancy Within Health and Social Care Facilities in Britain, 1921-1991*: Journal of Family Issues* January 2003 vol. 24 no. 1 124-148

Rajaram S. (1997) Experience of hypoglycemia among insulin dependent diabetics and its impact on the family. Sociology of Health and Illness, 19, 281-96

Reddy KS et al (2007). Educational status and cardiovascular risk profile in Indians. Proceedings of theNational Academy of Science, 104:16263–16268.

Richter, P; J Werner, A Heerlein, A Kraus, H Sauer (1998). "On the validity of the Beck Depression Inventory. A review". Psychopathology 31 (3): 160–8. ISSN 0254-4962. PMID 9636945.

Robin S.W. (2002) "Revisiting the Relationships Among Gender, Marital Status, and Mental Health." *American Journal of Sociology*, vol. 4, 2002, pp. 1065-1096

Samranbua A.(2011): The Lived Experience of Rural Thai Older Adults with Poorly Controlled Hypertension; a dissertation submitted to the Faculty of the School of Nursing Of The Catholic University of America In Partial Fulfillment of the Requirements For the Degree Doctor of Philosophy

Schneiderman N 2004: Psychosocial, Behavioral, and Biological Aspects of Chronic Diseases. American Psychological Society; Volume 13—Number 6. pp 247-251

Sherina M, Sidik Rampal L, Aini M, M Norhidayati H (2005), The prevalence of depression among elderly in an urban area of Selangor, Malaysia: *The International Medical Journal*, Vol. 4 No 2 Dec; 1-63

Sheth T, Nair C, Nargundkar M, Anand S, Yusul S (1999). Cardiovascular and cancer mortality among Canadians of European, south Asian and Chinese origin from 1979 to 1993: An analysis of 1.2 million deaths. *C M A J* ; 1 6 1 (2) : 1 3 2 - 8

Sidney S. and Braman M.D (2006) The Global Burden of Asthma: *s* 130 (1): 4-12

Strahl H (2003). Cultural interpretations of an emerging health problem: blood pressure in Dar es Salaam, Tanzania. Anth Med ;10:309-24.

Stuckler D.(2008) Population causes and consequences of leading chronic diseases: a comparative analysis of prevailing explanations. *Milbank Quarterly*, 86:273–326.

Spencer J, Philips E, Ogedegbe G (2005) Knowledge, Attitudes, Beliefs, and Blood Pressure Control in a community Based Sample in Ghana. *Ethnicity and Disease*, 15:748-752

Teasdale, T. W. & Engberg, A. W. (2001) Suicide after stroke: a population study. *Journal of Epidemiology and Community Health*, 55, 863–866

Tsang, C. H. (2004) Mortality and causes of death in a national sample of diabetic patients in Taiwan. *Diabetes Care*, 27, 1605–1609

Unwin, N., Setel, P., Rashid, S., Mugusi, F., Mbanya, J., Kitange, H., Hayes, L., Edwards, R., Aspray, T. and Alberti, K.G.M.M. (2001) Noncommunicable diseases in sub-Saharan Africa: where do they feature in the health research agenda? Bulletin of the World Health Organisation, 79(10), 947-953.

WHO Library Cataloguing-publication Data Global status on non-communicable diseases 2010: ISBN 97824156229; printed Switzerland.

William A. Petit, Jr., M.D., F.A.C.P., F.A.C.E.Christine Adamec (2002) The Encyclopedia of diabetes; Second Edition: Facts on File , Inc. An imprint of Infobase Learning 132 West 31st Street New York NY 10001.

Working towards wellness. The business rationale 2008, Geneva, World Economic Forum.

World Health Organization (2009). "Global health risks: mortality and burden of disease attributable to selected major risks." http://www.who.int/healthinfo/global_burden_disease/GlobalHealthRisks_report_full.pdf. Retrieved 10 February 2012.

World Health Statistics 2011. Geneva, world Health Organization, 2011

Waite, Linda J. “Does Marriage Matter?” *Demography*, vol. 32, no. 4, Nov. 1995, pp. 483-507.

Williams D. and Jackson J. (2000) Review Race/ethnicity and the 2000 census: recommendations for African American and other black populations in the United States. Williams DR, Jackson JS Am J Public Health. 90(11):1728-30

Yang W et al (2010). Prevalence of Diabetes among Men and Women in China. *The New England Journal of Medicine,* 362: 1090–1101.

.

Appendix A- Intrviewees Identity

ID	Pseudonym Names	Sex	Age	Illness	Duration	Education	Occupation	Ethnicity	Locality
R1	TT	M	64	Hypertension	-	No education	No occupation	Akan	Ussher Town
R2	Lamisi	F	51	Hypertension	-	Secondary school	Trader	Dagbani	James Town
R3	Derla	F	47	Diabetes	1year	No education	Perty Trader	Ga	Ussher Town
R4	Afi	F	64	Diabetes	1year	middle school	No occupation	Ga	James Town
R5	Okpoti	M	64	Diabetes	15years	Tertiary	Retired	Akan	James Town
R6	Ayele	F	63	Diabetes	10years	Tertiary	Head Teacher	Ga	Ussher Town
R7	Tazan	F	76	Diabetes	12years	No education	Perty Trader	Ga	Ussher Town
R8	Dzefa	F	41	Diabetes	4months	No education	casual worker (zoomlion)	Ga	Ussher Town
R9	Fudzi	M	50	Hypertension	10years	Secondary school	Chemist	Ga	James Town
R10	Adom	F	79	Diabetes	3years	Primary	Trader	Ga	James Town
R11	Mokoleje	F	54	Hypertension	3years	middle school	Trader	Ga	James Town
R12	Asempaye	F	56	Hypertension	1year	middle school	Trader	Akan	Ussher Town
R13	Woyomenor	F	84	Hypertension	-	No education	No occupation	Akan	James Town
R14	Gbetor	M	75	Hypertension	6years	Primary	no occupation	Ewe	Ussher Town
R15	Tsutsu	F	73	Diabetes	33years	Primary	No occupation	Ga	James Town
R16	Titiwobika	F	50	Diabetes	-	Primary	Trader	Akan	Ussher Town
R17	Mansah	F	47	Hypertension	6years	Primary	Trader	Ga	James Town
R18	Akose	F	52	Hypertension	6years	Middle school	Trader	Ga	James Town
R19	Awula	F	70	hypertension	3years	Primary	no occupation	Ga	Ussher Town
R20	Serwa	F	60	Diabetes	-	Primary	Perty Trader	Akan	James Town

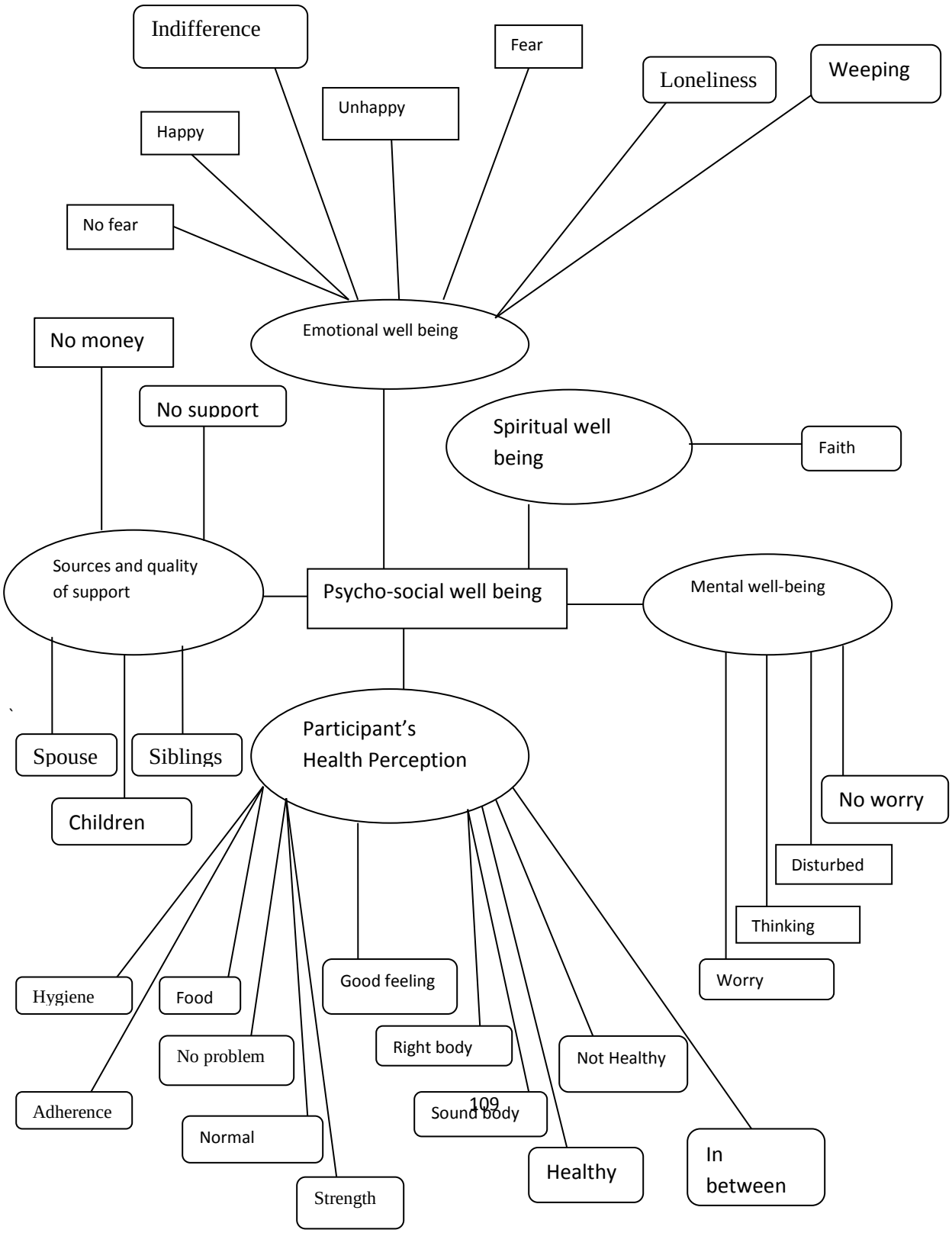
Apendix B

Thematic coding frame. D: Deductive, I: Inductive, M: Male, F: Female

Codes	*R1M*	*R2F*	*R3F*	*R4F*	*R5M*	*R6F*	*R7F*	*R8F*	*R9M*	*R 10F*	*R 11F*	*R 12F*	*R 13F*	*R 14M*	*R 15F*	*R 16F*	*R 17F*	*R 18F*	*R 19F*
Worry (D)	x		x			x	x			x	x	x					x	x	x
Fear/ scared (D)		x			x			x	x	x	x				x	x		x	x
Faith (I)							x						x						x
Happy (I)	x																		
Unhappy (I)	x				x	x				x									
Weeping (I)		x	x																x
loneliness													x						x
Fearless/ no fear (I)	x													X					
no worry (I)				x															
Thinking (I)				x						x		x		X	x	x			
Indifference (I)					x														
Disturbed (D)			x		x														
Isolation (D)													x						
Children (D)	x		x	x		x	x					x	x	X	x				x
Spouse (D)		x			x			x				x				x			
Siblings (D)			x					x										x	
no momey (I)																			x
no support (I)					x														
Friends (I)																			x
Strength (D)	x	x		x		x	x	x		x					x		x		
Normal (I)									X										
good feeling (I)	x																		
No problem (I)																			
sound body (I)					x														
Food (I)											x			X					
Adherence (I)													x				x		
Hygiene (D)														X					
Right body (I)																			x
Healthy (D)	x	x											x	X			x		
not healthy (D)			x	x		x	x	x	x		x	x			x	x		x	x
in between (I)					x					x									

Apendix C

Thematic Network Coding



Appendix D

Coding Frame

Codes	No. of Transcripts	Description and Definitions	Theme	Description of Theme
Fear (D)	10	Lived experience of CNCD	Nagative Emotional well-being	oh, I got afraid when I was told because my mother always said she does not want any of her children to have the disease
Unhappy (D)	4	"	‘’	I never felt happy and even now I am not a happy man. I’m not. Even ‘sex-wise’ sex wise you see you are unable to go in for it.
Weeping (I)	3	"	‘’	I encouraged myself. I was frightened and I started crying, I wept and wept till I said no to myself and decided to encouraged myself
Loneliness	2	"	"	My only problem is that I have no friend and I do not like to visit. I used to visit my sister in Legon but even there, I just sit around doing nothing. So that is my problem
No fear	2	"	positive Emotional well-being	I was not afraid… Because for me, I am bold, I had faith in God
Happy(D)	2	attitude when diagnosed	‘’	for their (the health practitioners) ability to tell me what was wrong with me, i was happy. I got to know what to do exactly about the situation
Indifference (I)	2	‘’	Emotional well-being	you see, I actually didn’t know about it and didn’t know how it will affect me so I did not take it all that serious
Worry	10		Mental well-being	I got worried because I didn’t know who would take care of these children should this illness remain in my life forever
Thinking (I)	7			Even my elder sister called Akweley also had the disease. But by then my mother was alive. So when I also got it started thinking so deeply
Disturbed (D)	2	attitude upon knowing of illness	‘’	I was rather more disturbed. So my doctors asked me to be stopping certain things I have been doing.
No worry (D)	2	attitude towards management of illness	‘’	I was not worried. It didn’t bother me at all
Faith	3		Spiritual well-being	*my prayer is that God will heal me.*

Codes	No. of Transcripts	Description and Definitions	Theme	Description of Theme
Children (D)	10	Source of Care	**social support**	oh! It's was my children but especially my elder daughter
Spouse (D)	5	"	‘’	my husband and God. I work on my own and my mum can also contribute to my wellbeing.
Siblings (D)	4	"	‘’	I have many brothers so I go to them for assistance
No money	1	Quality of support		my problem is that I do not have money
No support	1	"		My only worry is that all my children are gone. There is no one to help me.
Strength (D)	9	Definition of health		the person is strong and can do all things without any pains
Normal (I)	1	"		Health is normal, normal life
good feeling (I)	1	"		If you do not feel good in your body you should know you are not healthy.
No problem (I)	1	"		Oh, when you are healthy there is no problem
sound body (I)	2	"		Health? A sound body (laughs)
Adherence (I)	2	"		Try to follow the doctor's advice and take my drugs
Hygiene (D)	1	"		way you do your things hygienically will show how you are healthy
Right body (I)	1	"		
Healthy (D)	6	health status		ehm current am healthy
not healthy (D)	12	"		I will say I am not healthy
in between (I)	2	"		I may say both, good and bad health