

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY,**

**KUMASI, GHANA**

**COLLEGE OF HEALTH SCIENCES**

**SCHOOL OF PUBLIC HEALTH**

**DEPARTMENT OF HEALTH EDUCATION AND PROMOTION**

**ASSESSING THE EFFECT OF NATIONAL HEALTH INSURANCE SCHEME ON  
HEALTHCARE UTILIZATION.**

**A CASE STUDY OF RESIDENTS WITHIN UPPER DENKYIRA EAST  
MUNICIPALITY OF THE CENTRAL REGION**

**BY**

**ACHEAMPONG ISAAC OFORI (B.A NURSING AND PSYCHOLOGY)**

**JUNE 2016**

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**A THESIS SUBMITTED TO THE DEPARTMENT OF HEALTH EDUCATION AND  
PROMOTION, COLLEGE OF HEALTH SCIENCES, SCHOOL OF PUBLIC HEALTH,  
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF PUBLIC HEALTH IN HEALTH EDUCATION AND PROMOTION.**

**JUNE 2016**

## DECLARATION

I hereby do declare that except for references to other people's work which have been duly acknowledged, this project work is my own composition and neither in whole nor part has this work been presented for the award of a degree in this university or elsewhere.

SIGNATURE.....DATE.....

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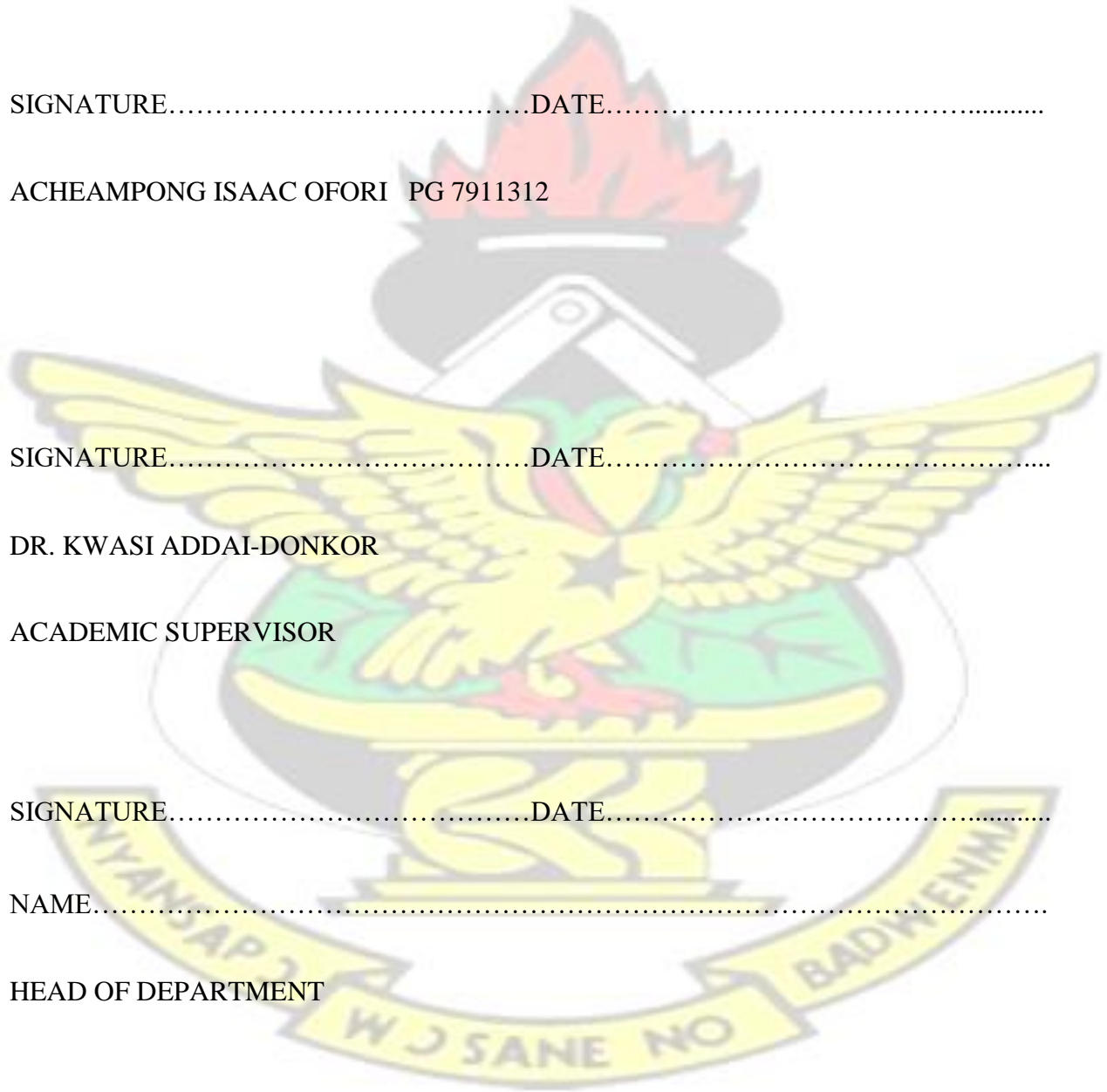
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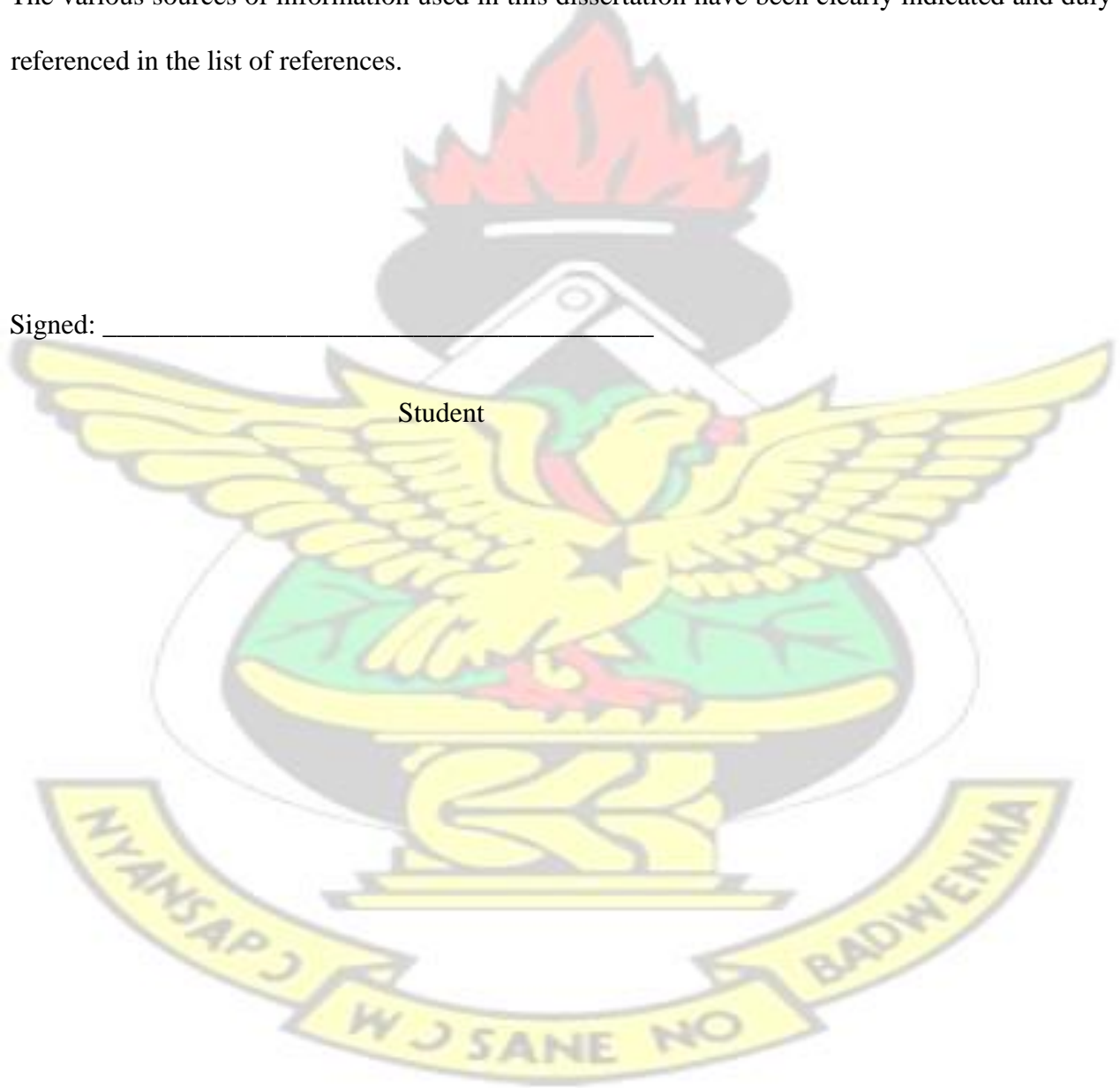
## STATEMENT

I hereby certify that this study is entirely the result of my own independent research work conducted at the Kwame Nkrumah University of Science and Technology for my MSc. study in Public Health.

The various sources of information used in this dissertation have been clearly indicated and duly referenced in the list of references.

Signed: \_\_\_\_\_

Student



## ABSTRACT

Attempts to use insurance in low-middle income countries have been recognized as a powerful tool, towards the universal health coverage. However, continuous enrolment and utilization of insurance in these countries has been unsuccessful and unsustainable. Studies have confirmed that many people who are not covered under the NHIS are the informal workers and the poor who have difficulties in affording the annual premium payment. In addition, the increasing enrolment rate, the generalization of the scheme coupled with fairly constant base insurance revenue threatens the sustainability of finances for the programme. This could indicate a missing link in the understanding of factors impeding enrolment into the NHIS and utilization of healthcare. This study aimed at examining the effect of NHIS on health care utilization.

A cross-sectional study design with quantitative methods was employed to collect data from 380 respondents in the Upper Denkyira East Municipality. The household were identified using simple random sampling. Data analysis involved descriptive and inferential statistics at 95% CI using STATA software version 12.

There were more male than female respondents, with an average age of 34 years. The study found that 86.7% of respondents have ever registered for NHIS, yet 25.74% were inactive. About 80.3% do not have all their healthcare expenditure covered when using the NHIS such that 27.65% make additional payments. Slightly half of the respondents (53.12%) are not comfortable with the services of the providers when they use NHIS. About 51.6% found it difficult in getting NHIS card to see the doctor. Socio-demographic factors such as age, gender, education and marital status of respondents influence the NHIS status of respondents. Individuals who were 38 – 47 years (AOR 0.06 95% CI; 0.00, 0.77) and 58 years and above (AOR=0.01 95% CI; 0.00,



0.25) were respectively less likely to have their NHIS active. Consistently, being a female had a higher likelihood of having NHIS status active AOR=3.92 (95% CI; 1.21, 12.67). Different educational levels were consistently associated with the NHIS status of respondents as active. Respondents who were married consistently had higher odds (AOR=48.9) of having their NHIS status active.

The study concluded that residents within the Denkyira Municipality do not have all their healthcare expenditure covered when using the NHIS and implies that respondents seem to be dissatisfied.

It however concluded that NHIS is not enough to ensure financial access to healthcare among the residents. The common challenges associated with NHIS enrolment and usage appear to discourage most people from renewing their NHIS subscription.

The study recommended that health care providers within the Municipality must be educated to provide prompt attention to all patients irrespective of whether registered with NHIS or not.

Measures to strengthen the NHIS scheme to cover most expenses are urgently needed to improve the quality of care provided.

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## ABBREVIATION

IMF – INTERNATIONAL MONETARY FUND

IML – INSURANCE MEDICINES LIST

MDG's – MILLENNIUM DEVELOPMENT GOALS

MHO – MUTUAL HEALTH ORGANIZATION

MOH – MINISTRY OF HEALTH

NHIA – NATIONLA HEALTH INSURANCE AUTHORITY

NHIS – NATIONLA HEALTH INSURANCE SCHEME

UNDP – UNITED NATIONS DEVELOPMENT PROGRAMME

WIFA – WOMEN IN FERTILITY AGE

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## CHAPTER ONE

### INTRODUCTION

#### 1.0 Background to the Study

Access to quality health is an indicator for healthy life and for human capital development. It is also a social factor towards the development of a nation such that it improves the productive ability of citizens to create wealth (Marmot et al., 2008). Life expectancy is improved when there is improvement and access to quality healthcare services (Mugilwa et al., 2005). However, individuals in better-off countries tend to have higher access to health services than those in poor countries where disease and squalor abound and yet have limited access to health care. (Mugilwa et al, 2005)

The early 1980's saw cost recovery system which allowed patients to pay out of pocket before access to healthcare popularly known in Ghana as —cash-and-carry system. This was part of the structural adjustment programme developed by IMF and World Bank against the background of economic recession and limited resources (Mensah et al., 2010, Agyepong, 1999). This system created several barriers to healthcare access especially poor communities in transitional countries and made households more poorer (Xu et al., 2003, Xu et al., 2007). Xu et al. (2003) found three



conditions for catastrophic payment of health services including the availability of the required health services for payment, low capacity to pay and lack of health insurance or provisions for prepayment mechanism.

Over the last decade, financing healthcare through the development of social or community health insurance are increasingly recognized as a powerful tool, towards the universal health coverage (Carrin et al., 2005). Many countries in Africa including Ghana, Nigeria, Tanzania Rwanda, Kenya and Senegal are practising a variety of social and community health insurance which mobilizes resources from the public and private sector to finance the scheme (Mensah et al., 2010, Blanchet et al., 2012, Jütting, 2004). Therefore, health insurance offers the potential to mobilize funds for essential public health services to protect the risk of financial access to services among poorest populations. This is a common strategy adopted by governments to establish compulsory scheme for public sector workers and establish equal schemes to cover workers in the informal sector simultaneously (Creese et al., 1997, Dror and Jacquier, 1999, Ekman, 2004).

As part of the Millennium Development Goals (MDG's) targets to reduce poverty and improve healthcare utilization, Ghana passed the National Health Insurance (NHIS) bill into law in 2003 and began full implementation in March 2005 (Witter and Garshong, 2009, Akazili et al., 2012). The health insurance had as primary objective to make healthcare affordable and increase the general utilization of drugs and healthcare particularly among the most vulnerable. Individuals insured have the likelihood of using outpatients facilities and public providers especially in lower income communities (Jowett et al., 2004). According to a study by Ansah et al. (2009), individuals in Ghanaian society enrolled in health insurance have the greater chance of visiting clinics, obtain prescription and seek formal healthcare. Pregnant women also have the likelihood of utilizing prenatal care, give birth in a hospital, and have skilled attendants present at birth (Mensah et al.,

2010). Witter and Garshong (2009) also found that, out-patients per-capita has increased significantly in Ghana after the introduction of the NHIS in 2005.

Despite the above, poor communities are not able to mobilize revenue towards the scheme. This can be attributed to the fact that they are mostly unemployed. Only a small proportion of the population is however registered as indigents to benefit from the policy (Witter and Garshong, 2009). This affects their participation in insurance schemes which is a major contributing factor to their exclusion in lower income communities particularly rural areas (Preker and Carrin, 2004). In spite of these, in recent years scholars have started focusing on the other side of the coin, without targeting the impact of the policy on Ghanaian citizens especially the most vulnerable. This study therefore aims at throwing light on the impact on NHIS in the Upper Denkyira East Municipality to make recommendations on how the programme could capture the most vulnerable.

## **1.2 Problem Statement**

Utilization of healthcare in every society is the primary target of any government. Healthy healthcare will ensure that the population is effective and efficient enough to contribute to development agenda of a country. It is therefore the top priority of every Government to provide quality healthcare that citizens can access. However, it is catastrophic when an individual is unable to utilize a healthcare service which is a fundamental right of every Ghanaian recognized by the constitution and international legislations. Understandably, this has an implication to the country in losing labour force that could contribute to productivity. This situation arises if health care policies do not make adequate financial arrangements especially for the vulnerable and disadvantaged in the society.

According to a study in Ethiopia by Girma et al. (2011), factors such as transportation and perceived treatment cost, household income and distance to the nearest health centres predict the level of utilization of the services. Utilization of healthcare is unsatisfactory particularly in rural areas and among most vulnerable populations in developing countries (Girma et al., 2011). In Ghana, out-of-pocket payment constituted 45% of total healthcare financing in 2005 (Mills et al., 2012). In response to low financial access and such consequential low utilization, developing countries including Ghana are increasingly adopting financing arrangements to protect the individual against catastrophes and ensure increased utilization of healthcare services. This concept, addresses healthcare challenges faced by poor people especially rural residents (Jütting, 2004). In Ghana for example, the National Health Insurance Scheme has been in inception for about a decade ago, yet the scheme appears to be characterised by poor documentation that makes determination of its coverage of the most vulnerable population. There seems to be little information about rate of utilization among various socio-demographic characteristics of residents such as income, gender, religion, employment status and educational level. The extant literature has not adequately conceptualized nor addressed these relationships. Nevertheless, this information is essential as it will help policy makers to know the rate of access among the most marginalized populations in the Ghanaian society for an appropriate response. Mills et al. (2012) found in Ghana, Tanzania and South Africa that the most vulnerable populations such as the poor have the least involvement in the scheme. The distribution of insurance services favours the rich in these countries more than the lower income populations. The few individuals who enrol in the scheme do not renew their subscription after it expires due to challenges such as unavailability of needed and appropriate healthcare services (Mills et al., 2012).



Another major challenge associated with the NHIS in Ghana is the barrier to enrolment. These barriers may include financial constraints, geographical and organisational inaccessibility as well as general lack of interest. These barriers usually exist as a result of interactions between clients of healthcare services and service providers as well as NHIS officials. The attitudes and satisfaction that beneficiaries will derive determine their involvement in the scheme.

Inadequate arrangement mechanisms to cover the most poor who constitute about 28% of Ghanaian population have the implication of retracting the sustainability of the policy. Therefore, measuring the impact, progress and sustainability of existing NHIS policy is an important strategy that needs policy direction to ensure equity and universal health coverage. Studies have been conducted in most countries where the insurance scheme is practiced particularly developed countries like US, UK, Australia etc. The little that focus on developing countries like Ghana however focuses on the healthcare financing methods that have been practiced over the years without identifying the socio-economic disparities among its utilization and whether it has increased financial access to health care services as it aims to achieve. This study therefore aims at assessing the effect on the NHIS on healthcare services utilization among households of Upper Denkyira East municipality.

### **1.3 Research Questions**

1. To what extent does the NHIS affect the utilization of healthcare services in Upper Denkyira East Municipal
2. To what extent does the NHIS reach the vulnerable in the Municipality?
3. To what extent does socio-economic and demographic information influence the NHIS coverage among residents in the Upper Denkyira East Municipal?



4. What are the barriers confronting the enrolment in the NHIS in the Upper Denkyira East Municipality or Municipal Assembly?

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#### **1.4 General Objective**

The purpose of this study is to assess the impact of the NHIS on healthcare utilization among residence in Upper Denkyira East Municipal.

#### **1.5 Specific Objective**

1. To measure the extent the NHIS affect healthcare utilization.
2. To assess the extent to which the scheme reaches the vulnerable in the district.
3. To assess how socio-economic and demographic factors affect the NHIS utilization
4. To determine the factors that impede on enrolment on the scheme and how to overcome such barriers.

#### **1.6 Justification of the Study**

In recent years, documentation of the need for provision for financial accessibility to healthcare services in developing countries like Ghana has received much more attention (Witter and Garshong, 2009, Palmer et al., 2004). The Ministry of Health (MoH) and international bodies like the United Nations and its agencies have expressed the need for NHIS to remove out-of-pocket payment for healthcare. Ghana Government passed the National Health Insurance law in 2003 and implemented it in 2005 as programme action under the Ghana Poverty Reduction Strategy (Akazili et al., 2012, Abebrese, 2011). However, in many districts in Ghana, subscribers fail to re-enroll

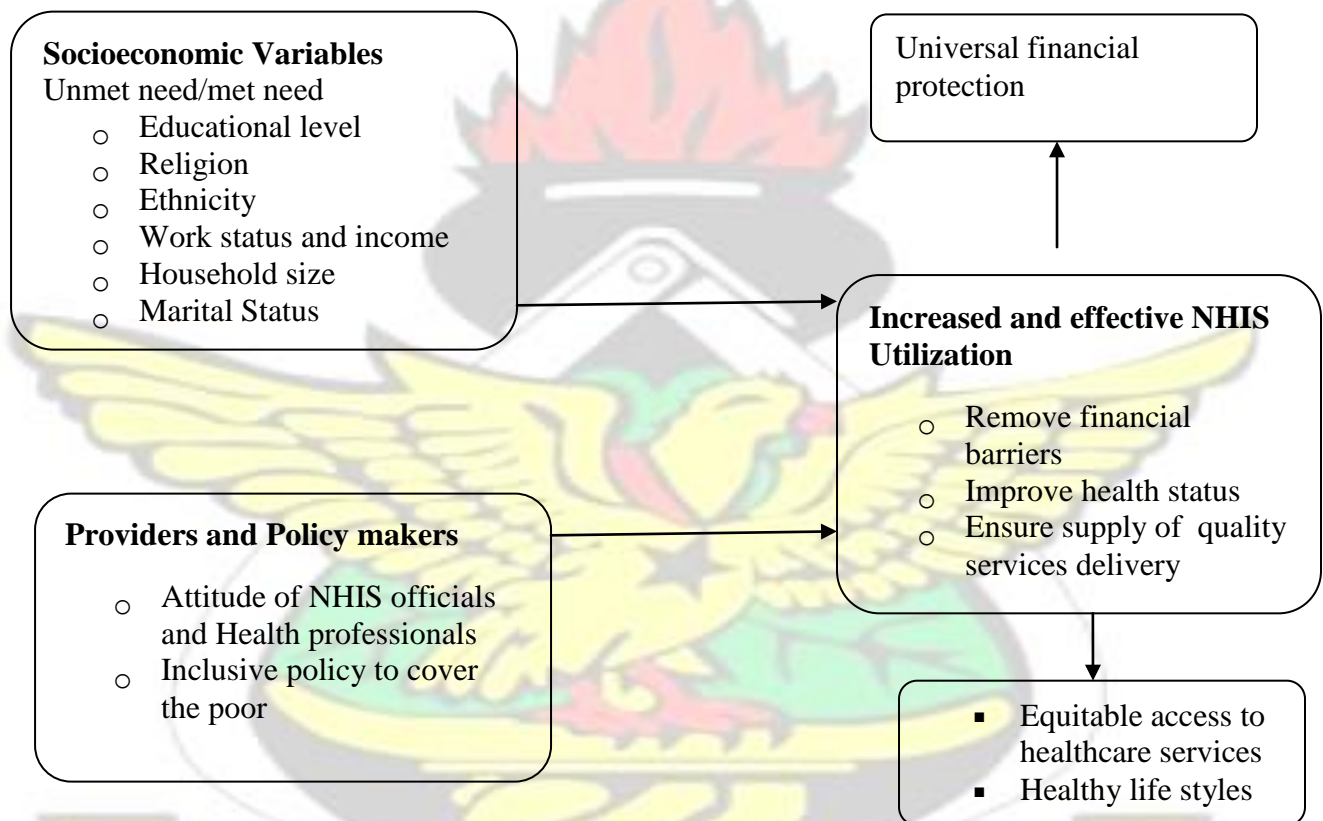
again after their first attempt due to some barriers they are confronted with. Again, health related expenses still pose a significant burden on individual patient in Ghanaian society. In order to understand the complex nature of the healthcare financing system and the rate of utilization in Upper Denkyira East Municipality, it is necessary to assess the impact the scheme has on individual households enrolled in the NHIS. It is important that the Government and major stakeholders shift more attention to the programme both in practice and research which significantly have a long term impact on the country. Focusing too much on other sectors of the economy with low attention to financing mechanism arrangement for healthcare will have serious effect on citizens particularly the poor and affect the development of the country. This study is therefore important as it aims at assessing the impact of NHIS on healthcare access which is one of the major social sectors in Ghanaian society. The evidence from the study will help in the following ways;

1. It will serve as evidence for Health and Finance Ministries for measures to strengthen the NHIS particularly addressing barriers and incorporating the needs of vulnerable population in society into the scheme.
2. The evidence will contribute to the body of literature in the field of health financing for academics, students and researchers in the field.

### **1.7 Conceptual Framework**

The conceptual framework below demonstrates how socioeconomic variables and policy makers or providers (independent variables) influence the utilization of NHIS (dependent variable). Socio-economic determinants like level of education and income may determine the enrolment to NHIS programme which substantially influences the utilization of healthcare. Similarly, measures from

policy makers and providers of NHIS may influence the use and equity in access NHIS. The outcome variable will ensure increased and effective utilization of NHIS such that it will remove financial barriers to healthcare, improve quality of services and ultimately improve the health status of the citizenry.



*Author's construct, 2014*

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter presents a summary explanation of existing knowledge in healthcare financing, theories under-pinning the phenomenon and the impact of the NHIS on health care utilization.

The review covered:

2.1 The conceptualization of Health Insurance around the world

2.2 Healthcare financing among vulnerable populations

2.3 Coverage of NHIS in Ghana

2.4 The nature of barriers to NHIS Utilization

2.5 Impact of NHIS on healthcare Utilization

2.6 Chapter Summary

#### **2.1 The conceptualization of Health Insurance around the world**

Health insurance is a term that is technically used to describe a particular insurance that has prepayment arrangement of all medical expenses including long term nursing and disability care (Quaye, 1991). It provides protection against the possibility of financial loss resulting from the use of healthcare. Arhin-Tenkorang (2001) defined the concept as a system in which the cost of healthcare are spread over a group of individuals to prevent risks of out of pocket payments. Historically, most African countries relied on informal traditional system for mutual support and solidarity during illness such as kinship and other commercial networks and association. Elujoba



et al. (2005) found that Traditional African Medicine was the first choice healthcare treatment for most Africans who experience fever and other common sickness and constitute at least 80% of healthcare services.

The emergence of health insurance became rampant recently in the last four decades and the period when most countries began to attain independence. Individual residents in the urban areas particularly the elite in the society became more privileged to formal health insurance for the reason that they had the opportunity to serve their colonial masters as immediate employees and dependants (Arhin-Tenkorang, 2001). The primary healthcare for example was adopted by most African countries upon the Alma Ata declaration in 1978 held in the Soviet Union that allowed states to resolve that healthcare was basic right of all citizens and as such, a responsibility of the Government (Baum, 2007).

Countries began to implement the recommendations from this conference by providing publicly funded healthcare to ensure that citizens benefit from healthcare services without out-of-pocket payment to ensure the protection of their rights. These efforts helped to increase the number of health professionals trained and employed in the public sectors as well as infrastructures to extend healthcare to rural communities and underrepresented population.

## **2.2 Healthcare financing among vulnerable population in Ghana**

Financing healthcare has undergone series of changes in developing countries. In Ghana, the late 1960's saw health care policies concentrating on fighting major epidemics, particularly programmes aimed at fighting threat to population. The pre-independence period experienced a hospital fee system which allows patients to pay before accessing health services. The 1960 and

1969 period had a flat rate of hospital fee of 2 pence in the country (Dakpallah, 1988). However, The post-independence period around 1969 saw the introduction of partial cost for education and healthcare in the country making the then government unpopular (Dakpallah, 1988, Garshong et al., 2002). The 1980's and 1990's however saw health policies that aimed at cost recovery strategies targeting fee policies and use of resources. This was the period that cash-and-carry was introduced culminating in upfront payment for health care services. It aimed to recover up to 20% of operational non-salary expenses from patients. This system was however perceived by most Ghanaians as threat to their healthcare and had negative effect on the utilization particularly among the poor (Singleton, 2006, Nyongator and Kutzin, 1999). Out of pocket or catastrophic payment for healthcare can push entire household or family to poverty. Households could be pushed into deeper poverty due to substantial medical expenses coupled with loss of income resulting out of being sick (McIntyre et al., 2006). However, there was an introduction of exemption strategy to the out of pocket system of healthcare financing among the elderly, children under 5 years, prenatal care for pregnant women and the indigents (Sulzbach et al., 2005). Nyongator and Kutzin (1999) found in the Volta Region of Ghana that, official exemptions to the poor population were not functioning. For example, one out of 1000 patients who visited facilities were granted exemption in 1995. However, 15 to 30% of the population lived in poverty from that end.

In recent years, healthcare financing has been the top priority of international health policy and research among all countries both developed and developing (McIntyre, 2007). This involves a policy that will ensure financing arrangements for the healthcare of all citizens in a country including formal and informal as well as urban and rural residents. It basically involves universal access to required health services through universal financial protection (Abihiro and McIntyre,

2013, Ataguba and McIntyre). Glied (2008), identified four ways of healthcare financing by countries such as financing from social insurance, general tax revenue, private health insurance and private out of pocket payments. Most countries have achieved a considerable progress in this regard while others still remain in the process. Those with large public sectors have been able to achieve the universal financial protection through direct payment from their salary (Carrin et al., 2004).

Ghana as a country practiced national health insurance and the private health insurance. (Xu et al., 2003). Ghana passed the National Health Insurance (NHIS) bill into law in 2003 and began full implementation in May 2005 (Witter and Garshong, 2009, Akazili et al., 2012). This is the period that healthcare financing became the top priority of the Ghana Government towards achieving the Millennium Development Goals. The health insurance had as primary objective to make healthcare affordable and increase the general utilization of healthcare particularly among the most vulnerable. It also aimed to provide financial protection for both formal and informal sectors through a contribution of taxes and annual premium payments (Abihiro and McIntyre, 2013). This is an effort by the Ghana Government to remove financial barriers to healthcare so as to ensure that citizens are able to access health care services without hindrance. Akazili et al. (2011) found that the health care financing in Ghana is experiencing progressivity largely driven by progressive taxes which account for 50% of healthcare funding. The NHIS levy is however mildly progressive. Despite this, Akazili et al. (2011) further disclosed that an informal sector contribution to the scheme was found regressive in nature. Similarly, out-of-pocket payments accounting for 45% of funding is also regressive to individual households.

Most lower and middle income economies suffer huge challenges of crises in NHIS policies due to severe economic constraints, mismanagement of the economy coupled with political instability and over-dependants on donor agencies. One major challenge of such policies in the low and



middle income economy is the low coverage of the scheme among populations in the informal sector (Samson, 2009). Arhinful (2003), found that, the policy failed to address the healthcare needs of vulnerable and minority populations. Studies have confirmed that many people who are not covered under the NHIS are the informal workers and the poor who have difficulties in affording the annual premium payment (Ansah et al., 2009, Carrin et al., 2004, Akazili, 2010). According to a study by Chankova et al. (2010), the increasing enrolment rate, the generalization of the scheme coupled with fairly constant base insurance revenue threatens the sustainability of finances for the programme.

Studies have also found that, to have informal sector covered under insurance scheme, taxfunded approach is currently viewed as the fastest and effective way to achieve universal coverage because enforcing premium contribution has been recognized internationally as ineffective (Samson, 2009, Carrin et al., 2008). Countries like Thailand, Kyrgyzstan and Moldova have adopted and achieved universal coverage under the tax funded approach (Prakongsai et al., 2009, Tangcharoensathien et al., 2011, Kutzin, 2007, Yang et al., 2007).

### **2.3 Coverage of NHIS in Ghana**

As part of the work of the National Health Insurance Council, they prepared an essential list of packages that the NHIS covers which is characterized by almost all out-patient care, diagnosis, optical, dental, maternity and most in-patient services. Services that the scheme do not cover are characterized by cosmetic surgery, anti-retroviral treatment, prostheses, dialysis for chronic renal failure and all other drugs and medicine that are not part of the essential drug list (Agyepong and Adjei, 2008). The NHIS covers almost 95% of disease burden in Ghana including cost of drugs declared on the NHIS list (Dalaba *et al.*, 2014).



For about ten years since the implementation of the NHIS scheme, it has achieved a wide coverage and enrolment level by clients. Almost 70% of registered members of the scheme receive a premium free health care service. Individuals who are insured in the population receive a comprehensive level of care and treatment. The NHIS started with an autonomous 145 scheme in 2003 and later expanded to new districts that were created (Sarpong *et al.*, 2010). In the year 2008, there was an introduction of free maternal care for pregnant women under the scheme. Similarly, indigents, children under 18 years of age, the aged 70 years and above in the informal sector were exempted (Agyepong and Adjei, 2008, Sarpong *et al.*, 2010, Aryeetey *et al.*, 2010). As a policy action under the Ghana Poverty Reduction Strategy to reduce poverty, the NHIS had about 65% subscribers who do not pay annual premium (Gobah and Zhang, 2011).

A significant improvement in the scheme has been achieved over the past few years which are not limited to the establishment of a claim processing centre in 2010 and implementing clinical audits in this same year but the establishment of a call centre in 2012. The scheme now engages more than 3200 healthcare providers.

There have been challenges in the methods of calculating the coverage of the scheme. Most civil society and interest groups have argued that the methods used in calculating the coverage was misleading such that it was based on the cumulating number of the population who had registered for the scheme. This method refused to consider double registration, the population with expired cards and people who have migrated out of the country. According to early figures in 2009, the NHIS had reached 10 million subscribers covering 50% to 62% of the population with 50% covered with a valid subscription cards (Gobah and Zhang, 2011). However, in 2010 after the revised methods of calculating the coverage, the rate was reduced to only 8.16 million representing 34% of the population. During the 10<sup>th</sup> anniversary celebration of the NHIS, it was reported that the scheme had reached 22 million subscribers since its implementation in 2003 yet only 9 million

remained active subscribers. The NHIS recorded 9.1 million subscribers which are expected to increase to 12 million by the end of 2014 (Government of Ghana, 2014).

## **2.4 The Nature of Barriers to NHIS Utilization**

It is catastrophic when an individual is unable to utilize a healthcare service which is a fundamental right of every Ghanaian recognized by the constitution and international legislations. This is usually as a result of financial arrangement that cannot cover the expenses of health services.

According to a study in Ethiopia by Girma et al. (2011), factors such as transportation and perceived treatment cost, household income and distance to the nearest health centres envisage the level of consumption of the health services. Many people in developing countries are not satisfied with health care services as delivered in the health institutions. This is particularly so in rural areas and among most vulnerable populations (Girma et al., 2011).

Mills et al. (2012) found in Ghana, Tanzania and South Africa that the most vulnerable populations such as the poor have the least involvement in the insurance scheme. The distribution of insurance services favours the rich in these countries more than the lower income population basically because of financial burden on the poor and marginalised group in the society. The few individuals who enrol in the scheme do not renew their subscription after it expires due to challenges such as unavailability of needed and appropriate healthcare services (Mills et al., 2012).

Another major challenge associated with the NHIS in Ghana is barrier to enrolment. These barriers may include financial constraints, geographical and organisational inaccessibility as well as general lack of interest. These barriers usually exist as a result of interactions between clients of healthcare services and service providers as well as NHIS officials. The attitudes and satisfaction that beneficiaries will derive determine their involvement in the scheme.

## **2.5 Impact of NHIS on healthcare Utilization**

The implementation of health insurance scheme in most countries seems to have achieved a varied impact on the health system of the country. They have achieved growth and increased utilization of healthcare among citizens (Sulzbach, 2008). Africa countries are beginning to experience universal health coverage as a result of massive introduction of health insurance in their countries. Studies have found that Rwanda's Mutuelles has prevented households from catastrophic health spending, improves medical utilization and have protection against potential catastrophic expenditure on hospitalization. There is a positive outcome from this programme in protecting financial risk to healthcare services which is a good implication as an effective tool towards universal health coverage in Rwanda. Despite this, individuals among the poorest quintile enrolled in the Mutuelles had the least utilization and experiences higher catastrophic health spending (Lu et al., 2012, Lewandowski et al., 2012, Drobac et al., 2013) Chankova et al. (2008) conducted a study on the impact of mutual health organization in the utilization of healthcare in three West African countries including Ghana, Senegal and Mali. The study found that individuals enrolled in the Mutual Health Organization are more likely to seek formal health in Mali and Ghana. Also, enrolments among households headed by women were more profound than families headed by men.

To put it another way, Franco et al. (2008) found in Mali that, individuals enrolled in MHO were 1.7 times more likely to have fever treatment from modern facility and also three times more likely to seek care for their children under five years. Receiving prenatal care during pregnancy for at least four times and sleeping under treated-insecticide mosquito net were also likely among individuals. Deininger and Mpuga (2004) also found in Uganda that the removal of out-of-pocket payment has reduced the probability of sickness which is particularly beneficial to the poor in



Uganda. There has also been a clear evidence of a reduction in incidence of mobility in this country (Deininger and Mpuga, 2004).

Some other countries have though witnessed improvements and positive benefits from the implementation of health insurance, yet there has not been any documentation on the impact of the programme. Measuring the impact on individuals exempted from payment to the programme receives less attention. For example, Burundi has experienced considerable increase in the utilization of healthcare services by pregnant women and children less than 5 years following exemption to payment in 2006 although there has not been any proper documentation (Batungwanayo and Reyntjens, 2006). Nigeria similarly made exemption to payment to children in 2007 whereas Zambia suspended payment of fees by rural areas in 2006.

In Ghana, Dixon *et al.* (2014) found that women enrolled in the NHIS make more visits to the health facilities to receive antenatal care than uninsured women irrespective of their socioeconomic and demographic factors. However, those living in urban areas, wealth households and educated had the greater likelihood of attending antenatal care than those in rural setting, uneducated and poor households. United Nations Development Programme (UNDP) and National Development Programme in Ghana conducted a study in 2012 on achieving the MDGs with equity in Ghana. It was found that the free maternal policy which was introduced in 2008 as part of the NHIS policy has recorded a reduction in maternal mortality ratio in Ghana. There has been a reduction from 740 per 100,000 births in 1990 to 451 per 100,000 live births in 2008.

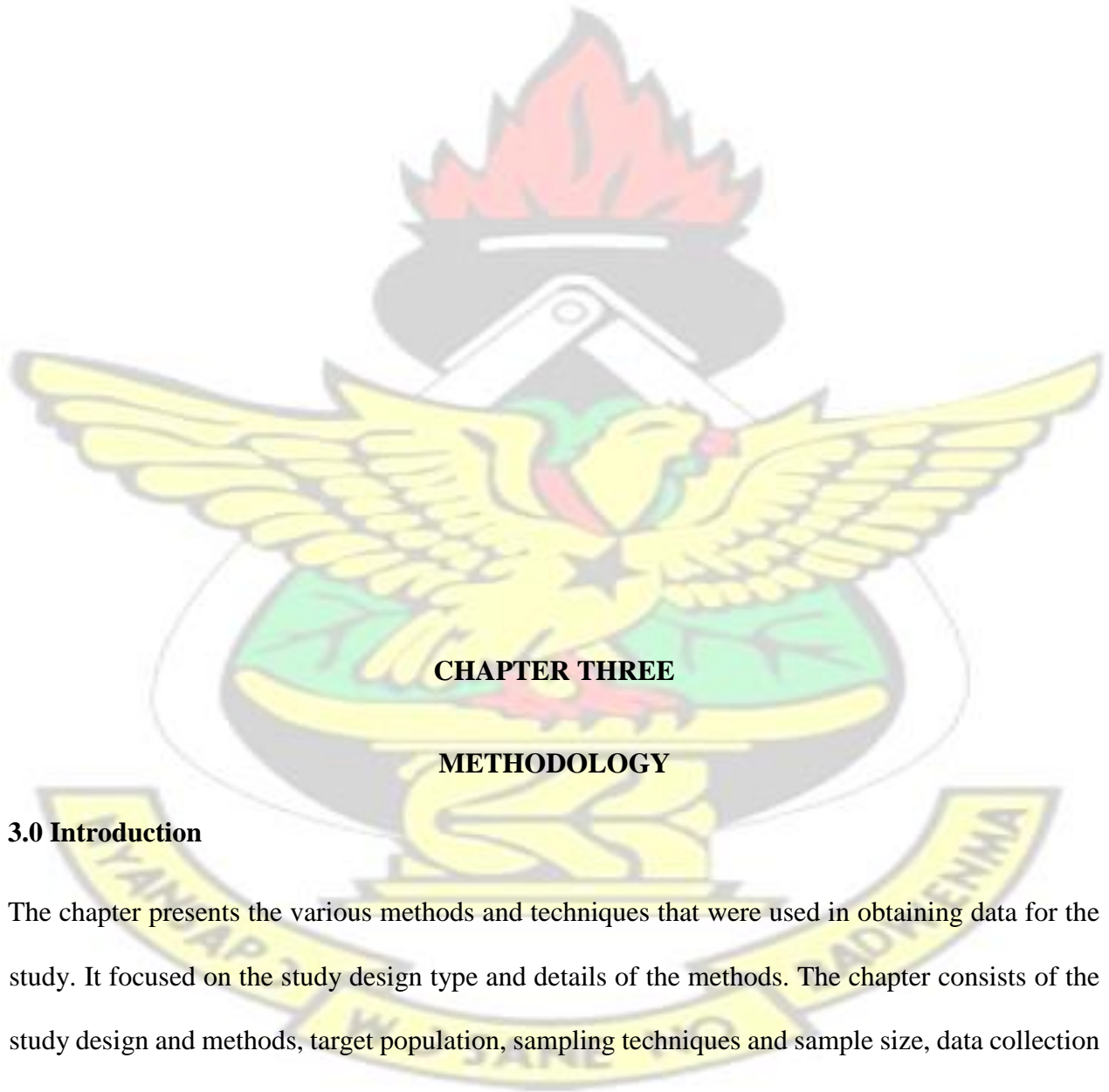
Institutional mortality ratio has declined from 216 per 100,000 live births in 1990 to 164 per 100,000 live births in 2010 (UNDP, 2012).

Furthermore, health insurance has the potential of increasing the job opportunities for most professionals in the country. For example, South Africa recorded increased varied business



opportunities for community pharmacies as utilization of the facilities increased such that public hospitals and drug suppliers were exhausted (McIntyre and Gilson, 2005)

# KNUST



## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.0 Introduction**

The chapter presents the various methods and techniques that were used in obtaining data for the study. It focused on the study design type and details of the methods. The chapter consists of the study design and methods, target population, sampling techniques and sample size, data collection techniques and plan of data analysis.

### **3.1 Study Design and Method**

This study employed a cross sectional design with quantitative methods of data collection to obtain information on the current state of NHIS in the Upper Denkyira East Municipality. Cross sectional study is a study design that is conducted within a short period at a particular point in time. This design was adopted because it measures association at a single point in time, and measures exposure prevalence in relation to effect prevalence. This method assisted the researcher to study NHIS and its effect on health care utilization at a particular point for a successful completion of the research (Olsen and St George, 2004, Levin, 2006). The crosssectional design also has the advantage of ‘generalizability’ and low cost.

### **3.2 Study population**

The target population for this study was individual households within the Upper Denkyira East Municipality. The sample was drawn from households within some selected communities such as Zongo, Dunkwa-Soro, Atechem, Mfuom, Kadadwen, Opponso, kyekyewere, Compound and so on.

### **3.3 Sampling techniques and sample size**

Sampling is used to draw participants from a larger population to represent the entire population for a study. Kumekpor (2002), found that sampling involves the selection of subset of individuals from within a population to estimate characteristics of the whole population. This is attributed to the fact that not all prospective study participants could be studied considering the larger population size. The sample however contained particular characteristics of the population of interest to ensure representativeness and generalization of the results. Creswell (2013), was also of

the view that the primary goal of sampling is to get a representative sample or a small collection of units or cases from a much larger collection or population, such that the researcher can study the smaller group and produce accurate generalizations about the larger group.

In this study simple random sampling technique was employed to select respondents. First, the researchers randomly selected ten (10) Communities (at least half) from the (20) communities with active health facilities (hospitals, health centres, CHPS compound). The sampled communities included Zongo, Dunkwa-soro, Atechem, Mfuom, Kadadwen, Compound, Opponso, Prapababida, Kyekyewere, and Kramokrom. In each of these communities, participants were randomly selected. All prospective study participants were made to pick from a box which had papers with either —Yes|| or —No|| written on them. All prospective respondents who picked a —Yes|| and gave their consent were enrolled. This was repeated in all the communities to obtain the required sample size. The researchers zoned households and principal streets in selected communities. The aim and procedures of the study were explained to all prospective respondents who were approached, and they were free to decide whether or not to participate.

The inclusion criteria were based on households who have stayed in the study area and accessed healthcare in the last 12 months using NHIS.

### **3.3.1 Sample size calculation**

The sample size for this study was calculated following statistical formula based on the proportion of the population in Upper Denkyira East Municipality who were enrolled in the NHIS

$$n = \frac{Z^2 pq}{e^2}$$

$$d^2$$

n= the desired sample size z= the standard normal deviation 1.96 p= the proportion in the target population estimated to have registered for NHIS is 33%. This was used for this calculation.

q = 1- p d = degree of accuracy desired was

$$\text{set at } 0.05 \quad n = \frac{(1.96)^2 (0.33) (0.67)}{(0.05)^2}$$

$$n = 339.75$$

Making provision for 10% non-response =  $1.10 \times 339.75 = 373.725$ , the total sample size was, approx. 373.7. It was therefore rounded-up to the nearest ten. Thus, the final sample size (N) was rounded-up to **380** participants.

### 3.4 Data collection techniques and tools

The study used structured questionnaires to collect information on impact, barriers and challenges of the NHIS on people of Upper Denkyira East Municipality. According to Kumekpor (2002), questionnaires relate to a form or document containing a number of questions on a particular theme, problem, issue or opinion to be investigated. The use of questionnaire helped to eliminate the difficulty in getting busy residents for about an hour for interview. The questionnaire was structured into different sections based on the objectives of the study. The questionnaire contained two sections; socio-demographic information and major questions relating to the objectives of the study. The questions were related to the source of healthcare services, time to reach the facility, satisfaction with the care provided to clients when using NHIS, barriers to enrolment into the scheme, exemption to enrolment into the NHIS scheme and source of payment into the scheme.

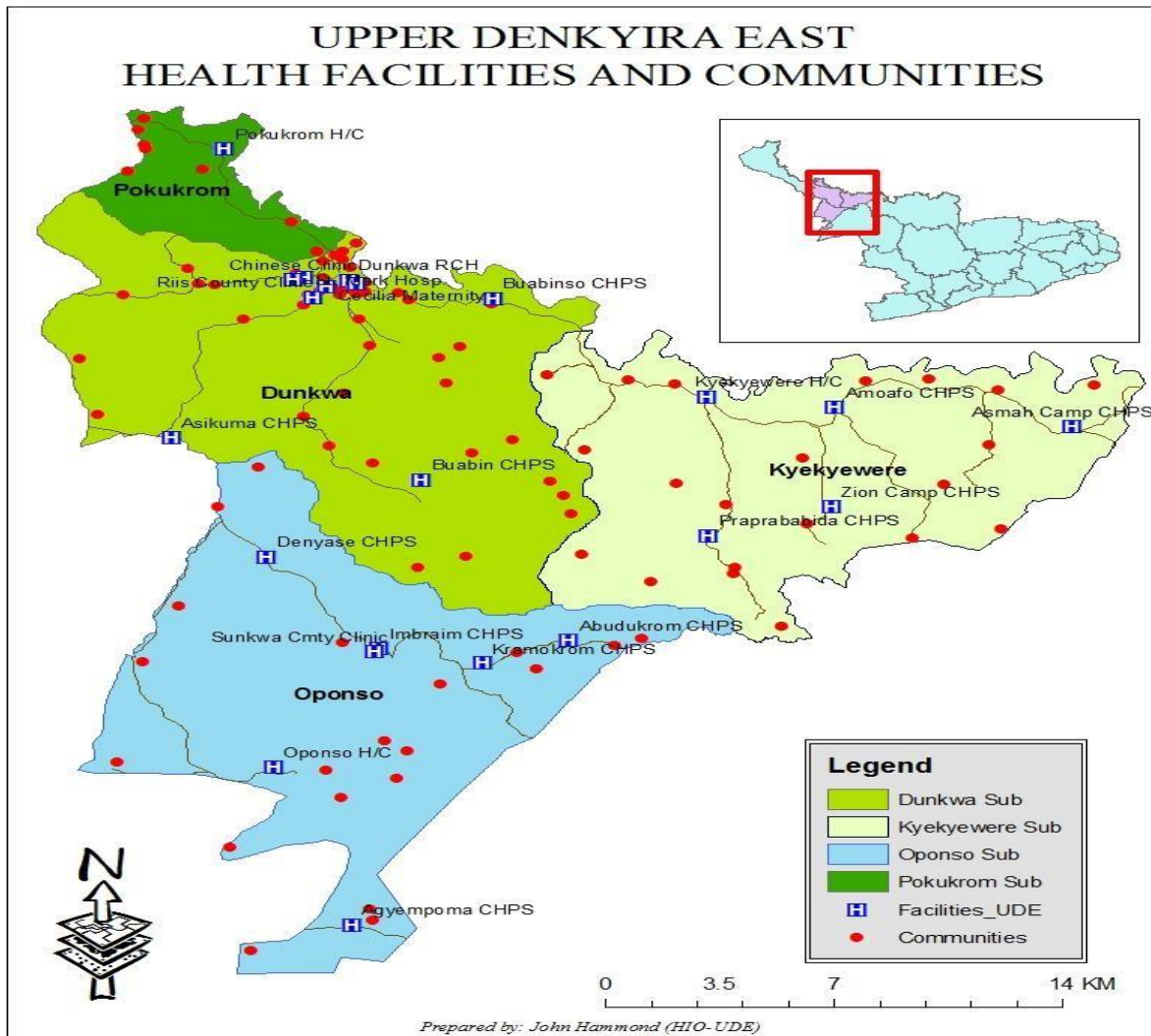


Aside major questions, demographic information such as age, gender, marital status, religion, occupation, income level, education level and address was collected using a demographic form designed by the researcher. The questionnaire was designed in English but was administered in the respondents' preferred languages. The data was collected over a period of three weeks to allow time to cover a greater proportion of respondents. Each participant was allocated an approximate time of 30 minutes for answering the questions.

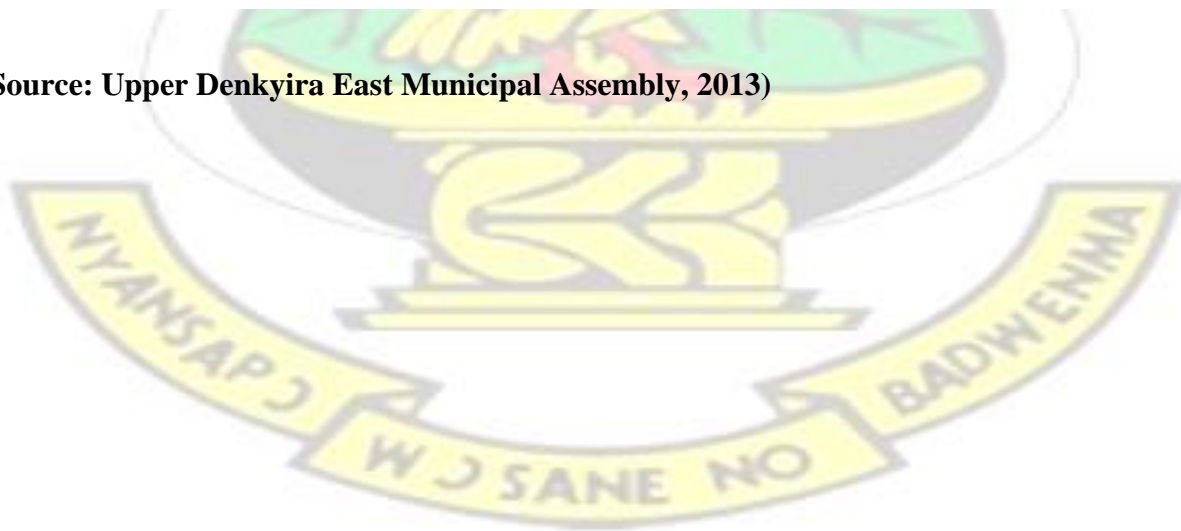
### **3.5 Study area**

The study was restricted to Upper Denkyira East Municipality. The Municipality lies within latitudes 5°-30' and 6° – 02' north of the equator and longitudes 1° W and 2°W of the Greenwich Meridian. Upper Denkyira East Municipality covers a total land area of 1,700 square kilometers, which is about 17% of total land of central Region. It shares common boundaries with Adansi South in the north, Assin District in the East and Twifo Hemang Lower Denkyira in the West. Upper Denkyira municipality accommodates resident population of 79,793 people as at 2013. Children under one year constitute 2,502 people whereas children under 5 years constitute 15,636 as at 2013.

Upper Denkyira East Municipality is endowed with 22 health facilities ranging from public and private individuals. Seventeen (17) facilities are being managed by the public whereas 5 health facilities are being managed by private individuals.



(Source: Upper Denkyira East Municipal Assembly, 2013)



**Health Indicators in Upper Denkyira East Municipality from 2010 – 2013**

<b>Indicator</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Total Population	83,889	87,226	77,394	79,793
Children Under one year	3,356	3,489	3,096	2,502
Children under five years	12,835	13,346	15,479	15,636
W.I.F.A	19,294	20,062	17,801	19,623
Functional chips zone	4	8	12	12
Private facilities	3	3	5	5
Public facilities	8	12	17	17

(Source: Upper Denkyira East Municipal, 2013)

**Membership of NHIS for 2012 and 2013 in Upper Denkyira Municipality**

<b>Category</b>	<b>2012</b>	<b>2013</b>
Fully paid up members	7,336	5,555
SSNIT Contributors	627	369
SSNIT Pensioners	264	134
Pregnant Women	3,867	3,764
Under 18 years	10,505	9,434
Over 70 years	1,323	551
Indigents	60	6,684
Total Registered Members	23,982	26,491
Renewals	42,962	52,106
Estimated Active Members	66,944	78,597

(Source: NHIA-Dunkwa-on-Offin annual performance report, 2013)

### **3.6 Sources of Data**

The study elicited information from two main sources, namely primary and secondary data. The primary data was the core data the researcher collected from the field and constituted the opinions of people from Upper Denkyira East Municipality. Secondary data on the other hand was accessed from sources such as journals, library archives, textbooks, memoranda, progress report.

### **3.7 Pre-testing**

Pretesting of questionnaires was done to reduce errors and ensure accuracy of the data. These were undertaken in the Upper Denkyira West district which has similar characteristics and environmental features. This enabled the researcher to modify the research tools and the study objectives where necessary. This pretesting was in the form of pilot interviews with fifteen (15) households. After the pretesting adjustment to the questionnaires were made before their administration.

### **3.8 Limitations to the Study**

A study that deals with individual households may be prone to limitations. The study might suffer selection bias resulting from the inequality in population size and the need to arbitrarily allocate samples to the population groups or communities. Participants may feel reluctant to provide full information on their NHIS subscription and challenges. This posed a limitation on the kind of information that was obtained for this study. The individuals who agreed to participate may not have provided complete information on what the research was seeking for.



These limitations are consistent with similar studies, notwithstanding, reliability and validity measures such as pretesting, random selection of respondents and training minimized the effects of these limitations on the finding.

### **3.9 Data Analysis Plan**

This study adopted a quantitative method of analysis. First, the researcher and his assistant checked all information obtained from the respondents to ensure completeness and consistency. The information obtained was entered into Statistical Product for Social Solutions (SPSS) version 12.0 to perform the analysis. The data was then imported into STATA version 12. The results of the study were generated through descriptive and inferential statistics to establish relationship between the study variables. Frequencies and percentages of responses from respondents were presented in tables and graphs. Also, logistics regression analysis reporting odds ratios were performed to determine factors that influence the enrolment of NHIS among respondents. All significance level was set at 0.05

### **3.10 Ethical Consideration**

All field data was kept confidential at the end of each day of data collection. The filled questionnaires were kept under lock and key by the principal investigator. Only the principal investigator, data analyst and project supervisor had access to the data. A written permission was obtained from the Municipal NHIS Co-ordinator and Health Directorate of Upper Denkyira East Municipal Assembly prior to the implementation of study methods.

Ethical clearance was obtained from Committee for Human Research Publication and Ethics of the school of Medical Sciences; Kwame Nkrumah University of Science and Technology. The

committee reviewed and cleared the study protocols prior to the implementation of the study. In addition, written and verbal informed consent was obtained from all participants before recruitment into the study. A written informed consent was translated from English to the preferred language of the potential participants. Prospective participants were taken through the consent process and were made to sign the consent form.



## CHAPTER FOUR

### RESULTS

#### 4.0 Introduction

In this chapter, the results of the study are presented. The results were generated from the questionnaire issued out to 380 households within the Denkyira Municipality. The analysis is presented at the univariate, bivariate and multivariate level. The results are presented per the objectives of the study.

#### 4.1 Socio-demographic characteristics of respondents

In Table 4.1, the socio-demographic characteristics of respondents involved in the study were explored. The study found that the average age of respondents was 34 years; however, most respondents (47.1%) were between 18 – 27 years. More than half of the respondents (57.9%) constituted males. The highest education among the majority of respondents was at the tertiary (46.9%) whiles the remaining mentioned qualifications such as Primary and Secondary education. Only 12.9% however disclosed they had no formal education. A little above half of respondents (52.4%) were single whiles more than one third (36.5%) described their marital status as married. Most respondents (43.75%) were engaged in semi-skilled employment, 36.9% as skilled workers and 19.29% were not engaged in any employment. Nearly one third of respondents (34.4%) disclosed their place of residence as old town, 25.47% as New sites and 18.16% as Zongo. The study further found the average monthly income of respondents was GHC 412.94; however the minimum amount respondents quoted was GHC 10 whiles the maximum was GHC 2000. The

mean household size was 5 persons per household. Also, the average number of dependents among the respondents' was 3 persons while the minimum and maximum was 1 and 12 persons respectively. The study again found that most respondents, 53.9% and 80% respectively had Denkyira ethnic and Christian religious background.



**Table 1: Socio-demographic characteristics of respondents**

Variable	Frequency	Percentage (%)
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<b>Age</b>		
18 – 27	179	47.11
28 – 37	80	21.05
38 – 47	60	15.79
48 – 57	33	8.68
58+	28	7.37
<i>Mean (SD); Min/Max</i>	<i>34 (13.96); 18/82</i>	
<b>Gender</b>		
Male	219	57.94
Female	159	42.06
<b>Education</b>		
No formal education	49	12.93
Primary	59	15.57
Secondary	79	20.84
Tertiary	178	46.97
Other	14	3.69
<b>Marital status</b>		
Single	199	52.37
Married	139	36.58
Divorce	27	7.11
Widow	15	3.95
<b>Occupation</b>		
Skilled	136	36.96
Semi-skilled	161	43.75
Unemployed	71	19.29
<b>Place of residence</b>		
Slum	22	5.33
Zongo	67	18.16
Old Town	127	34.42
New site	94	25.47
Estate	59	15.99
<b>Monthly income (GHC)</b>		
Below 200	130	51.18
200 – 500	45	17.72
500 – 1000	64	25.20
1000 – 1500	9	3.54
1500+	6	2.36
<i>Mean (SD); Min/Max</i>	<i>412.94 (417.55); 10/2000</i>	
<b>Household size</b>		
1 – 3	64	17.07
4 – 6	195	52.00
7 – 9	116	30.93
<i>Mean (SD);Min/Max</i>	<i>5.3 (1.93); 1/9</i>	

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<b>Number of dependents</b>		
1 – 3	147	61.51
4 – 6	70	29.29
7 – 9	13	5.44
10+	9	3.77
<i>Mean (SD);Min/Max</i>	<i>3.4 (2.3);1/12</i>	
<b>Ethnic background</b>		
Denkyira	185	53.94
Other	158	46.06
<b>Religion</b>		
Christianity	296	80.00
Islam	74	20.00

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*Source: Field Data, 2014*

#### **4.2 The extent NHIS affect healthcare utilization**

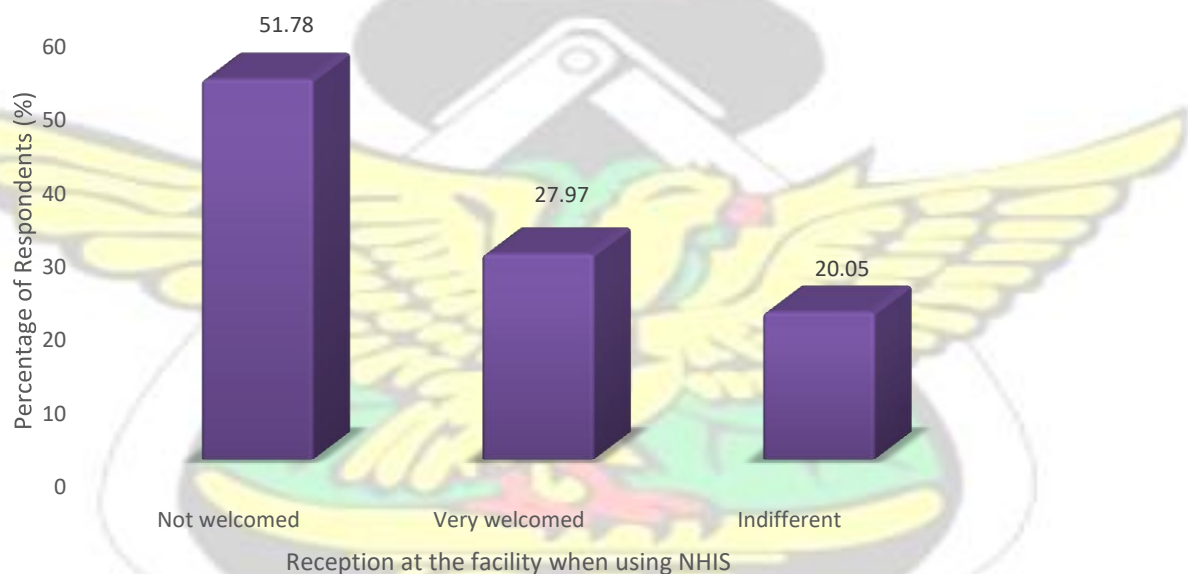
This section of the study presents the respondents view on the extent to which the NHIS affect healthcare utilization in the Denkyira municipality. The study found that most respondents (80.3%) do not have all their healthcare expenditure covered by the NHIS. On additional payment when holding NHIS card, only 27.65% indicated such payments while the majority (72.35%) revealed they do not make such payments. While most respondents (63.61%) perceived they received the needed care, 36.39% disclosed they do not receive the needed care when using the NHIS. The study further found that slightly half of the respondents (53.12%) are not comfortable with the services of the providers when they use NHIS.

Overall, nearly half of respondents (51.78%) perceived that they are not welcomed when visiting the health facility with the NHIS as shown in Figure 4.2.

**Table 2: Percentage distribution of how NHIS affect health care utilization**

<i>Variables</i>	<i>Sample N</i>	<i>Yes N (%)</i>	<i>No N (%)</i>
<b>All health care expenditure covered by NHIS</b>	325	64 (19.69)	261 (80.31)
<b>Pay for health services when holding NHIS</b>	340	94 (27.65)	246 (72.35)
<b>Services rendered at the facility were attractive</b>	348	224 (64.37)	124 (35.63)
<b>Received the needed care with the use of NHIS</b>	338	215 (63.61)	123 (36.39)
<b>Comfortable with the with services of health providers</b>	337	158 (46.88)	179 (53.12)

*Source: Field Data, 2014*

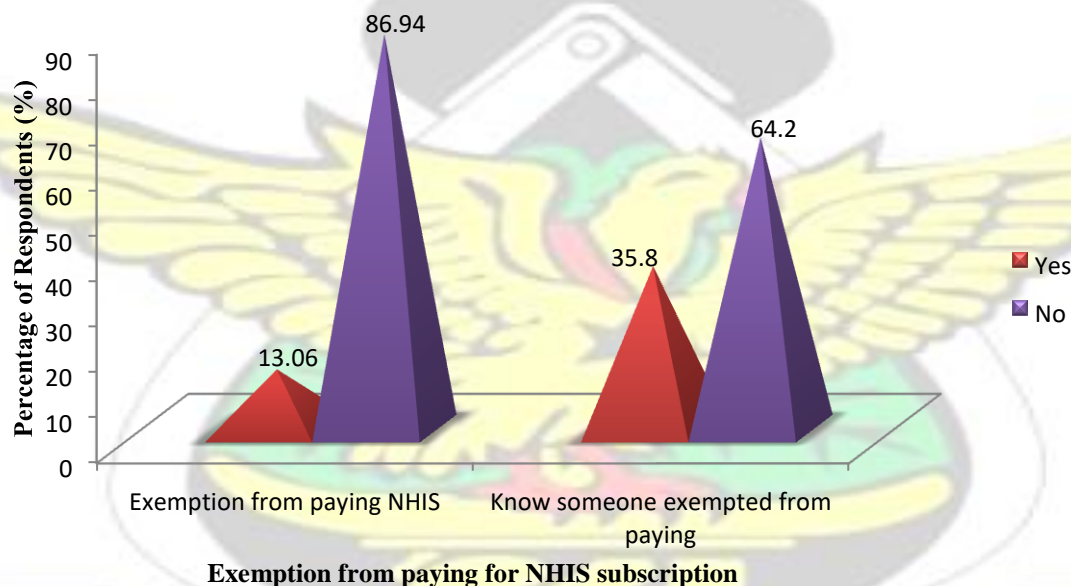


**Figure 1: Level of acceptability when clients visit health facility with NHIS Source: Field data, 2014**

#### **4.3 The extent to which the scheme reach the vulnerable**

The third objective sought to determine the extent to which the scheme reaches the vulnerable.

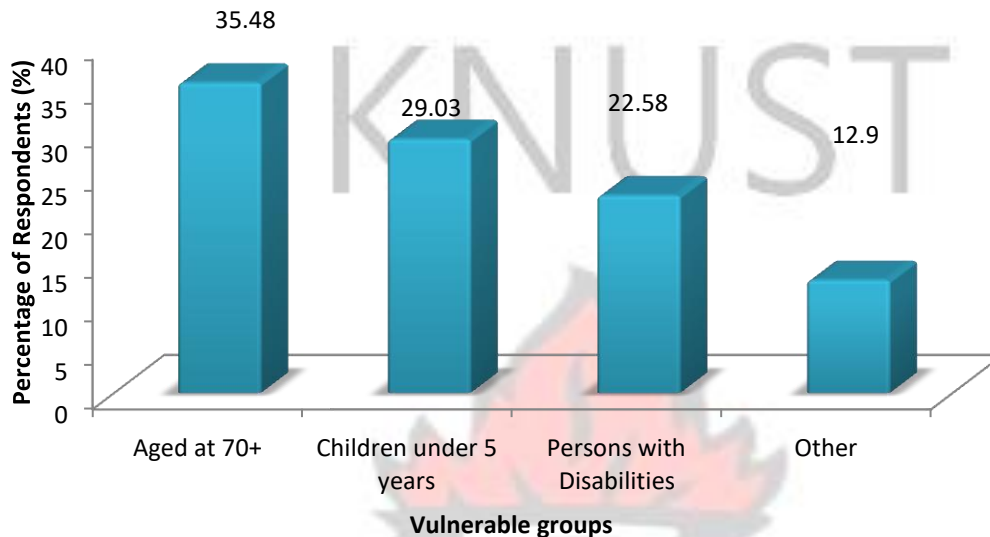
Subsequently, a question was asked about exemption from paying NHIS, most respondents (86.94%) revealed that they have not benefited from exemption while only 13% disclosed ever benefiting from exemption to payment. Again, while most respondents (64.2%) disclosed they do not know someone who has been exempted from paying the subscription, only 35.8% revealed they know. As shown in figure 4.4, the respondents revealed why either themselves or the people they know are exempted from paying NHIS subscription fees. More than one third (35.48%) indicated that persons aged 70 and above, 29.03% disclosed children under 5 years, 22.58% said persons with disabilities and Other 12.9% commented on reasons such as Pregnant women.





**Figure 2: The level of exemption from paying NHIS subscription among vulnerable groups**

*Source: Field Data, 2014*



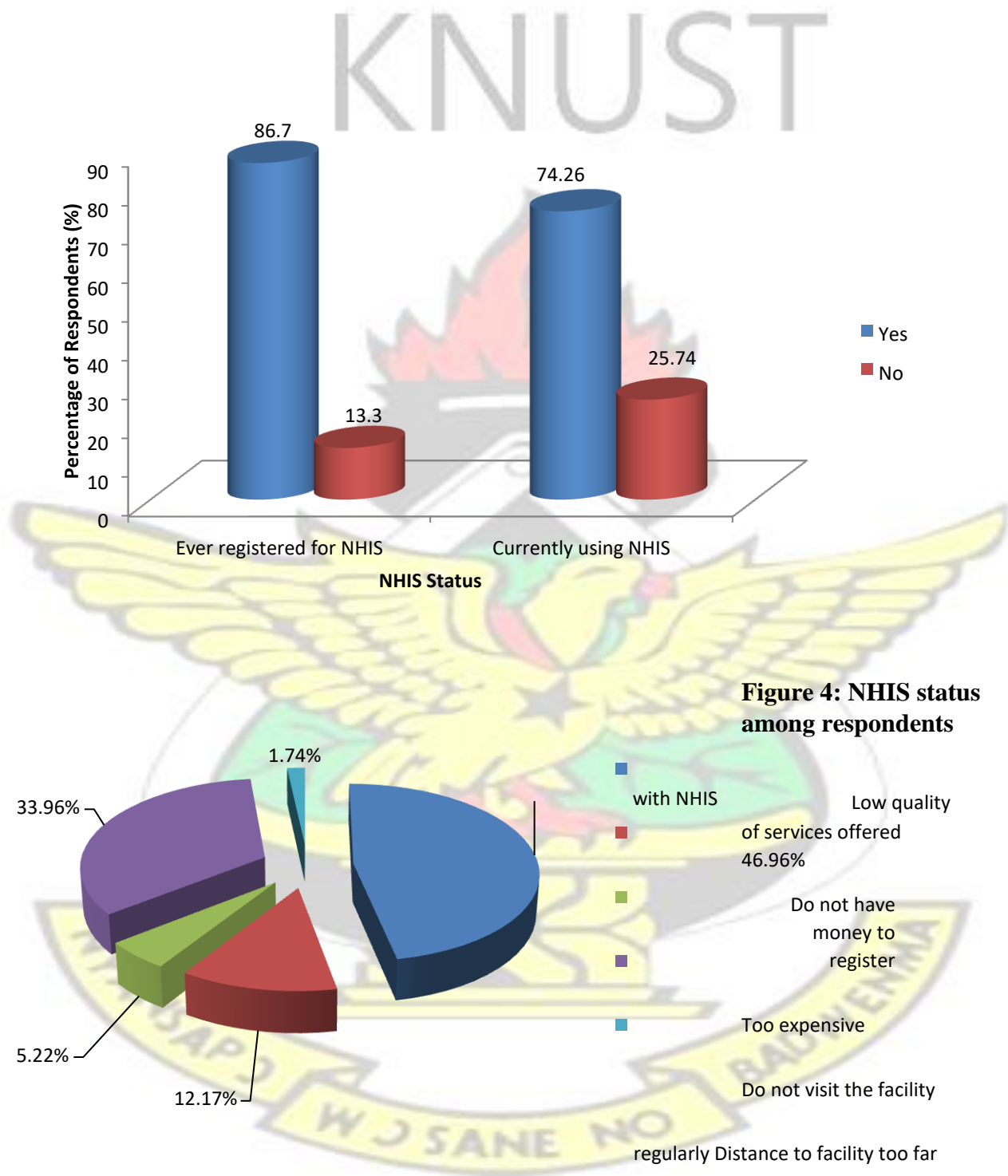
**Figure 3: Reasons for exemption to payment of NHIS subscription**

*Source: Field Data, 2014*

#### **4.4 The nature of barriers to NHIS enrolment**

This section presents results on respondents view on the nature of barriers to NHIS enrollment. As shown in Figure 4.2, the study found that most respondents (86.7%) have ever registered for the NHIS scheme. However, on the current use of the scheme, 74.24% disclosed its usage while 25.74% had a contrary view. Among the few who do not currently use NHIS services, the majority (46.96%) revealed there is low quality of services offered with NHIS, 33.96% disclosed they do not visit the facility regularly and 12.17% revealed they do not have money to register. On the common barriers, almost half (51.60%) disclosed they found it difficult in getting NHIS cards to see the doctor while 48.40% had contrary opinion. On discrimination, most respondents (78.19%) disclosed they have not been discriminated against while a few 21.81% confirmed ever being discriminated against. The respondents further gave sources of information about the scheme which was mostly through the media (72.31%). On the willingness to pay higher premium for

additional services, only few (27.73%) confirmed their ability to pay while the majority (72.27%) had contrary view.



**Figure 5: Reasons among respondents who currently do not use NHIS**

*Source: Field Data, 2014*

**Table 3: Barriers to enrolment**

<i>Variable</i>	<i>Frequency</i>	<i>Percentage</i>
<b>Ever been discriminated when visited facility with NHIS</b>		
Yes	57	21.81
No	251	78.19
<b>Difficulty in getting NHIS card to see doctor</b>		
Yes	177	51.60
No	166	48.40
<b>Sources of information about the NHIS scheme</b>		
Media	243	72.32
Friend	32	9.52
Dependent	17	5.06
Scheme providers	39	11.61
Other (Health professionals)	5	1.49
<b>Willingness to pay higher premium for additional services</b>		
Yes	94	27.73
No	245	72.27

*Source: Field Data, 2014*

#### **4.5 The influence of Socio-demographic factors on NHIS status**

Table 4.5 presents the strength of influence of socio-demographic factors on NHIS coverage and health care utilization. The analysis revealed that there was an increase in the odds of current use of NHIS with age of the respondents. Those in the age group 28 years and above were more likely to have their NHIS status active compared with those below 28 years. Independent of setting, females were 3.86 (95% CI 0.98, 2.61) times more likely to have their NHIS status active compared with males respectively. Respondents with tertiary education were more likely to have their NHIS status active (OR=4.0 95% CI; 2.76, 5.79) compared with respondents who have no formal education. There were increase in trends of the odds of using NHIS with employment; those with public sector employment were 4.5 (95% CI; 2.09, 9.68) times more likely to have their NHIS

active compared with those with no employment. Similarly, New site and Estate residence were 2.57 and 5.33 times respectively more likely to have their NHIS active compared with those who described their residence as Slums.

Furthermore, the analysis revealed that there is an increased odds of using NHIS with the amount respondents earn within a month; those who earn above GHC 500 were 5.3 (95% CI; 2.69, 10.41) times more likely to have their NHIS active compared with those who earn below GHC 200. The study again found that respondents who had more than 4 – 6 household size were 2.82 times more likely to have their NHIS status active compared with those who had less 1 – 3 household size. Respondents who described their religious affiliation as Islam were 0.47 times (95% CI; 0.27, 0.80) less likely to have their NHIS status active.

The study further revealed that the odds of having NHIS status active among different age groups change substantially after the inclusion of other covariates. Respondents who were 38 – 47 years (AOR 0.06) and 58 years and above (AOR=0.01) were respectively less likely to have their NHIS active after adjusting for other covariates. Consistently, being a female had a higher likelihood of having NHIS status active AOR=3.92 (95% CI; 1.21, 12.67) after accounting for the effect of other confounding variables. Different educational levels were consistently associated with the NHIS status of respondents as active after adjusting for other covariates. Also, respondents who were married consistently had higher odds (AOR=48.9) of having their NHIS status active after adjusting for other covariates. Similar to the univariate analysis, the odds of having NHIS status active decreased with religious background, the Islam were less likely to have their NHIS active of AOR 0.12 (95% CI; 0.03, 0.52) compared with Christians after accounting for other covariates.



**Table 4: Logistic regression analysis of socio-economic and demographic factors on NHIS coverage Variable Current NHIS status active**

	<i>OR</i>	<i>95% CI</i>	<i>p-value</i>	<i>AOR</i>	<i>95% CI</i>	<i>p-value</i>
<b>Age</b>						
18 – 27	1.00			1.00		
28 – 37	3.15	1.88, 5.29	0.00	0.47	0.06, 3.51	0.46
38 – 47	2.41	1.37, 4.24	0.02	0.06	0.00, 0.77	0.03
48 – 57	3.13	1.40, 6.93	0.05	0.24	0.02, 3.19	0.28
58+	3.00	1.27, 7.05	0.01	0.01	0.00, 0.25	0.01
<b>Gender</b>						
Male	1.0			1.0		
Female	3.86	0.98, 2.61	0.00	3.92	1.21, 12.67	0.02
<b>Education</b>						
No formal education	1.0			1.0		
Primary	2.22	1.27, 3.87	0.01	9.87	1.52, 64.07	0.02
Secondary	2.71	1.65, 4.47	0.00	7.80	1.24, 49.10	0.03
Tertiary	4.0	2.76, 5.79	0.00	9.68	1.00, 92.92	0.05
Other	1.8	0.60, 5.37	0.29	15.31	0.58, 402.7	0.10
<b>Marital status</b>						
Single	1.0			1.0		
Married	4.27	2.78, 6.54	0.00	48.9	4.46, 537	0.001
Divorce	2.0	0.89, 4.45	0.09	97.0	5.54, 1697	0.002
Widow	6.5	1.46, 28.80	0.14	2683	32.20, 2235	0.000
<b>Occupation</b>						
None	1.00			1.0		
Public sector	4.5	2.09, 9.68	0.00	1.85	0.14, 23.52	0.63
Farming	1.88	1.04, 3.38	0.03	0.69	0.05, 9.72	0.79
Trading	3.00	1.60, 5.61	0.01	1.38	0.09, 20.07	0.81
Apprenticeship	2.50	0.96, 6.44	0.06	2.66	0.09, 74.81	0.56
Self employed	4.70	2.37, 9.30	0.00	1.77	0.08, 35.44	0.70
Other	3.31	1.89, 5.79	0.00	7.41	0.24, 220.6	0.24
<b>Place of residence</b>						
Slum	1.00			1.0		
Zongo	2.67	1.55, 4.58	0.00	5.04	0.46, 55.38	0.18
Old Town	3.37	2.39, 5.88	0.00	3.57	0.41, 30.56	0.24
New site	2.57	1.63, 4.05	0.00	7.07	0.49, 102.1	0.15
Estate	5.33	2.61, 10.86	0.00	1.92	0.16, 22.77	0.60
Other	1.5	0.42, 5.31	0.53	1		

**Monthly income (GHC)**

Below 200	1.0			1.0		
200 – 500	2.67	1.37, 5.17	0.004	0.96	0.17, 5.35	0.96
500 – 1000	5.3	2.69, 10.41	0.00	1.06	0.26, 4.36	0.92
1000 – 1500	3.5	0.72, 16.8	0.11	0.12	0.01, 1.47	
1500+	0.5	0.09, 2.72	0.42	0.23	0.02, 3.53	

**Household size**

1 – 3	1.0			1.0		
4 – 6	2.82	2.04, 3.89	0.00	0.28	0.04, 1.64	0.16
7 – 9	3.07	2.00, 4.70	0.00	0.81	0.10, 6.35	0.84

**Number of dependents**

1 – 3	1.07	0.55, 2.10	0.84	3.83	0.93, 15.75	0.06
4 – 6	0.64	0.18, 2.24	0.48	2.84	0.17, 45.95	0.46
7 – 9	2.54	0.31, 21.06	0.39	3.30	0.07, 155.4	0.54
10+						

**Ethnic background**

Denkyira	1.00			1.0		
Other	0.69	0.41, 1.13	0.14	0.17	0.03, 0.78	0.02

**Religion**

Christianity	1.0			1.0		
Islam	0.47	0.27, 0.80	0.01	0.12	0.03, 0.52	0.004

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**OR=Odds Ratio; AOR=Adjusted Odds Ratio; CI=confidence interval, Outcome measures: Currently using NHIS**

**CHAPTER FIVE****DISCUSSION****5.0 Introduction**

The study explored the NHIS enrolment and healthcare utilization among 380 households in the Denkyira Municipality. This chapter discusses results from the study in relation to previous works

as presented in the literature and policy implications. The discussion is structured as per the objectives of the study and beginning with socio-demographic characteristics of respondents.

### **5.1 Socio-demographic characteristics of respondents**

The study found that most respondents were males with an average age of 34 years. This finding failed to reinforce the Ghana Statistical Services report where females dominate males in Ghanaian society (Ghana Statistical Services, 2012). This could probably be as a result of limited participation of females in research study due to their occupation with domestic activities. More than one third of the respondents had tertiary education while the remaining had primary and secondary school qualification. However, a few had no formal education. The high proportion of respondents with higher education might suggest an improvement in access to education in the Ghanaian society. The finding further implies that NHIS are mostly patronized by educated individuals. The study found that nearly half of respondents are single while more than one third were married. It was further revealed that most respondents were engaged in skilled and semiskilled work while few were unemployed. The former, that most respondents were engaged in skilled employment buttresses earlier finding that respondents were mostly educated.

The study found that the monthly income of respondents was 50% higher than the national monthly minimum wage. This implies that the respondents were relatively earning higher for their respective employment. The study also indicated that most of the respondents had Christianity and Denkyira ethnic background. This finding buttresses the fact that the study was conducted in the Denkyira a Christian dominated setting. It further corroborates the numerical strength of Christians in the Ghanaian society. Again, it supports the report by the Ghana Statistical Services where



Christianity was the dominant religious sect whiles Denkyira ethnic dominates in communities in the Denkyira municipality (Ghana Statistical Services, 2012).

## **5.2 The extent NHIS affect healthcare utilization**

This section presents the extent to which the NHIS affects healthcare utilization among respondents. The study found that most respondents within the Denkyira municipality do not have all their healthcare expenditure covered when using the NHIS. The use of NHIS as regular source of payment of healthcare expenses is an important move towards universal healthcare coverage. The finding buttresses previous study which posited that individuals in Ghanaian society enrolled in NHIS have the greater chance of visiting clinics, obtain prescription and seek formal healthcare (Ansah et al., 2009, Sulzbach et al., 2005). Nonetheless, the absence and inadequacy of coverage of all other expenditure suggest that respondents could be dissatisfied with the use of the NHIS. These findings suggest that in spite of enrolment in the NHIS programme, it may not be adequate enough to ensure financial access to healthcare. This finding corroborates with previous findings which posited that the NHIS does not cover some services and will require patients to have extra expenditure for such services (Agyepong and Adjei, 2008). A typical example of such services that the scheme does not cover are cosmetic surgery, anti-retroviral treatment, prostheses, dialysis for chronic renal failure and all other drugs and medicine that are not part of the essential drug list (Agyepong and Adjei, 2008). The inability of the NHIS to cover all expenditures suggests that the primary aim of scheme to protect citizens against the possibility of financial loss could not be met. In Rwanda for instance, previous studies suggest that individuals among the poorest quintile enrolled in the Mutuelles had the least utilization and experiences higher catastrophic health spending (Lu et al., 2012, Lewandowski et al., 2012, Drobac et al., 2013).



The finding further suggests that only few respondents were able to afford additional payments to cover healthcare expenditure when using NHIS. The decision to make additional payment to cover certain services might not be welcome by most of the patients particularly when they have not budgeted for such payment. This finding buttresses similar study in the NHIS scheme in the Ejisu Municipality where subscribers complained that the prescriptions of drugs outside the facility or outside Insurance Medicines List (IML) was expensive and a worrisome phenomenon (Adu-Gyamfi et al., 2015). The tariffs paid for medicines on the Insurance Medicines List which are relatively cheaper than medicines prescribed outside the IML. The study again found that nearly one third of respondents perceived they do not receive the needed care when using the NHIS. This finding could be attributed to the additional payments that NHIS users might pay to cover their health care expenditure.

In another development, nearly more than half were not comfortable with the services of the providers when they use NHIS. This finding suggests that respondents might not be receiving the needed services when they visit the facility with the NHIS. It was obvious that most respondents perceived they are not welcome when visiting the health facility with the NHIS. This finding does not augur well for the NHIS as such respondents are unlikely to renew their membership of the Scheme when they expire. This could support the reduction in the active subscribers of the NHIS in Ghana. This finding has a huge implication on the renewal of the NHIS particularly in the informal sector. For instance, Akazili et al. (2011) disclosed that an informal sector contribution to the scheme was found regressive in nature. Similarly, early figures in 2009 posited that NHIS had reached 10 million subscribers with a valid subscription cards. However, in 2010 the rate was

reduced to only 8.16 million representing 34% of the population (Gobah and Zhang, 2011). During the 10<sup>th</sup> anniversary celebration of the NHIS in 2013, figures suggested that the NHIS had reached 22 million subscribers since its implementation in 2003, yet only 9 million remained active subscribers. (Government of Ghana, 2014).

### **5.3 The extent to which the scheme reach the vulnerable**

In this section, the study presents the findings on the extent to which the NHIS reach the vulnerable in the Denkyira Municipality. The study found that most (86.94%) respondents have not benefited from the exemption while few (13%) were beneficiaries of exemptions policy. The finding that some people benefitted from exemption to NHIS payment is an important step to ensuring financial risk protection against this population. The few beneficiaries of exemption were characterized as vulnerable including aged, children under 5 years, Persons with Disabilities and Pregnant women. Although the beneficiaries of exemption were not many, it is important that such groups were given the opportunity.

This finding reinforces previous studies which posited the provisions of exemption fees for marginalized population in the Ghanaian society (Agyepong and Adjei, 2008; Sarpong et al., 2010, Aryeetey et al., 2010). These studies suggested that the Government of Ghana in 2008 introduced free maternal care for pregnant women under the NHIS scheme. The studies further revealed that indigents, children under 18 years of age, and the aged 70 years and above in the informal sector were exempted from the payment of NHIS subscription. Such individuals in the formal sector are catered for by SSNIT. Similarly, other studies related that the exemption to payment was part of

the Ghana Poverty Reduction Strategy to reduce poverty among citizens (Gobah and Zhang, 2011). This effort has also been demonstrated by some countries where exemption was provided for the vulnerable in the society. For instance, Burundi has experienced considerable increase in the utilization of healthcare services by pregnant women and children less than 5 years following exemption to payment in 2006 although there has not been any proper documentation (Batungwanayo and Reyntjens, 2006). Nigeria similarly made exemption to payment to children in 2007 whereas Zambia suspended payment of fees by rural areas in 2006.

This finding implies that such beneficiaries are more likely to patronize health care services than the non-exempt category. In previous studies however, many people such as informal workers and the poor are not covered under the NHIS because they have difficulties in affording the annual premium payment (Ansah et al., 2009, Carrin et al., 2004, Akazili, 2010).

#### **5.4 The nature of barriers to NHIS enrolment**

In this section, the study discusses the nature of barriers to NHIS enrolment among residence within the Denkyira municipality. The study found that most (86.7%), respondents have ever registered for the NHIS; however, nearly 74% currently use their NHIS cards. Although most people use the NHIS, it is below the initial rate of enrolment into the scheme. The few who do not use the services of the NHIS scheme attributed it to factors such as low quality of services offered by health facilities, limited visit to the facilities since they do not fall sick often, as well as limited funds to register for the scheme. In a previous study, it was revealed that few individuals who are enrolled in the NHIS scheme do not renew their subscription after it expires due to challenges such as unavailability of needed and inappropriate healthcare services (Mills et al., 2012). These common challenges appear to discourage most people from renewing their NHIS subscription.



The study again found that slightly half of the respondents found it difficult in getting NHIS card to see doctors. This suggests that there might be a bureaucratic process in getting NHIS cards among respondents. This difficulty might probably result from the time that respondents would have to wait in getting the NHIS card after registration

The study again found that most respondents' sources of information about the scheme were through the media. This finding suggests that the media is leading the frontier in educating the public about the need to enrol in NHIS scheme. This finding does not argue that respondents' limited information on insurance would limit respondents from enrolment.

### **5.5 The influence of Socio-demographic factors on NHIS status**

The study presents findings on how socio-demographic factors influence the NHIS status of respondents and substantially on healthcare utilization. The study found that the age distribution of respondents influenced their NHIS status. It was revealed that respondents whose ages were above 58 years were less likely to have their NHIS status as active. This finding might suggest that this population lacked the resources to pay for the premium. Although there is an exemption for aged, it is only limited to those 70 years and above. This has the implication that respondents between 58 - 70 years who are not well resourced financially may not be able to renew their subscription. In Ghana, the retiring age for the formal sector is 60 years. With the exemption age pegged at 70 years and above, people compulsorily retired from the public service might have to contend with the premium payment which invariably would not come easily. Pension payments are so low that pensioners find it difficult to make ends meet. This is particularly true among elderly persons within the Denkyira Municipality considering the fact that most residents are



predominantly farmers. This finding reinforces previous studies which suggest that the inability to pay for insurance premium constitute the most frequently cited reason for limited enrolment (Sulzbach et al., 2005, Diop, 2006).

The study again found that females were more likely to have their NHIS status active. This finding suggests that females mostly utilize health services more than males especially when they are pregnant. This might suggest that they have to find an innovative way of ensuring financial risk protection in order to have regular access to healthcare following pregnancy. This finding could also be attributed to the motherhood roles that females play in the Ghanaian society which places the responsibility for child care directly on mothers. Thus with mothers and children positioned in the vulnerable group they are more likely to seek financial protection more than anybody else. Again women are more concerned about their health and will report promptly to health facilities than men who would usually wait till their condition has deteriorated. This finding is consistent with previous study in Ghana, Senegal and Mali which related that enrolments and utilization of insurance among households headed by women were more profound than families headed by men (Chankova et al., 2008).

The study also found that different educational level consistently influenced the NHIS status of respondents as active. It was revealed that respondents who were educated at various levels such as tertiary, secondary and primary were more likely to have their NHIS status as active compared with those who had no education. This finding might suggest that education that respondents received have impacted positively on their knowledge and perception of the use of NHIS. The

education is likely to contribute to a better understanding of the benefits of NHIS membership, and may thus lead to a higher propensity to enrol. This finding again corroborates with previous finding which suggested that education of the household head is positively associated with enrolment in Mutual Health Organization in three West African countries; Ghana, Mali and Senegal (Chankova et al., 2008). The evidence on the association between individuals' education status and NHIS enrolment implies that individuals from the highly educated background are more likely to be enrolled than anyone else. This finding implies that membership of NHIS provide protection against the potentially catastrophic expenditures related to hospitalization among highly educated individuals than in the poor and indigents.

The study again found that respondents who described their marital status as married consistently had higher likelihood of having their NHIS status active compared to those who were single. This finding might suggest that married individuals had support from their partners to ensure that the insurance is renewed. Similarly, married couples might fear the consequences of out-of-pocket payment of healthcare particularly when there is a dependent child. Finally, the study found that respondents who were Christians were more profound to have their NHIS status active compared with Moslems.

# KNUST

## CHAPTER SIX

### CONCLUSION AND RECOMMENDATION

#### 6.0 Introduction

This study was undertaken to document the utilization of national health insurance scheme among residents within the Upper Denkyira Municipality of Ghana. This chapter presents conclusions on the findings and recommendations for programme designing for individuals. The chapter is subdivided into the conclusion and recommendation. However, the conclusion is presented per the objective of the study.

#### 6.1 Conclusion

##### 6.1.1 Socio-demographic information of respondents

In this study, males dominated females with average age of 34 years. The highest education among most respondents was at the tertiary level while few had no formal education. The study again concludes that most respondents described their marital status as single and the remaining were married and widow. Again, the study concludes that most respondents were engaged in skilled and semi-skilled work while few were unemployed. The monthly income among the respondents was 50% higher than the national monthly minimum wage. In this study, Christianity and respondents

with Denkyira ethnic background dominated which suggest the fact that the setting of the study is Christian and Denkyira dominated residents.

### **6.1.2 The extent NHIS affect healthcare utilization**

The study concludes that the residents within the Denkyira Municipality do not have all their healthcare expenditure covered when using the NHIS which consequently results in dissatisfaction of the respondents in the services rendered at the health facilities. The NHIS appears not to be enough to ensure financial access to healthcare among the residents. The inability of the NHIS to cover all expenditure suggests that the primary aim of the scheme to protect citizens against the possibility of financial difficulties when subscribers were taking ill. The study further concludes that only few respondents were able to afford additional payments to cover healthcare expenditure when using NHIS. In addition, most subscribers perceived they do not receive the needed care when using the NHIS. The subscribers were not comfortable with the services of the providers when they use NHIS such that subscribers perceived that they are not welcome when visiting the health facility as NHIS subscribers.

### **6.1.3 The extent to which the scheme reach the vulnerable**

The study concludes that few residents were exempted from the NHIS subscription and suggest the existence of exemption policy which seems to be an important step to ensure financial risk protection against this population. The few beneficiaries of exemption were characterized as vulnerable including the aged, children under 5 years, Persons with Disabilities and Pregnant



women. The study concludes that though the beneficiaries of exemption were not many, access to this exemption policy was limited. It is important that such groups were given the opportunity.

#### **6.1.4 The nature of barriers to NHIS enrolment**

The study concludes that although most residents are subscribers to the NHIS and currently use their cards, it is below the initial rate of enrolment and use. The use of the NHIS within the Municipality has fallen over the past years. The study concludes on factors such as low quality of services offered with the scheme, unwillingness of clients to visit the facility regularly and limited funds to register for the scheme as causes of low NHIS uptake. The study again concludes that most clients found some difficulty in getting the opportunity to see doctors at the facility such that they are delayed to see the doctor when holding NHIS cards. Finally, the study concludes that the common challenges appear to discourage most people from renewing their NHIS subscription.

#### **6.1.5 The influence of Socio-demographic factors on NHIS status**

The study concludes that there was an increase of the odds of NHIS status with the age of respondents. The age distribution of respondents influenced their NHIS status of respondents such that those who were above 58 years were less likely to have their NHIS status as active. Again, the study concludes that females were more likely to have their NHIS status active compared with males. Similarly, different educational level consistently influenced the NHIS status of respondents as active. Individuals who described their marital status as married consistently had higher likelihood of having their NHIS status active compared to those who were single.

## 6.2 Recommendations

The study aimed to provide empirical evidence to gain better understanding of factors that affect the NHIS status of residents within the Denkyira Municipality. The evidence from the study will inform stakeholders about the programmatic actions to address factors affecting enrolment into the scheme in the municipality. Based on the findings of the study, the following recommendations have been made and divided into Government, Municipal NHIS management team, Health Professionals and Community members or clients.

### 6.2.1 Government/Ministry of Health/National Health Insurance Authority

- ✓ The study found that some clients or patients make additional payment for drugs to meet all their health care needs. This practice is likely to influence clients not to engage in the NHIS. It is therefore recommended based on this empirical evidence that the NHIA and the Ministry of Health provide measures to ensure that most of the medical expenses and needs of patients are covered when they visit the facility with NHIS. This will ensure that all clients are satisfied with the services. This could be achieved by ensuring that the NHIS medicines list is expanded to cover all disease and services.
- ✓ Though some clients who are regarded as vulnerable are exempted from paying the NHIS subscription. The study recommends that efforts should be made to improve the exemption strategy for vulnerable population. This could be achieved through involvement of leaders of vulnerable groups like disability into the NHIS committee at the National and Municipal levels. This will enable them lobby the committee and stakeholders about the need to include vulnerable groups into the scheme and the specific needs. Again The NHIA should consider reducing the exemption age of 70 years for elderly population to 60 years and

above in order for the scheme to benefit people between ages 60 to 69, whom the study revealed have financial difficulty in registering with the scheme.

- ✓ It is also recommended for further studies into the reimbursement challenges to guide policy directions, which will help ease the financial burden on accredited healthcare institutions. A successful removal of reimbursement challenges will help improve service delivery at the health facilities.

#### ***6.2.2 Municipal NHIS and Health directorate***

- ✓ The study found that most clients find some difficulty in getting the opportunity to see doctors at the facility such that they are delayed to see the doctor when holding NHIS cards. It is therefore recommended that health care providers within the municipality must be educated to provide prompt attention to all patients irrespective of whether registered with NHIS or not. This will make card bearing members to continue their subscription with the scheme since some members have the perception that they are being discriminated upon since they do not pay cash at the point of receiving services.
- ✓ The Municipal NHIA in collaboration with the health directorate should embark on a public education on the benefits of enrolling with the scheme to increase the subscription rate.
- ✓ The Municipal NHIS should find innovative approach to simplify the procedure for potential members of the scheme as well as members to ease the perceived bureaucracy associated with the process of registration.

- ✓ It is also recommended for further studies on the quality of care given by accredited health institutions. Studies to improve on the quality of care will help reduce the effects of factors contributing to clients' dissatisfaction when they visit health facilities with NHIS.

### **6.2.3 Community members or clients**

- ✓ The study found that singles, male population, illiterates and Muslims were the group who were less likely to have their NHIS status active. It is therefore recommended based on this empirical evidence to strengthen public education among these populations. The education could be delivered by the NHIS in the Municipality and the Health Directorate. Again, NGO's who work closely on health issues in the Municipality should also provide education to these populations about the need to enrol into the scheme to ensure universal access to healthcare.

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# KNUST



## APPENDICES

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI  
SCHOOL OF MEDICAL SCIENCES DEPARTMENT OF COMMUNITY HEALTH**

***ASSESSING NATIONAL HEALTH INSURANCE SCHEME ON HEALTHCARE  
UTILIZATION: A CASE STUDY OF RESIDENT WITHIN UPPER DENKYIRA EAST  
MUNICIPAL***

**Dear Sir/Madam**

The purpose of this questionnaire is to *assess the contribution of the National Health Insurance Scheme (NHIS) on healthcare utilization of resident within Upper Denkyira East Municipal*. It would be greatly appreciated if you could complete this questionnaire. The study is for academic purposes. You are, however, assured of the confidentiality and anonymity. Thank you

**Isaac Ofori Acheampong – Student**

Please answer the following questions with a tick [☐]

**SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS**

1. Age.....
2. Gender:    a) ... Male   [☐]    b) [☐]
3. Level of Education:
  - a) No formal education
  - b) Primary    [☐]
  - c) Secondary [☐]
  - d) Tertiary    [☐]
  - e) Other (specify): .....
4. Marital status
  - a) Single            [☐]
  - b) Married          [☐]
  - c) Divorce          [☐]
  - d) Widow           [☐]
  - e) Co-habitation [☐]
5. Occupation:
  - a) Government (Civil Servant)
  - b) Self-employed [☐]
  - c) Farming           [☐]
  - d) Trading           [☐]
  - e) Apprenticeship [☐]
  - f) None                [☐]
  - g) Other (Specify): .....
6. Religion: .....

7. Ethnicity: .....
8. In a typical month, how much do you earn? GHC.....
9. Place of resident:
- a) Slum ☐
  - b) Zongo ☐
  - c) Old Town ☐
  - d) New site ☐
  - e) Estate ☐
  - f) Other (Specify): .....
10. Household size: .....
11. How many dependents do you have? .....
12. What asset do you owe: .....

## SECTION B: ACCESS AND BARRIERS TO NHIS

1. Have you ever registered for the National Health Insurance scheme?
- a) Yes ☐
  - b) No ☐
2. Do you currently use NHIS?
- a) Yes ☐
  - b) No ☐
3. Why did you register for the NHIS?
- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....
4. If no to Qn 2, what is the main reason for not using the NHIS scheme?
- a) Low quality services offered ☐
  - b) Do not have money to register ☐
  - c) Too expensive ☐
  - d) Do not visit facility regularly ☐



- e) Distant to facility too far ☐
- f) Other (specify) ☐
5. If no, do you intend to enrol in the scheme in future?
- a) Yes
- b) No
6. How much do you spend on your healthcare monthly? GHC.....
7. What is the source of payment for your NHIS?
- a) Self-payment ☐
- b) Exemption benefit to payment ☐
- c) Dependant ☐
- d) Deduction from Salary ☐
- e) Other (Specify) ..... ☐
8. Does your NHIS subscription meet all your healthcare expenditure when you access the health facility?
- a) Yes
- b) No
9. Have you ever been exempted from paying the NHIS premium?
- a) Yes
- b) No
10. If yes, what is the reason for your exemption?
- a) Aged at 70+ ☐
- b) Person with Disability ☐
- c) Child under 5 years ☐
- d) Other ☐
11. Do you know anyone who has been exempted from paying the NHIS premium? a) Yes ☐
- b) No ☐
12. What is your source of information about the scheme?
- a) Media ☐
- b) Friend ☐
- c) Dependant ☐
- d) Scheme providers ☐
- e) Other: (Specify) ☐

13. Would you be willing to pay a higher premium for additional services on the NHIS? a)  
Yes ☐  
b) No ☐

14. How was the reception when you visited the health facility  
a) Very welcomed  
b) Indifferent  
c) Not welcomed

15. Did you find the services rendered attractive?  
a) Yes  
b) No

16. Have you ever been discriminated against when you visited the health facility with NHIS?  
a) Yes  
b) No

17. If yes, on what bases were you discriminated against?

.....  
.....  
.....  
.....

18. Did you have difficulty getting a card to see a doctor?  
a) Yes  
b) No

### SECTION C: ACCESS TO HEALTHCARE

1. What is your source of healthcare services?

- a) Hospital ☐  
b) Clinic ☐  
c) Health centre ☐  
d) Polyclinic ☐  
e) Other (Specify): ..... ☐

2. How many minutes do you spend to reach your source of healthcare from your residency?.....

3. Did you receive the care you need when you visited health facilities with NHIS? a) Yes  
☐

b) No ☐

4. Do you have to pay for health services when holding NHIS?

a) Yes ☐

b) No ☐

5. Does the NHIS meet all your healthcare expenses?

a) Yes ☐

b) No ☐

6. Are you usually comfortable with the services of providers whenever you use NHIS? a)

Yes ☐

b) No ☐

7. Please tick ☐ to indicate your opinion on the following statements in Table 1.

**Table 1: Opinion of respondents on the level of effects of the NHIS on healthcare utilization**

<i>Statement: The NHIS</i>	<i>SA</i>	<i>A</i>	<i>N/A</i>	<i>D</i>	<i>SD</i>
a) is insufficient for me to access healthcare services					
b) helps to receive quality health care					
c) has improved my health status since my enrolment					
d) makes it easier for me and my dependents to access healthcare					
e) ensures that the poor enjoys the same rights to healthcare as the rich in society					
f) does not cover most of my health conditions					
g) premium is too expensive considering my finances					

*Scale Strongly agree (SA) Agree (A) Not applicable (N/A) Disagree (D) Strongly disagree (SD)*

8. From your experiences as NHIS subscriber, which health condition (s) did the premium covered and/or did not covered when you accessed healthcare

Health condition	Yes	No
a) Referral for Surgery abroad and implants		
b) Health screening or medical examination		
c) Hypertension, stroke and diabetes related conditions		
d) Dental related care		

e) Pregnancy related care		
f) Typhoid fever		
g) Malaria		
h) Diarrhoea		
i) General Body pains		
j) Injuries		
k) Road accidents		

Thank you!!!

### **Participant Information Leaflet and Consent Form**

**This leaflet must be given to all prospective participants to enable them know enough about the research before deciding to or not to participate**

#### **Title of Research:**

Assessing National Health Insurance scheme on healthcare utilization: A case study of resident within upper Denkyira East Municipal

**Name(s) and affiliation(s) of researcher(s):** This research is being conducted by ISAAC OFORI ACHEAMPONG of the Community Health Department of KNUST.

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

Access to quality health is an indicator for healthy life and for human capital development. It is also a social factor towards the development of a nation such that it improves the productive ability



of citizens to create wealth (Marmot et al., 2008). Life expectancy is improved when there is improvement and access to quality healthcare services (Mugilwa et al., 2005). However, individuals in better-off countries tend to have higher access to health services than those in poor countries such that the poor in such countries have the less access.

The early 1980's saw cost recovery system which allows patients to pay out of pocket before access to healthcare popularly known in Ghana as —cash-and-carry system. This was part of the structural adjustment programme developed by IMF and World Bank against the background of economic recession and limited resources (Mensah et al., 2010, Agyepong, 1999). This system created several barriers to healthcare access especially poor communities in transitional countries and makes households poorer (Xu et al., 2003, Xu et al., 2007). Xu et al. (2003) found three conditions for catastrophic payment of health services including the availability of the required health services for payment, low capacity to pay and lack of health insurance or provisions for prepayment mechanism.

Over the last decade, financing healthcare through the development of social or community health insurance is increasingly recognized as powerful tool towards the universal health coverage (Carrin et al., 2005). Many countries in Africa including Ghana, Nigeria, Tanzania Rwanda, Kenya and Senegal are practicing a variety of social and community health insurance which mobilize resources from the public and private sector to finance the scheme (Mensah et al., 2010, Blanchet et al., 2012, Jütting, 2004). Therefore, health insurance offers the potential to mobilize funds for essential public health services to protect the risk of financial access to services among poorest population. This is a common strategy adopted by governments to establish compulsory scheme for public sector workers and establish equal scheme to cover workers in the informal sector simultaneously (Creese et al., 1997, Dror and Jacquier, 1999, Ekman, 2004).

As part of the millennium development goals targets to reduce poverty and improve healthcare utilization, Ghana passed the National Health Insurance (NHIS) bill into law in 2003 and began full implementation in autumn 2005 (Witter and Garshong, 2009, Akazili et al., 2012). The health insurance had as primary objective to make healthcare affordable and increase the general utilization of drugs and healthcare particularly among the most vulnerable. Individuals insured have the likelihood of using outpatients' facilities and public providers especially in lower income communities (Jowett et al., 2004). According to a study by Ansah et al. (2009), individuals in Ghanaian society enrolled in health insurance have the greater chance of visiting clinics, obtain prescription and seek formal healthcare. Pregnant women also have the likelihood of utilization prenatal care, give birth in a hospital, and have skilled attendants present at birth (Mensah et al., 2010). Witter and Garshong (2009) also found that, outpatients per-capita has increased significantly in Ghana after the introduction of the NHIS in 2005.

Despite the above, poor communities are not able to mobilize revenue towards the scheme attributed to the fact that they are mostly unemployed. Only a small proportion of the population is however registered as indigents to benefit from the policy (Witter and Garshong, 2009). These affect their participation in insurance schemes which is a major contributing factor to their exclusion in lower income communities' particularly rural areas (Preker and Carrin, 2004). In spite of these, in recent years scholars have started focusing on the other side of the coin, without

targeting the impact of the policy on Ghanaian citizens especially the most vulnerable. This study therefore through light on the impact on NHIS in the Upper Denkyira East municipality to make recommendation how the programme could capture the most vulnerable.

**Purpose(s) of research:**

The study aims to assess National Health Insurance scheme on healthcare utilization of resident within Upper Denkyira East Municipal

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

Residency of Upper Denkyira East Municipal will be systematically be selected as participants for the study. I will conduct semi structured interviews with you as subscribers of the NHIS using semi-structured questionnaires. I will ask questions base on the objectives and conceptual framework of this study. You will then be required to give me your experiences as you use the NHIS. If you find it difficult to read and write the answers to the questions, I will assist by writing when you provide the answer. Three hundred and Eighty (380) beneficiaries of NHIS like you will be participating in this study. I will report the information you give me on tables and graph form. I will also use mean, median and standard deviation to report the information you give. I will not link your name with any variable in the reporting stage of the study.

**Risk(s):**

There will be inconvenience to respondents because they are mostly busy and will have to make time for me as far as the administration of the research tools are concerned.

**Benefit(s):** Participant will have the chance to express their views on usefulness of the NHIS policy and provisions that needs to be available pertaining to their subscription to the schemes

**Confidentiality:**

**Information collected will be coded and no name will be recorded. Data collected cannot be linked to any one in anyway. No name or identifier will be used in any publication.**

**Voluntariness:**

**This study is voluntary. You may choose to be a part or not. No sanctions will apply.**

**Alternatives to participation:**

**If chosen not to participate in this research it will not affect you in anyway.**

**Withdrawal from the research:** You may choose to withdraw from the research for which there will be no need to explain yourself..

**Consequence of Withdrawal:** There no consequence for withdrawing from the research neither will there be any benefit or care lost.

**Costs/Compensation:** A cake of soap

**Contacts:** If you have any question concerning this study please do not hesitate to contact ISAAC OFORI, +233208562500)

**The Office of the Chairman Committee on Human Research and Publication Ethics Kumasi**  
**Tel: 03220 63248 or 020 5453785**

### **CONSENT FORM**

**Statement of person obtaining informed consent:**

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

DATE: \_\_\_\_\_ NAME: \_\_\_\_\_

**Statement of person giving consent:**

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

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

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

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

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



NAME: \_\_\_\_\_

DATE: \_\_\_\_\_ SIGNATURE/THUMB PRINT: \_\_\_\_\_

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

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

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

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

MOTHER'S NAME: \_\_\_\_\_

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

FATHER'S NAME: \_\_\_\_\_

