SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA
LEGON

NATIONAL HEALTH INSURANCE SCHEME: PREDICTORS OF CARD RENEWAL AMONG SUBSCRIBERS IN THE EAST GONJA DISTRICT

BY
STEPHEN AWUDU
(10551904)

THIS DISSERTATION SUBMITTED TO THE UNIVERSITY OF GHANA LEGON, IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF PUBLIC HEALTH DEGREE

JULY, 2016

DECLARATION

I, Stephen Awudu, hereby declare that apart from references to other people's work, which have been duly acknowledged, this work is the result of my own independent work. I further declare that this dissertation, either in whole or in part has not been submitted to any University for the award of any degree.

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STEPHEN AWUDU

STUDENT

.....

DATE

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DR. PATRICIA AKWEONGO

ACADEMIC SUPERVISOR

.....

DATE

DEDICATION

I dedicate this thesis to my lovely and supportive wife, Iddi Jemila Sanda, a senior nursing officer at the Tamale Teaching Hospital (TTH). Her support and companionship continues to be an inspiration to me.

ACKNOWLEGDEMENTS

Completion of this program was made possible with the assistance of several people and institutions. My first appreciation goes to the Almighty God for granting me the opportunity and strength throughout this research project.

My second thanks go to my supervisor, Dr. Patricia Akweongo who patiently guided me to the successful completion of this thesis. I very much appreciate all her genuine and constructive criticisms and recommendations based on her rich experience earned from many years of lecturing, research and community work.

Again, I acknowledge the significant inputs made by all faculty members of the Health Policy, Planning and Management Department of School of Public Health, Legon. I very much appreciate their guidance and encouragement that kept me going through out this project.

My gratitude also goes to the principal of Kpembe Nursing and Midwifery Training College (KNMTC), Hajia Shirley Issah for her unconditional approval of my graduate training. This kind gesture from her is highly appreciated.

I am also thankful to my research assistants especially Maximus Dieberi (Health Tutor in KNMTC) and any other person who contributed in diverse ways to the success of this thesis.

I am indebted to my parents, brother and sisters for their unflinching support all these years. I equally extend this gratitude to my father and mother in-laws for their support.

I express many thanks to my family especially my two sons, Stephen Opoku-Kwarteng and Emmanuel Opoku-Kwarteng for their cooperation during this research.

Finally, to students of Kpembe NMTC, I say thank you all for your prayers and good wishes for me throughout my graduate studies. God bless you my little love ones.

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LIST OF ABBREVIATIONS

1. CEO… ……Chief Executive Officer
2. CBHIS……Community Based Health Insurance Scheme
3. CHPS……Community-Based Health Planning and Services
4. DANIDA ……Danish International Development Agency
5. DHIS…….....District Health Insurance Schemes
6. EA……...Enumeration Areas
7. GDHS…….Ghana Demographic and Health Survey
8. GHS…….....Ghana Health Service
9. GOG……...Government of Ghana
10. GSS……Ghana Statistical Service
11. ICT……Information Communication and Technology
12. ID……Identification Card
13. LEAP…….Livelihood Empowerment Against Poverty
14. LI…….....Legislative Instrument
15. LMIC…….Low and Middle Income Countries
16. MHO…….....Mutual Health Insurance Organization
17. MMDAs ……...Metropolitan Municipal and District Assemblies
18. MOGCSP……..Ministry of Gender, Children and Social Protection
19. MOH……Ministry of Health
20. NGO……..Non-Governmental Organization
21. NHIA……...National Health Insurance Authority
22. NHIL……...National Health Insurance Levy
23. NHIS.....National Health Insurance Scheme
24. OPD……..Out Patient Department

25. PHC….. ……Primary Health Care

26. RCH…….Reproductive and Child Health

27. SSNIT…….Social Security and National Insurance Trust

28. SHI….....Social Health Insurance

29. SHIS…….. Social Health Insurance Scheme

30. UHC…….....Universal Health Coverage

31. WHO……..World Health Organization

DEFINITION OF TERMS

1. Active membership: A member of the National Health Insurance Scheme (NHIS) is said to be active if he/she has renewed his membership by paying premium and can access health services from accredited facilities.

2. Previously enrolled: Individual members of the NHIS who have not renewed their membership after expiration.

3. Provider factors: Factors related to health service personnel and service facilities where clients obtain health care such as waiting time, staff attitude and availability of drugs.

4. Scheme factors: Factors related to the National Health Insurance Scheme such as location of schemes' office and premium price.

ABSTRACT

Introduction: Ghana's National Health Insurance Scheme (NHIS), which was established in 2003 by Act 650, had an objective of reaching a hundred percent coverage within five years of its operations. The scheme is over ten years old with a reported national coverage of about 60% and active membership of about 35%. A number of reasons have been identified to account for the slow progress by the scheme towards universal coverage. National health insurance renewal rate among insurance subscribers has not been reported in the East Gonja District. However, the drop-out rate reported in the district was higher (37%) than the reported average (16%) across the country. The reasons for non-renewal as reported across the world include low levels of income and low levels of awareness of insurance benefit package among enrollees residing in the district. This study sought to identify and assess the determinants of health insurance card renewal among subscribers in the East Gonja District.

Methods: A descriptive cross-sectional quantitative method was employed to assess individual, provider and scheme related factors that influence renewal of health insurance membership in the East Gonja District. A sample of three hundred and eighty National Health Insurance Scheme subscribers, were randomly interviewed in households from 1st June to 1stJuly, 2016. STATA version 13 software was used to analyze the data by descriptive and regression analysis using Chi-square as the statistical test.

Results: Three hundred and eighty insurance enrollees aged 18-69 years participated in the study. Out of the 380 respondents, 264 (69.5%) were active members of the scheme whilst 116(30.5%) failed to renew their membership. The study demonstrates that NHIS members' knowledge of their card's expiry date has the strongest

association (p=0.001) with the decision to renew insurance subscription. Scheme staff attitude, benefit package and premium price as scheme factors; and waiting time, provider staff attitude, drug availability and distance to facility as provider factors were found not to influence insurance renewal decisions.

Conclusion: National Health Insurance active membership was high, (69.5%) compared to the reported national average (35%) among subscribers in the East Gonja District. The subscribers' decisions to purchase national health insurance through card renewal were not influenced by provider, scheme and individual factors. However, an individuals' awareness of the expiry date on insurance card was a significant predictor of insurance renewal. This highlights the need to have reminders on expiry dates of National Health Insurance Scheme membership to increase renewal rates.

CHAPTER ONE

INTRODUCTION

This chapter of the study includes the background of the study as well as the problem statement, justification and conceptual framework.

1.1. Background

The militating impact of catastrophic health spending on households of developed and developing nations drove many international organizations to call for potent health financing alternatives that would protect citizens of countries across the world against poverty arising from excessive out-of-pocket payment for health care at the point of service use (O'Donnell & Doorslaer, 2005; WHO, 2005; World Health Assembly, 2005; Xu *et al*, 2005). Catastrophic health expenditure describes a situation where a household spends amount equal or more than 40% of its disposable earnings (Xu *et al*., 2003). This spending occurs through direct payments (out-of-pocket) for health services at the expense of basic needs of households such as food, shelter and clothes (Mathur, Paul, Prasad, & Das, 2014; Giedion & Andr, 2013). Households recognizing the debilitating effects of health spending do not utilize health care services for fear of being pushed into abject poverty. However, refusal to seek health care would come at a cost, including suffering deformity, premature death and loss of productivity (Xu *et al*., 2005).

It is against this background that member countries were urged to initiate and speed up progress toward the realization of universal health coverage (UHC) that would remove all barriers to health care utilization and ensure access to basic health care services to all citizens regardless of geographical location and socio-economic status (World Health Report, 2013; Marten, & Etienne, 2012). To remove barriers to health

care utilization, viable health financing alternatives are required for the effective implementation of UHC. Social Health Insurance (SHI) has been recognized globally as a reliable health care financing policy that guarantees rapid scale up of health coverage (Evans *et al*., 2012; Amporfu, 2013).

The World health Organization (WHO) recognizes SHI as financing and managing health care through risk pooling. This involves the pooling of health risks and resources from contributions of members and other stake holders (government and enterprises). SHI which doubles as a social intervention has been embraced by governments of developed and developing worlds as the single most important health policy intervention that would provide high quality health care to their citizens without risk of financial hardship (Schneider, 2004; WHO, 2013).

In Africa, many governments have moved away from "user fees" to implement forms of SHI as a specific strategy to finance and provide health care to all their citizens without barriers (Mclntyre & Gilson, 2005; Witter, 2010; World Bank, 2012). However, the future of these SHI schemes in some African countries is bleak with low patronage. SHI coverage across Africa is low, with 15% coverage in Tanzania, 20% in Kenya, (Mtei, Makawia, & Masanja, 2014; World Bank, 2015) and this is attributed to non-enrolment, non-renewal and subsequent drop-out of scheme stemming from high insurance premiums and service quality issues (Jehu-Appiah, Aryeetey, Agyepong, Spaan, & Baltussen, 2012; Djokoto, 2014).

Ghana showed the way as the first sub-Saharan African country by implementing the National Health Insurance Scheme (NHIS) in 2004 as a health financing mechanism to ensure access to health care by all citizens and all persons visiting Ghana (GOG, 2003; Jehu-Appiah *et al.*, 2012). Studies demonstrate an increased health care

utilization with the inception of NHIS (NHIA, 2010; Blanchet, Fink, & Osei-Akoto, 2012; Kotoh, 2013). For example, barely two years after the implementation of the policy, Out Patient Department (OPD) attendance had increased from 0.31% to 0.41% in the Asante Akim South District (Otchere, 2009). The country as a whole has witnessed significant OPD and in-patient attendance with 597,859 Outpatient utilizations in 2005 through 9,339,296 in 2008 up to 27,350,847 by end of 2013. In a similar manner, in-patient service had increased from 28,906 in 2005 to 617,231 in 2008 and by 2013, it had shot up to 1,610,622 (Parliarment of Ghana, 2013).

NHIS utilization is affected by a multiplicity of factors categorized into three main factors, namely individual, provider and scheme factors. Studies have explored aspects of these factors in parts of Africa and for that matter Ghana (Atinga, Abiiro, & Kuganab-Lem, 2015; Djokoto, 2015).

With a renewed mandate to achieve UHC in the shortest period of time, the National Health Insurance Authority (NHIA) has scaled up efforts at enrolment of persons and NHIS membership renewal given the current membership of 35% (Abiiro & Mclntyre, 2013). The NHIA recognizes that the achievement of UHC would depend on a promising active membership (NHIA, 2012) and rolled out effective measures that were to increase coverage from 33% in 2011 to 60% by 2014. The specific measures include special registration exercise to enroll indigents (the poor who do not have job and cannot afford premium), orphans, prison inmates and inmates of leprosaria (NHIA, 2011). What the NHIA fails to recognize however, is that the situation of membership non-renewal (16% - 23%) (Jehu-Appiah *et al.*, 2012;Mohammed *et al.*, 2015) would stall efforts to realize the set target. This is because insurance policy non-renewal is shown to have a negative influence on the size of the insurance (Criel & Waelkens, 2003;Flessa, 2009;).

The forgoing observation is a demonstration that the performance of an insurance scheme measured by its progress toward UHC hinges on its ability to enroll new members as well as maintaining existing members. This calls for research work to assess factors that influence individuals' NHIS renewal utilization to inform policy on UHC in the study area and beyond.

Several studies have revealed why non-insured individuals do not take up insurance (Abiiro & Mclntyre, 2013; Djokoto, 2015). However, not much work has been done to find out why previously insured individuals fail to renew their membership.

1.2. Problem statement

In 2003, when Ghana passed the health insurance Act (Act 650), the objective was to achieve Universal Health Coverage within 5 years of the scheme's implementation (Arhinful, Kusi, & Zakaria-Akoto, 2007). Over 10 years since the inception of the policy, a total of 18.5 million of Ghana's population have been registered (Djokoto, 2015). Of the registered members, only 8.64 million representing 34.5% constituted active membership as at September 30, 2012. (NHIA, 2012; Parliament of the Republic of Ghana, 2013), far from the envisioned 100% coverage. Notable among the factors on the low active membership in the NHIS is subscriber non-renewal when membership expires (Djokoto, 2015). Recent studies carried out in slum communities in the Greater Accra region reported drop-out rate of 34.8% (Atinga *et al*., 2015), 23.9% in the Volta region (Boateng & Awunyo-Vitor, 2013), 16% in the Eastern and Central regions (Jehu-Appiah *et al*., 2012) and 36.5% in the East Gonja District in the Northern region (Abdul, Akeji, Abdu, & Kasimu, 2014).These dropout rates across the country threatens the NHIA's quest for UHC. Factors known to affect enrollment and renewal of health insurance membership include individual, provider and scheme

factors such as distance to nearest health facility, and scheme factors (location of scheme, staff attitude, premium price and benefit package).

The study assesses factors that contribute to an individual's decision to renew NHIS membership in the East Gonja District of Northern Ghana.

1.3. Justification.

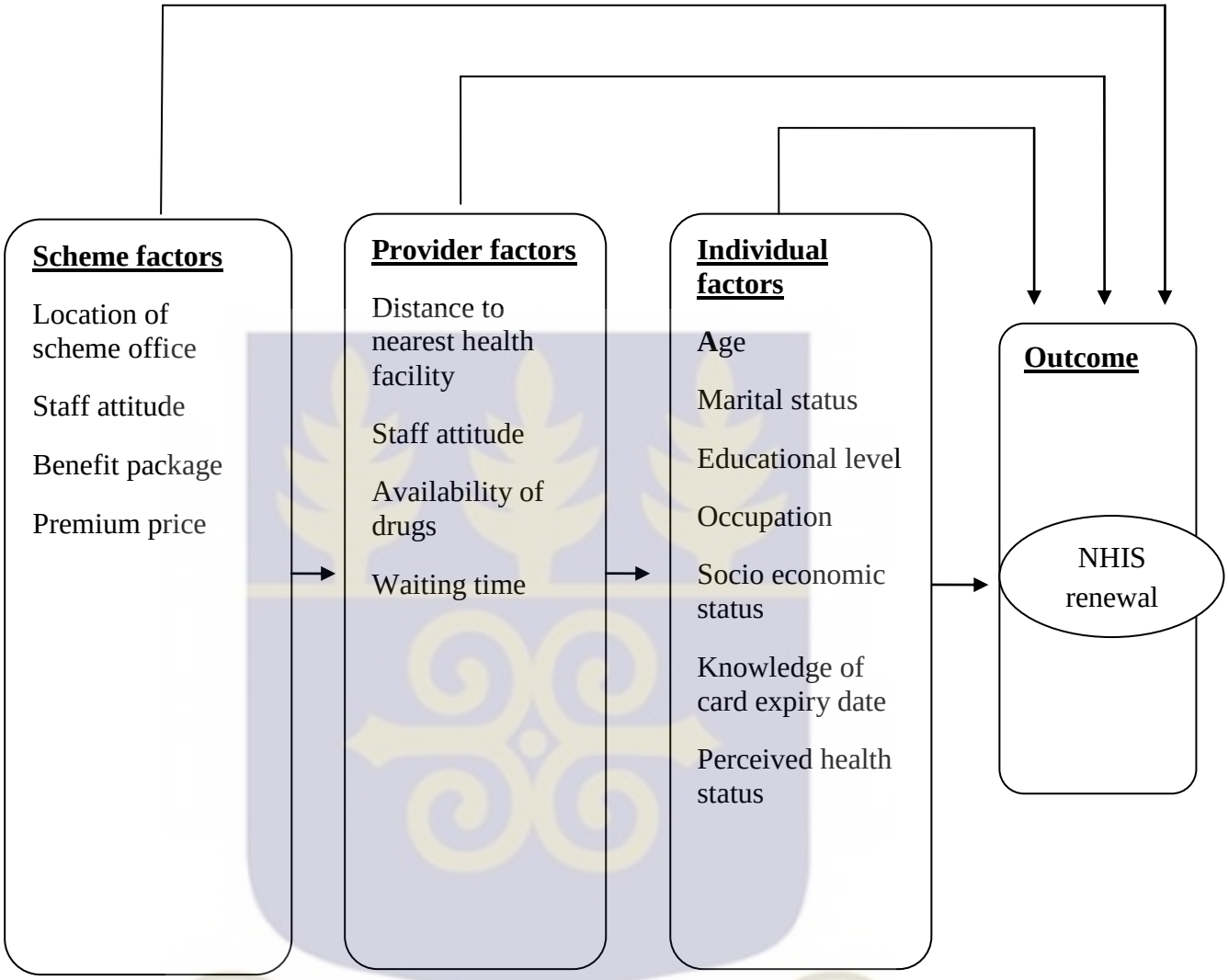
Several studies (Arhin-Tenkorang, 2001; Carrin& James, 2005; Aikins, 2005) have explored the factors that contribute to low National Health Insurance Scheme (NHIS) subscription but few research have been done to ascertain what accounts for failure by NHIS enrollees to renew their membership upon expiration.

The study findings may contribute to knowledge of individual, provider and scheme factors that affect renewal of insurance membership. The findings of the study may provide NHIA and Ministry of Finance and Economic Planning and Ghana Health Service evidence on renewal of NHIS membership that may lead to policy adjustment to enhance coverage. Study findings may also assist the National Health Insurance authority (NHIA) and the Ministry of Gender, Children and Social protection (MoGCSP) in identifying indigents and registering them into the scheme. Study findings are also expected to provide the NHIA, MOH/GHS with information on health utilization behaviour in relation to NHIS, which may subsequently guide NHIS utilization sensitization campaigns to enroll and retain membership in the NHIS.

Finally, information on NHIS subscriber perception of the quality of service rendered by health care providers and scheme provider may shape policy at the national level in terms of making scheme and provider services more responsive and attractive.

1.4 Conceptual frame work

Figure 1: Conceptual frame work for NHIS membership renewal



Source: Adapted from the Behavioural model of health service use(Andersen, 1995).

The Behavioural model propounded by Andersen (1995), snugly fits into the context of this study through review of related literature. Hence it's adoption. This framework tries to demonstrate the influence of a number of determinants on the renewal of national health insurance scheme (NHIS) membership. The decision of an enrollee to renew membership is informed directly and indirectly by individual, scheme and provider factors.

It is believed thatindividual factors such as age, marital status, educational level, occupation and perceived health status constitute a critical component of health insurance utilization by an individual. Scheme and provider factors are equally important, but if a person does not consider scheme and provider services as relevant, he/she may be less likely to use it.

Globally, socio-demographic characteristics have been found to influence the utilization of health care in both developed and developing countries. The model illustrates how the age of an insured individual could shape his/her decision to utilize health insurance through periodic membership renewals. Old age (70 years and above) which is associated with health problems drives the aged to utilize health insurance more than other age groups except for children under five years.

Perceived health status represents a strong determinant of health insurance utilization. Persons with chronic health problems are more likely to utilize health insurance more than those perceive themselves as healthy. This phenomenon raises the question of adverse selection where people avoid insurance until they believe they have health problems that warrant increased health care utilization (Mladovsky, Soors, Ndiaye, Ndiaye, & Criel, 2014).

Marital status has also been found to influence an individual's decision to utilize health insurance. Women who are not married and those who are separated from their partners probably have more autonomy when it comes to decision making regarding their own health than their counterparts who are married and living with their spouses and will have to seek partner's decision regarding care from health institutions.

Education level of a person in part influences his/her socioeconomic status and autonomy. Higher education may translate into an improved autonomy in decision-

making power of an individual which increases the chances of a person to make confident decisions on the utilization of health services. A person's educational level also relates to occupation and income in that compared to individuals without education, a more educated person has an increased chance of securing a well-paying job. This improves financial accessibility to the utilization health care services through health insurance.

The model also demonstrates that even if an individual is predisposed to the utilization of health insurance, they should be able to reach and obtain the available services. Other factors which may drive an individual to renew health insurance membership include; provider factors (distance to nearest health facility, staff attitude, availability of drugs and waiting time) and scheme factors (location of scheme office, staff attitude, benefit package and premium price).

Distance to health care facilities and scheme offices and where clients seek care and NHIS renewals take place respectively has a bearing on insurance utilization. Long distances to these facilities may discourage subscribers from renewing membership while short distances could be a motivation to renewal of membership. In rural communities, the issue of distance may be worsened by the absence of transportation.

The cost of premium of insurance is also recognized as an important factor in the utilization of health insurance as the poor are unable to subscribe and remain in active membership compared with the rich (Akazili *et al*., 2014).

Staff attitude toward client in both provider facilities and scheme offices has been identified as a critical characteristic that influence an individual's utilization of health care services through health insurance schemes. These perceptions formed by clients

are a function of the quality of service in terms of availability of drugs, long waiting periods and poor interpersonal relationship by staff (Criel & Waelkens, 2003).

1.5. Research questions

1.5.1 Main research question

What are the factors influencing national health insurance renewal in the East Gonja District?

1.5.2 Specific research questions

The specific questions of the study were as follows;

1. What proportion of households and individuals renew their NHIS membership in the East Gonja District?
2. What are the individual factors that influence NHIS membership renewal among subscribers in the East Gonja District?
3. What provider factors contribute to NHIS membership renewal among enrollees in the East Gonja District?
4. What are the scheme factors that influence NHIS membership renewal among subscribers in the East Gonja District?

1.6 Objectives of the study

1.6.1 General objective

The general objective of the study was to assess the factors that influence renewal of National Health Insurance Scheme membership among subscribers in the East Gonja District.

1.6.2 Specific Objectives

The specific objectives of the study were as follows;

1. To determine the proportion of households and individuals renewing their NHIS membership in the East Gonja District
2. To determine individual factors that influence NHIS membership renewal among subscribers in the East Gonja District.
3. To identify provider factors contributing to NHIS membership renewal among enrollees in the East Gonja District.
4. To determine scheme factors that influence NHIS membership renewal among subscribers in the East Gonja District.

CHAPTER TWO

LITERATURE REVIEW

This chapter focuses mainly on the thematic areas of the study such as individual, provider and scheme factors that influence insurance renewal.

2.0. History of health insurance in Ghana

There have been several efforts at equitable health care financing since the start of organized health care services Ghana (Aikins, 2005). The Hospital and Dispensary Fee Ordinance was passed into law in 1898 (Arhinful, 2003). In an effort to ensure equity under the ordinance, officials in government and their relatives paid a minimal admission fees at the point of service use whilst those who were not government officials and non-Europeans and their dependents paid according to how much they earned (Arhinful, 2003).

Shortly after independence in 1957, the fee-free healthcare policy was introduced in government owned health facilities in the country (Djokoto, 2015). The free health care policy could not however, be sustained following an economic decline in the 1960s (Krishna, 2005).The Hospital Fees Regulation (Legislative Instrument (LI) 1277) was introduced in 1963 by the government at that time as a measure to sustain health care in public facilities (Aikins, 2005). This led to what was referred to as insignificant fees. By the late 1970s, user-fees had increased tremendously in public facilities across the country as an attempt to raise revenue to support health care and also to discourage frivolous use but the fees were highly subsidized and therefore, could not achieve its intended objectives (Goodman & Waddington, 1993). Heavy cuts in budgetary allocation in the 1980s to the health sector rendered the health care

efforts unsustainable in the country. There were regular drug stock-outs in public health facilities, unavailability of equipment and other consumables (MOH, 2004).

The Legislative Instrument (LI) 1313 was passed to replace the LI 1277 in 1985 with the aim of improving the quality of health care service across the country (Sachs, 2012). The LI 1313 specified the fee levels for consultations, various diagnostic procedures specific medical, dental and surgical services, full cost recovery for all drugs and in-patient accommodation (Sachs, 2012; Kotoh, 2013). The policy improved the quality of health care in public health facilities and the availability of drugs, but it led to severe inequities in access to health care by the vulnerable groups in society such as the poor (Garshong, Waddington & Enyimayew, 1990; Nyonator & Kutzin, 1999; Ansah, Dakpalla, Huijts, 2002).

The reaction to the inequity in healthcare access was strong hence the Government began to explore other health care financing mechanisms (Agha & Do, 2009; Carrin & James, 2005). The first health care five-year program of work (POW) analyzed the country's health care system (Marten & Etienne, 2012). The challenges that were identified included geographical and financial access to basic and quality health care services, inadequate funding of health services, poor quality of care and poor inter-sectorial collaboration (Aikins, 2003; Akazili *et al.*, 2014).

In the early parts of the twenty first century, district-based mutual Health Insurance schemes became widespread. About 47 were in existence by 2001 and by the year 2003, there were about 168 District-based Mutual Health Insurance Schemes (DMHIS) (Kotoh, 2013).

The Nkoranza scheme which had coverage of 30% of its target population was adjudged one of the best performing schemes DMHIS (Kirigia, 2005). The scheme

was assisted by the Danish International Development Agency (DANIDA) and other NGOs (Arhin-Tenkorang, 2001) to expand coverage and sustain its membership. The government was inspired by the modest successes of some Community-based Health Insurance Schemes (CBMHIS) and continued the initiative of establishing a viable National Health Insurance Scheme (Arhinful, 2003). The Social Security and National Insurance Trust (SSNIT) also began planning another centralized health insurance scheme to be run by a company called the Ghana Health Care Company (Agyepong & Adjei, 2008).

The National Health Insurance Law (Act 650) was passed by parliament under a certificate of urgency in 2003 (Government of Ghana, 2003), after a national debate. The goal was to replace the then user-fee policy, popularly called'cash-and-carry' system, correct the inequity in access to health care and protect people (especially the poor) catastrophic healthcare expenditure. Though the Act makes membership obligatory for every resident of Ghanaian to belong to an insurance scheme the individual does not suffer any sanctions or penalties for not enrolling (WHO, 2012; Kotoh, 2013). The NHIS Act was repealed in 2012 and replaced by a new law (Act 852). The object of the Authority under Act 852 is to attain Universal Health Insurance Coverage (UHC) for resident in Ghana, and non-residents visiting Ghana, and to provide access to healthcare services to persons covered by the scheme (NHIA, 2012).

2.1. Health insurance financing models

The following are insurance financing models;

1. Classical Social Health Insurance (SHI) model defined by McIntyre (2003) as one "legislated by government with regular, compulsory contributions which are

income related and with a standardized, stipulated minimum package" (McIntyre, Doherty, & Gilson, 2003). The premiums or benefits can only be altered through a formal political process. Such systems could include multiple payers as in Germany or a single payer as pertains in Ghana under Act 852 and in Canada.

2. Community Health Insurance (CHI) also known as the Mutual Health Insurance (MHI) are based on three principles namely community cooperation, local self-reliance and prepayment (WHO, 2005)
3. Private health insurance: This involves an individual payinginsurance premium to private or voluntary insurance schemes to attend to their health problems. Clients choose voluntarily to purchase an insurance package that best meets their preference. Under individual insurance the premium is based on the individual's risk characteristics as against group insurance where the premium is calculated on a group basis. Private insurance may be bedeviled by massive exclusions of certain class of diseases or be hit by adverse selection where individuals only purchase insurance when they perceive themselves as sick (Djokoto, 2015)
4. Mixed models where social health insurance coexists through social security contributions with district wide mutual health Insurance Organization.

Ghana' NHIS operates based on both the social health insurance model and the community based health Insurance scheme (CBHIS) models to ensure a nationwide coverage of formal and informal sector workers.

2.2. Structure of the national health insurance scheme

Under the LI 1809 in March, 2004, the NHIS became operational. It sets out three distinct types of health insurance schemes that may be established and operated in Ghana as; the district mutual health insurance schemes, private mutual health

insurance schemes and private commercial insurance schemes (Nguyen H, Rajkotia Y, Wang H. 2011).

By 2011 the scheme, was operational in 145 districts and 5 satellite offices across the country (NHIS, 2011). The District Health Insurance Scheme is by far the most common in the Ghana with coverage of about 33% of the total population (Allegri *et al*., 2006). The private commercial health insurance schemes cover not than 1% of the population (Kotoh, 2013).

The Act established the NHIS council, now the National Health Insurance Authority (NHIA) as the governing body, headed by a Chief Executive Officer (CEO), is responsible for policy planning, monitoring and evaluation of the District Health Insurance Schemes (DHIS).The earmarked funds, National health Insurance levy (NHIL) and SSNIT contributions constitute about 90% of cash inflows (NHIS, 2011).

2.3. Features of the Ghana's NHIS

The NHIS is the first scheme in Africa initiated by government with a centralized authority and national coverage to give policy directions. The NHIS differs from the other insurance schemes in African countries such as Benin, Rwanda, Senegal and Tanzania (Chankova, Sulzbach, & Diop, 2008) in that it is a fusion of elements of both the social health insurance scheme (SHIS) and the community based health Insurance scheme (CBHIS) models to ensure nationwide(universal) coverage for both formal and informal sector workers. The informal sector constituted 35.5% of the active members whilst the formal sector constituted 4.2% of active members, as of 2012 (NHIS, 2012). The individuals in a district prepay for healthcare services under a centralized system of service provision and financing determined by the regulatory and statutory authority (NHIA). The new national health insurance Act, passed in

2012 (Act 852) establishes a unitary scheme as opposed to the individual district mutual schemes that existed under act 650. The rationale for the unitary system is the harmonization of the NHIS operations to ensure effective and efficient delivery of service that are responsive to clients' needs.

2.4. Membership in the NHIS

The object of the NHIS was to register all residents in Ghana within five years of the inception of the scheme. After more than ten years, only a third of the population of Ghana is active card bearers (Jehu-Appiah *et al*., 2011). Initially the scheme had challenges with tracking the number of active members of the scheme. The methodology that was used initially calculated the active membership by subtracting the number of all expired identification (ID) cards since the inception of the scheme from the sum of all the ID cards issued and renewed (Jehu-Appiah *et al*., 2011). The limitations of this methodology included; the cumulative number of ID cards issued includes members who have engaged in multiple registration and thus over estimated the number of ID card holders, the cumulative number of ID cards issued members who have died and thus also over estimated the number of ID cards and finally the cumulative number of expired ID cards was not accurately tracked and therefore was underestimated.

A new methodology was therefore developed based on the sum of the number of new members registered for a given year and the number of renewals made in the year. The ICT platform was used in the extraction of the number of new members registered and the number of enrollees who renewed their membership during the given year. The new Information Communication and Technology (ICT)-based

methodology could however not be applied retrospectively. Table 2.1 below presents the scheme-membership trend from 2005 to 2011.

Table 2.1: Trend in NHIS Membership from 2006 – 2011

Year	2006	2007	2008	2009	2010	2011
Registered members	3867862	8184284	12518560	14511777	1831366	2139240 2
Active membership Old method	2521372	6643371	9914256	10638119	1803136 6	2139240 2
Active membership New method	N/A	N/A	N/A	N/A	8163714	8227823

(Source-NHIA, 2011).

The NHIS (2011) reported that 8 million people representing 33% of the population were active card bearing members of the scheme as at December 31st, 2011. Despite the significant strides, the NHIS identified low membership as a setback. It therefore, resolved to intensify membership mobilization in order to increase membership to 40% by the end of the year 2012. Specific activities planned to improve membership included; to support special registration exercise, train scheme and regional staff and monitor adherence to standards. Other activities to increase coverage were enumerated as follows; to support the enrolment of indigents, beneficiaries of Livelihood Empowerment AgainstPoverty (LEAP), a program designed to assist the poor in households and the vulnerable to achieve social integration, inmates of psychiatry hospitals, leprosaria and orphanages (NHIA, 2011). The scheme increased its membership through these measures as it registered about 1.2 million and 1.5 million extremely poor people in 2013 and 2014 respectively (NHIA, 2015). However, there has not been emphasis on measures to ensure that previously registered members renew their membership.

2.5. Non-renewal of membership

Non-renewal of membership has been identified as a threat to the sustainability of community based health insurance schemes (Dong *et al*., 2009). The main effect it has on the insurance scheme is to reduce the size of the insurance pool. The secondary effect is the negative influence it exerts on enrollment of new members and further drop outs. A good example that has been reported in literature comes from the Maliando Scheme which only lasted 2 years despite the conscious scientific efforts at the core of its design (Criel &Waelkens, 2003).

In a study conducted by Dong *et al*., (2009), in Nouna, Burkina Faso, it was found that households with higher utilization of health care services were more likely to renew their insurance. While this situation is in itself a positive development for the unhealthy population it weakens the foundation of the health insurance by inadvertently promoting the phenomenon of adverse selection. Adverse selection describes a situation where people with poor health states tend to purchase health insurance whilst those with self-perceived good health fail to renew their insurance membership. The Nkoranza scheme piloted in Ghana experienced fluctuations in membership which was linked to adverse selection (Atim & Soc, 2009).

2.6. Factors influencing insurance membership non-renewal

The decision of an individual to enroll or renew health insurance can be a function of three factors; Scheme factors, Individual factors and Provider factors.

It is presumed that these three factors interact to produce a renewal outcome (Atinga *etal*., 2015).

2.7. Scheme factors

A number of studies have explored scheme factors that influence insurance utilization. A study conducted in slum communities in the Greater Accra provides insight into some scheme factors that have a bearing on individual's insurance utilization behavior (Atinga *et al*., 2015).

These technical processes of the scheme as well as the benefit an individual is likely to get from subscribing to the scheme influences the likelihood of enrolling in the scheme (Boateng & Awunyo-Vitor, 2013). Peoples overall satisfaction with the community scheme services is likely to increase when the scheme managers respond to the community preferences. In a study conducted in the Volta region in 2013, it was found that the majority of respondents were in agreement that the scheme was beneficial and this influenced their decision to subscribe to the NHIS (Boateng & Awunyo-Vitor, 2013). Some respondents also thought that by registering with the scheme, they derived financial protection against health care expenditure. Studies carried out in the Central and Eastern regions of Ghana also showed that majority of respondents believed that the scheme could protect them from financial hardship (Jehu-Appiah *et al*., 2011; Abiiro & Mclntyre, 2013). Other factor that influenced the decision of the individual to renew the membership in NHIS included the opening hours of the scheme offices, the convenience of location of the scheme office and the process of the collection of the cards. The poor handling of these technical issues have the potential to make the scheme unattractive (Baltussen, Bruce, Rhodes, Narh-Baah, &Agyepong, 2006).

The price of insurance or premium has been identified as a factor that can influence the enrollment and continuous stay in the NHIS (Basaza, Criel, & van de Stuft, 2008). Boateng and Awunyo-Vitor, (2013) revealed that respondents who disagreed that the

premium was too high were significantly more likely to renew their insurance. The affordability of premium as far as insurance is concerned has been mentioned in several studies (Asante & Aikins, 2007; Basaza, Criel, & Van der Stuyft, 2008). For example, Jehu-Appiah *et al*., (2011), found that the dropout rate was 16% and the main reason for insurance non-renewing was the inability to pay renewal fees (67%). Another example is the Dangme West Health Insurance Scheme where some household heads cited high cost of premium as the reason for not renewing their membership in the scheme (Baltussen, Bruce, Rhodes, Narh-Baah, & Agyepong, 2006). In the Nkoranza scheme in Ghana, the average cost of contributions ranged from 5% to 10% of annual household budgets. This constituted a barrier to the registration of residents in the scheme.

The Ghana Social Trust Survey in Nkoranza and the Dangme West District Health Insurance Scheme suggested that around 77% of non-insured respondents said they would consider enrolling in the scheme if the premium was reduced to an affordable price (Arhiful & Kusi & Zakaria-Akoto, 2007; Abiiro & Mclntyre, 2013).

In health economics literature, low insurance coverage of schemes is generally attributed to the individuals' inability to pay and the cost of premiums (Asante & Aikins, 2007; Basaza, Criel, & Van der Stuyft, 2008). In another study carried out in the Eastern region however, areas like Oframanse which is relatively a poor farming community with a relatively lower socio economic status had higher enrollment figures and lower non-renewal rates. This is contrary to the situation in Koforidua where nobody is below the poverty line and NHIS premium for majority of respondents are directly deducted from their salaries. This example indicates that enrollment does not perfectly correlate with the economic status of persons (Kotoh, 2013).

2.8. Individual factors

The socio-demographic characteristics of a person are identified to contribute to the uptake and renewal of health insurance (WHO, 2012). For example, sex is demonstrated in various studies to correlate with insurance uptake where women consistently utilize it more than their male counterparts (Nguyen, Rajkotia, & Wang, 2011). A study conducted in Kenya to explore perceptions of household about insurance revealed that 1229 (50.8%) females utilize insurance compared to males 1190(49.2%) (Mulupi, Kirigia, & Chuma, 2013). In another study conducted in Ghana to examine the impact of health insurance in terms of financial protection on households showed that about 50 (61.0%) women subscribed to NHIS while 47.4 (38%) men enrolled to benefit from the scheme (Kusi, Hansen, Asante, & Enemark, 2015). However, a study conducted in Enugu in Nigeria contradicts the foregoing utilization pattern of insurance by sex with 235 (56.0%) males utilizing health insurance as against 216 (55.5%) females (Ujunwa, Onwujekwe, & Chinawa, 2014). It is argued that women are vulnerable in the society in number of ways necessitated by their reproductive role and by this they tend to utilize health insurance where risks are pooled and the financial burden of health cost shared among members (Boateng & Awunyor-Vito, 2013).

Additionally, women who are married tend to utilize health insurance more than their unmarried counterparts. The research carried out in Enugu also demonstrated that 338(60.14%) married women got insured while 94 (43%) unmarried women insured (Ujunwa *et al*., 2014). Women play the role of care givers especially for children and sick people in households and therefore, they experience the challenges that accompany ill health. In another study to examine factors that influence insurance utilization in Accra 263 (43.8%) married women enrolled into the NHIS whereas 337

(56.2%) unmarried women enrolled. When asked whether or not they would renew their membership, 31.3% of the married women indicated 'yes' whereas 41.7% unmarried said 'yes'(Atinga *et al*., 2015).

The occupation and the economic status of an individual are found to correlate with health insurance patronage (Aikins, 2005). In a study conducted in Northern Ghana to assess NHIS utilization showed that 1718 (39.5%) of farmers were insured against 2629 (65.5%) farmers who could not subscribe into the scheme (Akazili *et al*., 2014). The study showed that while only 383 (33%) poor individuals were able to take up insurance, 618 (58.3) of the richest were insurance enrollees.

A study conducted in Accra, revealed that the educated (95.8%) had a better understanding of health insurance and utilized health insurance more than the illiterate (4.2%) (Amporfu, 2013). Another study conducted in Kenya, on community perceptions of health insurance report increased health care utilization with educational level of respondents with 79 (5.1%) for the non-educated 718 (46.1%) for primary school leavers and 639 (41%) for secondary school graduates (Mulupi *et al.*, 2013).

The decision by an individual to enroll for an insurance program is influenced by self-perceived health status of the individual (Cutler & Zeckhauser, 1998; Mladovsky *et al*., 2014; Mebratie, Sparrow, Yilma, Alemu, & Bedi, 2015).

2.9. Provider factors

The choice of health providers for health care is a critical decision involving the interplay of many determinants. This decision making process, which includes the choice of health care facilities is influenced by factors external to the individual such

as quality of services provided by the health care institutions (Arhinful*et al*., 2007). Client satisfaction of services provided is a perception by the clients and should be given attention by managers of health care facilities in their decisions to enhance health facility services (Uchendu, Ilesanmi,& Olumide, 2013; Atinga *et al*., 2015; Boateng & Awunyor-Vitor, 2013).

A link is demonstrated between choice of health facility and perceived quality of service provided in health facilities in Nigeria (Uchendu *et al*., 2013) where a greater proportion of public health care facilities were reported to provide good quality of service as far as interpersonal/communication skills were concerned, 111(50.2%); cost/payment of service, 139 (62.6%); and cleanliness of facility, 104 (46.8%). In general, the total quality score was, 104 (47.3). Private facilities conversely, scored 46(54.1%) in providing good quality of service only with ease of getting care/waiting by respondents compared with the public facilities.

The quality of care rendered by the health care system influences the perception of the health insurance (Arhinful, 2003).The fundamental reason for reduced interest in the Maliando Mutual Health Organization (MHO) in Guinea-Conakry in West Africa, was the poor quality of services rendered in health facilities even though there was understanding of the benefits of the scheme (Criel & Waelkens, 2003). A study reports that among the uninsured, a majority (81%) of respondents admitted having been examined physically in the consulting rooms compared to 61% of respondents who were insured (Dalinjong & Laar, 2012). Quality of service is affected when utilization of health care services after the introduction of the NHIS is not matched with a commensurate increase of health care personnel and infrastructure development (MOH, 2009).

CHAPTER THREE

METHODS

This chapter provides a detail description of the research methodology used for this study. The issues discussed include the research design, study area, study variables, study population, sample size, sampling procedure, data collection techniques and tools, quality control, pre-data collection stage, data processing and analysis, statistical methods, ethical considerations, descriptions of subjects, potential risks and benefitsto participants and data usage and storage.

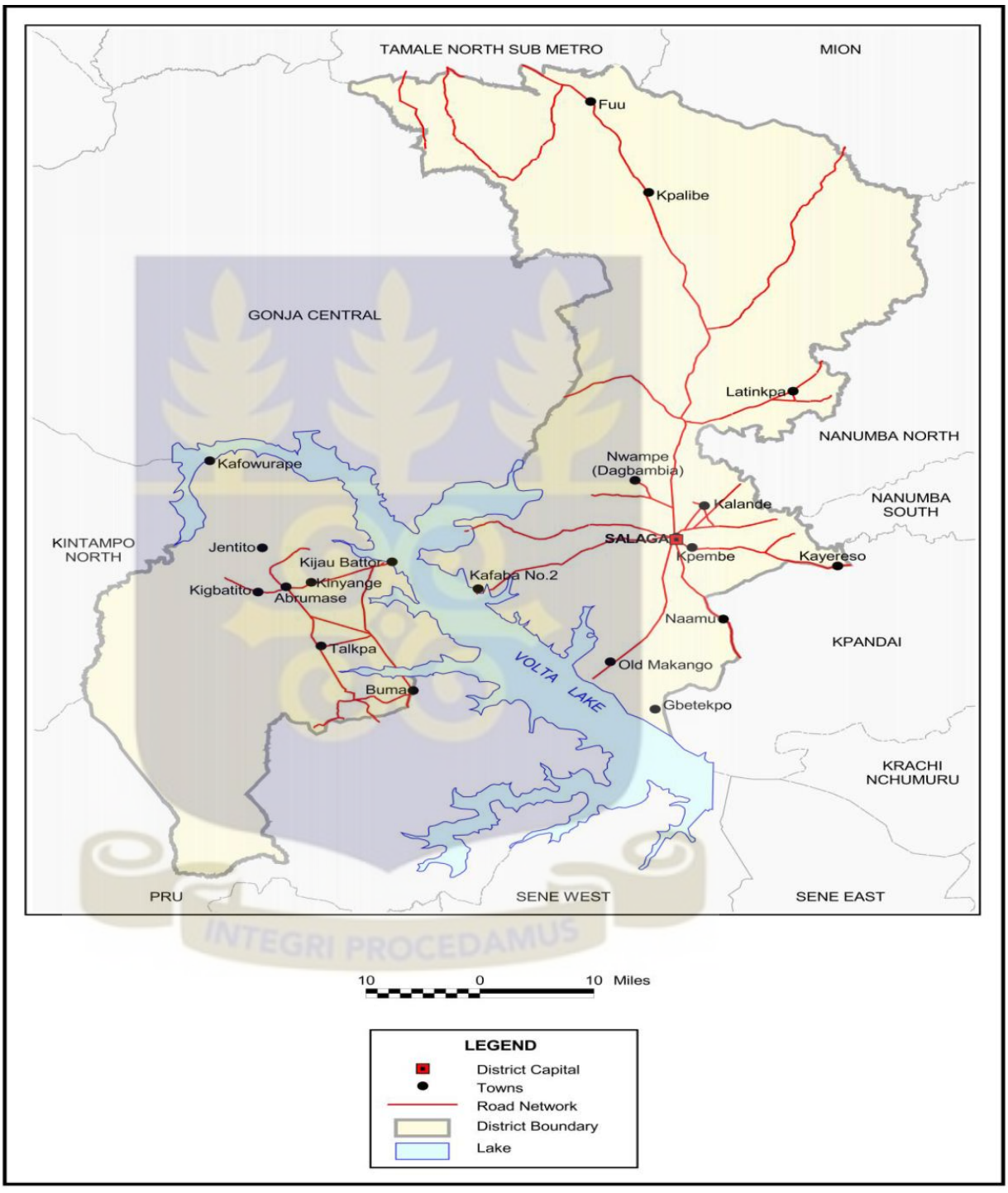
3.0. Study design

A descriptive cross-sectional study was employed to collect information on all three categories of determinants (individual, provider and scheme factors) that contributed to renewal of NHIS membership.

3.1. Study setting

3.1.1 Map of the study area

Figure 3.1: East Gonja District



Source: Ghana Statistical Service, (2012).

East Gonja District, one of the 23 Metropolitan Municipal and District Assemblies (MMDAs) is located at the South-eastern section of the Northern Region of Ghana. The district lies between Lat. 8^0N & 9.29^0N and, Long. 0.29^0 E and 1.26^0 W. It is boarded to the North by Mion and Tamale Districts, Central Gonja District to the West, Nanumba-North and Nanumba-South Districts to the East, and to the South by the BrongAhafo region (Figure 3.1). The district has one hospital with a 69-bed capacity in Salaga, the district capital. There are 10 Health Centres, a Reproductive & Child Health (RCH) Centre and a CHPS compounds spread across the three Health sub-districts (GSS, 2012; Government of Ghana, 2006).

The Ghana Statistical Service estimates the total population for the East Gonja district per the 2010 Population and Housing Census (PHC) to be 135,450. Males constitute 51.5% of the population while 48.5% are females and about 81% of the population is rural. The district has youthful population (44%) and a small proportion of the aged (4.0%).

The district has the second highest general fertility rate in the region (Northern region) with 98.4 births per 1000 women aged 15-49 years (GSS, 2012).Crude death rate in the district is 5.62 per 1000 with accident, homicide and suicide accounting for about 10% of the deaths and other causes accounting for about 89%. With 18,811, as the total number of households in the district, the household size averages 4.4 persons per household with a household population of 133,139. With regard to marital status 48.8% of the population aged 12 years and above are married while 43.3% have never married. Over 80% of all married women are employed (GSS, 2012).

About 32% of the population among ages 11 years and above in the district, are literate while about 67% are non-literate. Among the male population, 52.1% are literate as against 47.9% of female literate population.

The main economic activities in the district are trading and farming. Majority of the people are economically active (72.4%) with a few (27.6%) not being economically active. Among the employed population, those in the informal sector constitute the majority (96%), a majority (77.3%) of the people are engaged in farming and the rest into other activities such as sales and fishery (GSS, 2012).

3.2. Study variables

3.2.1. Independent variables of the study were as shown in the table (Table 2)

Table 3.1: Independent variables

Study variable	Operational definition	Scale of measurement
NHIS membership status*	An insurance subscriber who has renewed or not renewed his/her subscription within the last 12 months prior to the study	Binary 1. Not-active 2. Active
Age	The completed number of years of an individual from birth to the year of study	Continuous (categorized later)
Gender	Sex of respondent	Binary 1. Female 2. Male
Marital status	Society's view of an individual's identity with respect to marriage as of the time of study	Categorical 1. Single 2. Married 3. Divorced 4. Consensus 5. separated
Educational level	The highest formal educational level attained by an individual at the time of data collection	Ordinal 1. No education 2. Primary 3. Secondary 4. Tertiary
occupation	Productive activity, service, trade or craft for which respondent is paid regularly	Categorical 1. Petty trading 2. Civil servant 3. Farmer 4. Hairdresser 5. Seamstress
Expiry date on card	The date on the card after which a member cannot receive services from accredited facilities	Binary 1. No 2. Yes
Perceived health status	A self-ranked perception of a respondents	Binary 1. No 2. Yes
Drug availability	Respondents' perception of the availability of drugs at the health facility	Binary 1. No 2. Yes
Waiting time	Respondents perception of duration in terms of time spent at health facilities seeking care	categorical 1. Strongly disagree 2. Disagree 3. Not Sure 4. Agree 5. Strongly agree
Dependent variable*		

Table 3.1B: Study variables

Study variables	Operational definition	Scale of measurement
Distance to Facility	Respondents' perception of how far or near a health facility is from him/her	
Premium price	Respondents perception of the affordability of insurance premium	Categorical 1. Strongly disagree 2. Disagree 3. Not Sure 4. Agree 5. Strongly agree
Provider staff attitude	Respondents' perception of the attitude of health personnel at health facilities	Categorical 1. Strongly disagree 2. Disagree 3. Not Sure 4. Agree 5. Strongly agree
Scheme staff attitude	Respondents' perception of the attitude of staff at the scheme's office	Categorical 1. Strongly disagree 2. Disagree 3. Not Sure 4. Agree 5. Strongly agree

The dependent variable is NHIS membership renewal

3.3. Study population

The target population for the study was all adults between the ages of 18 and 70 years in the East Gonja district. The individual should have ever renewed NHIS membership 12 months prior to the study. The study population includes only those in the premium paying category. The premium paying category includes all residents of Ghana who are within the ages of 18 and 70 years.

3.3.1 Inclusion criteria

A person qualified for the study if he/she met the following;

1. above 18 years of age and below 70 years of age

2. residing in East Gonja District
3. ever renewed membership at least 12 months prior to study
4. consents to be a study participant

3.3.2 Exclusion criteria

All enrollees aged 18-69 years (premium paying category) who qualify for the study but were too sick to communicate were not interviewed.

3.4. Sample size calculation

The sample size for the study was calculated using the Cochran formula;

$N= (Z^2 \times P \times Q) \div d^2$

Where N is the sample size, P is the assumed prevalence of renewal of NHIS membership in the East Gonja District, Z is the significance level at 95% confidence interval (standard value of 1.96) andd is the margin of error (0.05). Assuming a 50% proportion of renewal of membership among the population in the study area, the sample size was calculated as;

Q=1-P

$= (1.96^2 \times 0.5 \times 0.5) \div 0.05^2$

= 384

Assuming a 5 % non-response rate (19 persons), the estimated sample size for the study was approximately 403.

3.5. Sampling Methods

A multi-staged sampling approach was adopted to sample participants for the study. As the first step in the sampling process, communities in the study area, which were identified as clusters representing the primary sampling units (PSU) were selected on the basis of probability proportional to size of their respective populations.A list of the communities in the East Gonja District together with their populations was formally obtained from the Ghana Statistical Service. In a separate column, cumulative population for all the 20 communities was determined with the final figure representingthe total population (135,450) of the district. The overall population was divided by the required number of localities (20) needed for the study to obtain the sampling interval of (6,772) A random number from 1 to the sampling interval was then selected. To identify the first cluster, the locality whose population immediately exceeded the random number was selected. The second locality was located by adding the sampling interval to the selected random number and the locality with the cumulative. In the second phase of the sampling method, households were identified as the secondary sampling units (SSU) and randomly selected from each cluster with the aid of Census maps from the 2010 population and housing Census. To select the first household, a pencil was spanned at the Centre of each cluster and the household along the direction of the pencil tip were labeled and counted.

The first household was randomly selected from the list by the lottery system where a list of the households was written on small pieces of paper, folded, shuffled and picking the first household to be visited. The remainder of the households was visited using the "nearest household door" criterion to obtain the required sample size for the study. Only one person per household was interviewed.Oneperson per household who satisfied the inclusion criteria was selected randomly through ballot to participate in

the study. In the event that nobody from a particular household qualified by way of NHIS membership, two people from the next nearest household were randomly selected to participate in the study.

3.6. Data collection

Data was collected using a well-structured questionnaire. The questionnaire sought information on respondents' uptake of the NHIS and their renewal status. This was cross-checked with the participants' NHIS card if possible. The questionnaire was designed covering three main areas- The socio-demographic characteristics of the respondents, provider and scheme factors influencing renewal. Data on socio-demographic characteristics of the respondents were collected using 16 items on the questionnaire.The provider and scheme factors were also measured using 11 and 18 items respectively (Appendix B). In all, 45 items on the questionnaire were used to collect data on all the independent variables that influence insurance renewal. Perception of quality of care and the quality of services provided by both the scheme and health care provider were measured with a five point Likert scale ranging from "strongly agree (1)" to "strongly disagree (5).

Insurance status was classified as previously enrolled (respondents who are previously enrolled but had not yet renewed their membership) and currently enrolled (respondents who are active members and had renewed their membership in the last 12 months prior to the study). Information on the number of times a client renewed insurance card was also collected.

3.7. Data analysis

Data was entered into Microsoft Office Excel and imported into STATA 13.1 for analysis. The data was inspected and sorted with box and whisker plot to screen for outliers. Data was also inspected for missing data. The socio-demographic characteristics of the study participants such as age and knowledge of card expiry date as well as the proportions of renewals oneyear prior to the study were examined using descriptive statistics. Perceptions of quality of care and the quality of services provided by both the health care provider and the scheme were measured using a five point Likert scale ranging from 'Strongly disagree' (1) to 'Strongly agree' (5). Chi-square test was performed on the associations between the individual independent variables and the dependent variable (renewal status) in the logistic regression analysis. All the independent variables (educational level, marital status, occupation, staff attitude, premium price) that have been reported in literature to have significant associations with insurance renewal were included in the multiple logistic regression analysis to determine their associations with the dependent variable (NHIS renewal status). Any unknown variables such as knowledge of card expiry date, which provedto have a significant association with the dependent variable at the univariate analysis stage was also included in the multiple logistic regression analysis. Odds ratio at 95% confidence interval was used to assess the measure of effect.

3.8. Quality control

The study was conducted in accordance with the procedure specified in the proposal approved by the Ghana Health Service Ethical Review Committee which required that all ethical issues including privacy, anonymity and confidentially of respondents be protected. The training of field assistants and supervisors covered the following key

areas; Objectives and importance of the study, probing techniques, data collection procedures, and filling of questionnaires. Demonstration and role playing was also used throughout the training. The principal investigator together with two field assistants collected the data. An average of 30 minutes was spent interviewing each participant.

The questionnaire was pretested in the Nanumba North District, which borders the East Gonja District to the East. The essence of the pretesting was to assess the flow of questions, presence of sensitive questions and appropriateness of categorization of variables.

3.9. Ethical consideration

The dignity, rights, safety and well-being of participants must be the primary consideration in any research (Davies, 2005). Ethical considerations included securing ethical clearance, consenting processes, risks/benefits of the study, issues of privacy and confidentiality and data handling. Ethical clearance was sought from Ghana Health Service (GHS) ethics review committee on research on human subjects. The final report was disseminated to the NHIS and the East Gonja Health Directorate.

Risks and benefits

Some participants felt uncomfortable with some of the questions that were asked during the interviews at the pretest stage. The questionnaire was reviewed at the end of the pilot and those questions that were found to be intrusive removed. The researcher also explained to the participants that answers to the questions however important they were to the study could be ignored. There was no compensation in monetary terms for the participants as a reward for their participation. The research

study may however, provide evidence which can be used to institute reforms for the benefit of subscribers of the NHIS.

Right to refuse

Participation in this study wasvoluntary, and participants were not under any obligation to respond to questions or participate in the study if they did not want to. Participants were made to understand that even with the consent to participate in the study they were at liberty to withdraw at any stage of it without any sanctions.

Anonymity, privacy and confidentiality

The study involved collecting data from participants through interviews. Participants were assured that any information given during the study was to be used for the purpose of research. They were further assured that any information given would not be disclosed but treated with utmost confidentiality. Apart from the researchers, no other person would know the name of participants granting interviews. Data collected were entered into MS Excel of a computer with password that was known only to the principal investigator. All filled out questionnaires were also stored in shelves of a cupboard and kept under key always. The data would be stored for five years and all records will be destroyed in an environmentally friendly manner with witnesses and photographic evidence when the five year period elapses. Research assistants were given adequate training on data collection and instruction to go according to the questions on the questionnaire to avoid intrusion into participants' privacy. The final report was disseminated to the NHIA/NHIS and the East Gonja Health Directorate. In the analysis and report writing, the data was reported in the aggregate and no one will be able to trace the information back to the respondents.

Participants were provided with contact numbers to discuss any issues of concern related to the research study. Participants could contact the following numbers:

(The principal investigator) 0246459621

(GHS-ERC Administrator for: Hannah Frimpong).0507041223

Consent/access

Permission was obtained from the East Gonja Health Directorate and East Gonja District Health Insurance Scheme and the traditional council to undertake this project. Participants were told the purpose of the study, who the researchers were, information on risk, benefits, privacy and anonymity in the language they understood so that they could make informed decision as to whether or not to participate. Participants who agreed to participate were made to sign the consent form which captured the explanation above.

Conflict of interest

The project was a self-sponsored one as it was fully funded by the principal investigator. The principal investigator and all research assistants as of the time of the study were not members of the key stakeholders of the agency (NHIA) that regulates the National Health Insurance Scheme and the health care provider facilities.

CHAPTER FOUR

RESULTS

4.0. Introduction

This chapter presents a summary of the results of the study in tables with frequencies.

4.1. Socio-demographic characteristics of respondents

Out of a total of 380 respondents, 270 (71.1%) were females and 110 (28.9%) were males (Table 4.1.). While 214 (56.3%) of the respondents were between the ages of 18-25 years, 142 (37.3%) were within the age category of 26-35 years. Only 24 (6.3%) respondents were aged 36-69 years. Majority of the respondents, 192 (50%) were single whilst 140 (37%) were married. Only 36 (7.9%) of the respondents had no formal education, 114 (28.7%) had basic education and 138 (37.6%) had tertiary education. Those who earned less than GHS 100.00 a month at the time of the study were 224(58.9%) while, 152 (40.1%) earned more than GHS 100.00 a month. A greater proportion, 65.4% (250) of the respondents were Muslims and about 30% (124) Christians. About 2% (6) of respondents were traditionalists. While 64 (17%) of the respondents were without job, 296 (80%) of them were employed in various occupations such as petty trading, 50 (13%), farming, 90 (12%) and 90(23.8%) of the respondents were civil servants.

Table 4.1: Socio-demographic characteristics of respondents.

Variable	Frequency	Percent
Sex		
Female	270	71.1
Male	110	28.9
Age		
18-25	214	56.3
26-35	142	37.3
36-69	24	6.3
Marital status		
Single	192	50.0
Married	140	36.8
Divorced	20	5.3
Consensual	10	2.6
Separated	18	4.7
Level of education		
None	36	7.9
Basic	114	28.7
Secondary	92	25.8
Tertiary	138	37.6
Religion		
Muslim	250	65.4
Christian	124	31.9
Others	6	2.7
Occupation		
Petty trading	50	13.2
Civil servant	90	23.7
Farmer	46	12.1
Seamstress	52	13.7
Hairdresser	26	6.8
Unemployed	64	17.4
Others	50	13.1
Income		
Less than 100	224	58.9
More than 100	152	41.1

4.3. Distribution of Health insurance renewal by individual factors

Table 4.2 displays the results of the distribution of individual factors and their insurance renewal status. Among the age category, respondents aged between 18-25 years were the majority, 56.3% (214), who renewed their insurance membership and the 36-69 years category was the least group 6.3% (24) to renew their insurance membership. Among the female respondents, 71.9% (194) renewed their insurance cards while 63.6% (70) of the male respondents renewed their insurance membership. About 80% (110) of the married respondents were active members of the scheme compared to 66.6% (124) of their counterparts who were single. Among the divorced, 60% (12) renewed their cards whereas about 55% (10) of the separated respondents renewed their insurance to access health care. Among the respondents who renewed their cards, about 76% (210) knew the date of renewal on their insurance membership cards. About 55% (20) of the respondents with no formal education renewed their insurance status, 68% (78) of those with basic education renewed and about 69.6% (96) of those of tertiary education renewed their membership status and 76% (84) the respondents with secondary education renewed their cards. Among the unemployed 78.8% (52) of the respondents renewed the insurance status compared to 73.9% (34) of the respondents who were farmers, and 66.7% (60) of Civil servants. Among those who renewed their insurance status, 150 (67.6%) earned less than GHC 100.0 while 114 (72.2%) of the respondents earned more than GHC 100.0.

Table 4.2: Health insurance renewal distribution by individual factors

	Renewal of NHIS membership		
Variable	**No (%)**	**Yes (%)**	**p-value**
Age			0.799
18-25	68(31.8)	146(68.2)	
26-35	40(28.2)	102(71.8)	
36-69	8(33.3)	16(66.7)	
Gender			0.267
Female	76(28.1)	194(71.9)	
Male	40(36.4)	70(63.6)	
Marital status			0.872
Single	68(35.4)	124(66.6)	
Married	30(21.4)	110(78.6)	
Divorced	8(40.0)	12(60.0)	
Consensual	2(20.0)	8(80.0)	
Separated	8(44.4)	10(55.6)	
Level of education			0.380
None	16(44.4)	20(55.6)	
Basic	36(31.6)	78(68.4)	
Secondary	22(23.9)	70(76.1)	
Tertiary	42(30.4)	96(69.6)	
Occupation			0.347
Petty trading	14(28.0)	36(72.0)	
Civil servant	30(33.3)	60(66.7)	
Farmer	12(26.1)	34(73.9)	
Unemployed	14(21.2)	52(78.8)	
Seamstress	16(30.8)	36(69.2)	
Hairdresser	6(23.1)	20(76.9)	
Other	24(48.0)	26(52.0)	
Income			0.501
100 or less	72(32.4)	150(67.6)	
more than 100	44(27.8)	114(72.2)	
Card expiry			0.001
No	52(49.1)	54(51.0)	
Yes	64(23.4)	210(76.6)	

4.4. Association between health care provider factors and insurance renewal

As indicated in the Table below (Table 4.3), among the respondents who perceived the distance to health facility to be near, 86 (70.5%) renewed their insurance status compared to138 (69.0%) their counterparts who perceived the distance to be far and 40(69.0%) who said the distance was very far. On perception of the availability of drugs in accredited facilities, among the respondents who strongly disagreed (194) to the perception that drugs were available in accredited health facilities, 124 (63.9%) of them renewed their insurance membership. Out of the total number (86) who disagreed, 68 (79.5%) renewed their membership. While 42 (71.4%) of those who agreed to the perception that insurance drugs were always available renewed their cards, 10 (62.5%) of the respondents who strongly agreed renewed their membership status to access health care. Among the respondents (94) who strongly disagreed that waiting time at health provider facilities was too long 72 (76.6%) renewed their cards compared to 46 (76.7%) of their counterparts who disagreed to the long waiting time perception. However, out of 94respondents who agreed to the perception that the waiting time at health facilities was long 64 (68.1%) renewed their membership with the national health insurance scheme. On staff attitude, while 70 (79.5%) respondents renewed their cards they strongly disagreed to the perception of staff attitude towards customers at health facilities being good. Among the respondents (12) who strongly agreed to the perception that staff attitude was good, 6 (50.0%) renewed their insurance status.

Table 4.3: The influence of provider factors and NHIS renewal

Variables	NHIS renewal		P-value
	No (%)	Yes (%)	
Distance to facility			0.857
Near	36(29.5)	86(70.5)	
Far	62(31.0)	138(69.0)	
Very far	18(31.0)	40(69.0)	
Availability of drugs			0.438
Strongly disagree	70(36.1)	124(63.9)	
Disagree	18(20.5)	68(79.5)	
Not sure	10(23.8)	32(76.2)	
Agree	12(28.6)	42(71.4)	
Strongly agree	6(37.5)	10(62.5)	
Waiting time			0.132
Strongly disagree	22(23.4)	72(76.6)	
Disagree	14(23.3)	46(76.7)	
Not sure	16(42.1)	22(57.9)	
Agree	30(31.9)	64(68.1)	
Strongly agree	34(36.2)	60(63.8)	
Staff attitude			0.100
Strongly disagree	18(20.5)	70(79.5)	
Disagree	36(31.5)	78(68.5)	
Not sure	28(33.3)	56(66.7)	
Agree	28(34.1)	54(65.9)	
Strongly agree	6(50.0)	6(50.0)	

4.5. Association between scheme factors and insurance renewal

The Table in this section (Table 4.4.) below illustrates the results of the respondents' perception of the services of the National Health Insurance Scheme (NHIS). Among the respondents who strongly disagreed (56) with the convenience of scheme office location, about 60% (34) renewed their membership while about 63% (28) of those who strongly agreed (44) renewed. About 70% (36) of the respondents who strongly disagreed joining the NHIS has benefited them renewed their insurance membership and about 73% (34) of the respondents who strongly agreed renewed their NHIS membership status. On premium affordability, 36 (72.0%) respondents strongly disagreed the current annual premium was affordable renewed their health insurance

membership compared to 18 (64.3%) respondents who strongly agreed. Among the respondents who strongly disagreed (66) staff at the scheme office were helpful, 46 (66.7) renewed their insurance with the national health insurance scheme whereas among those who strongly agreed (40), 28 (70.0%) renewed their membership.

Table 4.4: The influence of scheme factors and NHIS renewal

	NHIS renewal		
Variables	**No (%)**	**Yes (%)**	**P-value**
Scheme office is conveniently located			0.240
Strongly disagree	22(39.2)	34(60.8)	
Disagree	20(41.7)	28(58.3)	
Not sure	16(24.2)	50(75.8)	
Agree	42(25.3)	124(74.7)	
Strongly agree	16(36.4)	28(63.6)	
Joining NHIS has benefited me			0.442
Strongly disagree	14(28.0)	36(72.0)	
Disagree	8(14.3)	48(85.7)	
Not sure	28(42.4)	38(57.6)	
Agree	54(33.3)	108(66.7)	
Strongly agree	12(26.1)	34(73.9)	
NHIS premium is affordable			0.226
Strongly disagree	14(28.0)	36(72.0)	
Disagree	14(17.9)	64(82.1)	
Not sure	40(37.0)	68(63.0)	
Agree	38(37.8)	78(62.2)	
Strongly agree	10(35.7)	18(64.3)	
Staff at the scheme office are helpful			0.753
Strongly disagree	20(33.3)	46(66.7)	
Disagree	22(37.9)	36(62.1)	
Not sure	26(27.1)	70(72.9)	
Agree	36(30.0)	84(70.0)	
Strongly agree	12(30.0)	28(70/0)	

4.5. Reasons for insurance renewal

Table 4.5. Perceived health status and insurance renewal

Variable	Health Insurance Renewal			
	Not renewed (%)	Renewed (%)	Total	P-value
Perceived health status				**0.679**
Strongly disagree	6(20.0)	24(80.0)	30	
Disagree	22(34.4)	42(65.3)	64	
Not sure	24(26.9)	38(61.3)	62	
Agree	28(26.92)	76(73.1)	104	
Strongly disagree	36(30.0)	84(70.0)	120	
Presence of Chronic illness				**0.414**
Not present	90(32.1)	190(67.9)	280	
Present	26(26.0)	74(74.0)	100	

Table 4.5 above illustrates the results of the reasons attributed to renewal of health insurance membership among the respondents. Among the respondents who strongly disagreed (30) with the perception that they were in good health for the past 12 months, 80% (24) of them renewed their insurance membership compared to 70% (84) of the respondents (120) who strongly agreed with the perceived good health status. The least, 61% (38) to renew among this category were those respondents (62) who were not sure of their health status. Similar renewal patterns were observed among the respondents on the presence of a medical condition. Among those (100) who said they had a present medical condition 74% (74) of them renewed their insurance status while 67.9% (190) of those without present medical condition (280) renewed their insurance status.

CHAPTER FIVE

DISCUSSION

5.0. Introduction

This section of the study discusses the findings of the research. The findings were compared with related literature to enhance appreciation of the discussion.

5.1. Renewal of National Health Insurance Membership

A total of 384 health insurance subscribers were interviewed. About 69% (264) of the respondents were currently enrolled (active) in the National health Insurance Scheme (NHIS) while about 31% (116) of the respondents who were previously enrolled failed to renew their NHIS membership. This study has demonstrated a renewal rate higher than the reported national average (35%) (NHIS, 2012) and may be attributable to the decentralized nature of the scheme at district levels (Jehu-Appiah *et al*., 2011). It might also be explained by the fact that at the district level, it is easier encouraging people to enroll by organizing community durbars and door-to-door campaigns at the least cost (Jehu-Appiah *et al*., 2011). The finding is similar to what has been reported in a previous study. Atinga *et al*. (2015) observed a similar health insurance renewal rate (65%) and a drop-out rate of about 34% in their study carried out in 22 slum areas in Accra Metropolitan Assembly. This study finding is slightly higher than the results of previous studies. Djoko, (2015) reported 57% (172) renewal rate among his study participants in the Keta Municipality. In the study by Thompson, (2014) conducted in Dormaa in Ghana to determine impediments to insurance enrolment, 60% (126) of the respondents were currently enrolled. The insurance renewal rate among the respondents in this study was lower than previous studies have reported (Jehu-Appiah, 2012; Boateng & Awunyo-Vitor, 2013). In the study conducted in the Volta region by

Jehu-Appiah *et al*., (2012), the renewal rate among respondents was about 84% while Boateng and Awunyo-Vitor (2013) reported a renewal rate of about 77% among their study participants in the same region. The rate of renewal (69.5%) reported by this study, however, contradicts findings of previous studies (Chankova *et al*., 2008; GSS, 2009) that argue that national health insurance enrolment in rural Ghana has been low. The result in this study could also be associated with the recent biometric registration exercise whose publicity could serve as a push factor for the acquisition of a new insurance card.

5.2. Individual factors

5.2.1. Socio-demographic characteristics of respondents

The socio-demographic characteristics of the respondents did not demonstrate statistically significant association with health insurance renewal. The results show an average renewal rate (68.9%) across the various age categories. However, respondents within the older age category (36-69 years) constituted the minority respondents who renewed their cards. This study result is consistent with what is observed in previous studies. Thompson, (2014), reported greater proportion (39%) among young adults in his work compared with 20% among the older (44-66 years) respondents and did not record statistically significant association between age and health insurance renewal. This study finding is however, inconsistent with findings from previous studies and does not support the proposition that with advancing age, the individual health state deteriorates and they tend to utilize insurance more than young people (Jehu-Appiah, 2011). In the study by Djokoto, (2014), the association between old age and renewal of health insurance was reported to be statistically significant. Even though there was an observed difference between female (71.1%) and male (28.9%) participation in

that study, similar proportions of females (71.9%) and males (63.6%) renewed their insurance status. The association between the gender of the respondents and insurance renewal was however, not statistically significant in this study. This result supports the findings of previous studies which argued that gender had no association with insurance renewal (Gobah *et al*., 2011) but contrary to other findings such as a higher (36.7%) insurance renewal response observed among women compared with (23.3%) among males in the study of Thompson (2014). High insurance enrolment has been found to be the result of women being a vulnerable group in terms of their roles in childbearing and taking care of the sick tend to purchase insurance more than their male counterparts to protect themselves from financial catastrophe (Chankova *et al*., 2008). This study reports no statistically significant association between marital status and insurance renewal. The results indicate that insurance renewal was not influenced by marital status. The finding is contrary to what was reported in previous literature. Thompson (2014), rather recorded a high (62.5%) insurance enrolment among singles and but his results also failed to demonstrate significant association between marital status and insurance renewal. However, the results contradict results of the work of Boateng and Awunyo-Vitor (2013), and other studies (Thompson, 2014; Djokoto, 2015) where they argued that married women were more likely to take insurance probably because the care for the sick and take care of children at home. Married women's preference for insurance subscription has also been attributed to the fact that having children comes with added responsibility and exposes mothers to extra adversity with consequent high health expenditures (Li & Chen, 2002; Kirigia *et al*., 2005).

In this study, educational level of participants and the renewal of health insurance status were not statistically significant.This is because, among the levels of education,

there was an average health insurance rate of 67.4% across all the educational level categories. The results suggest that an individuals' decision to renew his/her health insurance status was not influenced by high level of education and this corroborates findings from previous studies. Boateng and Awunyo-Vitor (2013) and Djokoto (2014), reported similar results where there were no statistically significant associations between the educational level of an insurance subscriber and his/her decision to purchase insurance subscription. However, other previous studies have documented contrary findings. Dong *et al.* (2009), for example, documents a statistically significant association between educational level and insurance enrolment and speculates that highly educated individuals utilize insurance subscriptions more because they have higher expectations of their health states. The study by Thompson (2014) demonstrates a similar finding that the individual's level of education increases with demand for health care and insurance utilization. The income of the respondents and their employment status did not show statistical significance in this study. Similar renewal patterns was observed between the two groups, those who earned less than GHC 100.0 (67.6) and those respondents who earned more than GHC 100.0 (72.2) a month. In addition, among the respondents, income did not influence their decisions to renew health insurance status. This study results differ from findings of previous studies. Several studies (Jehu-Appiah, 2011; Thompson, 2014) have linked the decision to purchase insurance to an individuals' income level where it has been suggested that the rich can afford insurance premiums compared to their poor counterparts. The association between the income level and insurance utilization has been explained by the fact that high income earners have secured jobs (Kirigia *et al.*, 2005). It has however been suggested that even though the rich has a higher chance to insurance subscription (Jehu-Appiah, 2011) as their resources expand the rich tend to

decline insurance utilization (Kirigia, 2005; Thompson, 2014) and this phenomenon has been attributed to the fact that the rich or people with more resources tend to be more critical about their health status and demand high quality health care (Agha & Do, 2009).

5.3. Provider factors and card renewal

The results indicate a positive correlation between insurance renewal and knowledge of card expiry date. This implies that an individual who understands the need for insurance might default if he/she does not know the date his/her card expires. It was not surprising then to record a statistically significant association between respondents' knowledge of card expiry date and renewal of insurance subscription. I have the impression this not a chance occurrence but a concept future research can explore among insurance enrollees.

The study reports no statistically significant association between perceived health status and renewal of insurance. Renewal of insurance status was similar in both respondents who perceived themselves to be in good health and those respondents who held the perception that they were not in good health for the past 12 months. The results suggest that the decision to renew insurance among the respondents was not influenced by perceived health status. The result of this study is contrary to what has been reported in previous studies. Perceived health status has been cited in literature to be one of the main reasons for insurance enrolment (Thompson, 2014) where individuals who perceived themselves not to be in good health are more likely to purchase insurance to protect them from catastrophic health expenditure. Two/thirds of those reporting medical conditions renewed their cards compared to more than two/thirds of those reporting no medical condition. This finding is contrary to what is

reported by other authors. Boateng and Awunyo-Vitor (2013) and Djokoto (2014) reported presence of a medical condition to be associated with the decision to renew insurance membership. They argue based on the significant association being sick and enrolment in health insurance schemes leads to the unfortunate phenomenon of adverse selection where more sick people purchase insurance and healthy people not enrolling (Djokoto, 2015).

In this study, those who hold positive perception about the waiting time in health facilities did not show any statistically significant association between waiting time at facilities and insurance enrolment. The results mean that an individual's decision to enroll in the health insurance scheme is not influenced by waiting time in health facilities.

In this study, distance to health facility was not statistically significantly associated with health insurance subscription. The finding implies that the distance travelled to the facility where an individual seeks care does not influence one's decision to purchase national health insurance. Similar study results have been documented in previous studies. In the work of Jehu-Appiah (2011), it was found that health insurance was reaching everybody without geographic barriers and this was said to be explained by the pro-poor nature of the policy where it operates in every district in the country. Jehu-Appiah *et al*. (2011), further explained that the national health insurance scheme at the scheme level was very effective attracting members by organizing durbars and door-to-to campaigns at the least cost compared to the scheme at urban settings. However, the result as presented in this study is also contradictory to what some previous studies have reported. Dong *et al*. (2009) found living close to a facility to be significantly associated with health insurance enrolment. By this, they implied that people living close to health facilities do not appreciate the advantages of

health insurance because they bear only the primary cost of treatment and will be able and willing to bear the cost compared to their distant counterparts who have to bear additional cost from transportation. De Allegri *et al*. (2006) also found that because people who lived far from health facilities bear additional cost including the opportunity cost of seeking health care, they were more likely to enroll in health insurance scheme compared to their counterparts who live close to health facilities. The behaviour of the respondents of this study in the East Gonja District have not been supported by the findings of De Allegri *et al*. (2006) and other authors probably because the Community-based Health Planning (CHPS) concept meets the basic health needs of the people. The CHPS concept offers a variety of health services such as family planning counseling services, deliveries, treatment of minor illness and vaccination. The behaviour of the respondents also contradicts the assertion by Thompson (2014) that people who live in remote areas have limited access to insurance and health care and will have to travel to urban areas to meet their health needs when they are sick.

There was no statistically significant association between perceived health provider attitude and insurance renewal. This finding implies that individuals' decision to purchase health insurance is not informed by health provider attitude. While the finding of this study is similar to that of Djokoto (2014), this study finding is in contrast to findings of previous research studies. The main reason that accounted for the collapse of the Maliando scheme in Guinea Conakry was poor quality of care measure in part by provider attitude towards clients (Criel &Waelkens, 2003). The study by Dong et al. (2009) also cited perceived poor staff attitude in health facilities in Burkina Faso and similar findings have been reported in studies in Ghana (Jehu-Appiah, 2011) where insurance enrolment and subsequent renewal have been found to

be influenced by perception of health provider attitude. This suggests that positive perceptions of the attitude of staff can increase health insurance enrolment. Quality of health care which is measured in most cases by staff attitude is therefore imperative to attract and retain more members to the scheme (Thompson, 2014). Unfortunately, these claims by other studies (Jehu-Appiah, 2011; Thompson, 2014) that negative attitude could increase the odds of not renewing insurance subscription have not been supported by the finding of this study.

5.3. Drug availability at health provider facilities

This study did not demonstrate any statistically significant association between the perception of drug availability and insurance renewal. This implies that a person's insurance renewal decisions are not affected by the presence or otherwise of insurance drugs. The finding is contrary to the study carried out by Kotoh (2013) which noted that majority of the respondents in her study hold negative perception of health insurance drug availability. This has been blamed on the delay in reimbursement leading to frequent stock outs (Kotoh, 2013).

5.4. Scheme factors and insurance renewal

There was no statistically significant association between scheme office location and insurance renewal. This is observed in the similar insurance renewal pattern among those who strongly agree (60.8%) and those who strongly disagree (63.8%). The finding implies that a persons' decision to purchase health insurance is not influenced by the location of the scheme's office.Studies carried out in the Volta Region, found no significant association between convenience of scheme office location and insurance renewal decisions (Boateng & Awunyo-Vitor, 2013). This finding suggests

the outreaches conducted by the scheme is effective and removes the need to visit the office for renewal.

On premium price, the study did not find statistically significant association between premium affordability and insurance renewal. The finding suggests that individuals' decision to renew or not to renew is not affected by insurance premium price. This study finding is similar to that of Djokoto (2014) who documented no statistically significant association between insurance renewal and premium price and suggested that though some people might be unable to afford insurance premium genuinely, it did not correlate with the economic status of the individual. Similarly, in the Eastern and Central Regions household surveys where poverty incidence was compared with individuals insurance status, it was found that insurance enrolment was low (56%) with 22% non-enrolment in Koforidua where poverty incidence was low compared to Oframanse with 66% enrolment with the lowest non-renewal. In the study by Asante and Aikins (2007), it was argued that the price of annual insurance premium influenced the decision to enroll and remain enrolled in health insurance scheme which is contrary to the finding of this study. Other studies (Jehu-Appiah *et al*., 2011; Thompson, 2014) have also documented similar findings where the price of insurance was perceived to be expensive. In the work by Jehu-Appiah *et al*. (2011), high insurance premium was cited as the main reason people were not enrolling in the scheme while it could be inferred from the foregoing that an individuals' inability to afford insurance premium may be subject to financial priorities.

This study found no association between insurance renewal and benefiting from the scheme even though two-quarters of the respondents agreed the scheme was beneficial. This means that a person's insurance renewal decisions are not influenced by the benefits derived from the scheme. This study finding is consistent with the

findings made by other studies conducted in Ghana. Jehu-Appiah *et al.* (2011) reported that the national health insurance scheme had benefitted enrollees by reducing out of pocket payment. In this study, even though the results suggested that there was no association between insurance renewal decisions and perceived benefit of the scheme, other authors have reported otherwise. Boateng and Awunyo-Vitor (2013) for example, reported that positive perceptions of the scheme influenced enrolment among the insured. The behaviour exhibited by the respondents could be explained by the wide coverage of benefit package offered by the scheme. This offers clients access to variety of health care services.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.0. Introduction

This chapter contains conclusions drawn from the result and discussion sections of the write-up and suggested recommendations for stakeholders of the national health insurance scheme.

6.2. Conclusion

High enrolment into health insurance schemes by individuals and their retention of enrolled members have been linked to the sustainability of such insurance schemes (Akazili *et al*., 2014). In the case of Ghana's National Health Insurance Scheme (NHIS), there are concerns as to its slow progress to achieving its universal coverage target with the current national coverage of about 40% (Jehu-Appiah *et al*., 2012; Atinga *et al*, 2015). However, evidence from this study indicates a higher (69.5%) health insurance renewal rate among the respondents, which could not be explained by the study variables.

The individual factors which included age, gender, marital status, and educational level were found to have no influence on subscribers' decision to renew insurance membership. However, respondents' knowledge of card expiry date was found to besignificantly associated (p=0.001) with insurance renewal among the respondents.

The provider factors including long waiting time, distance to health facility, staff attitude and drug availability as variables were also found to have no influence on respondents' health insurance subscription and renewal decisions.

Scheme factors which were measured using variables such as premium price, convenience of scheme office location, benefit package and scheme staff attitude did not influence insurance renewal decisions among respondents in the East Gonja District.

6.3. Recommendations

This research is a valuable effort at understanding the factors that influence people to renew membership with Ghana's national health insurance scheme. The following recommendations are made to all actors of the nations' flagship health financing policy (National Health Insurance Scheme) in the hope of sustaining this internationally acclaimed scheme to protect residents of the country against catastrophic health expenditure.

Policy recommendations

The National Health Insurance Authority (NHIA) should consider reviewing its outreach registration policy where emphasis has been on registration of new members to include a household reminder clause on expiry dates. During the outreaches, scheme staff should educate households on the expiry dates on members' cards.

Policy should target improving quality of service in public institutions by providing adequate infrastructure, ensuring professional attitudes towards clients and timely reimbursement of claims to accredited health facilities to reduce the incidence of out-of-pocket payments among the insured. This will make the scheme more attractive to enrollees and the general public.

Limitations to the study

The study explored the factors influencing health insurance renewal only from the client'spoint of view and did not explore the factors from the viewpoints of the health provider and the scheme.

The study used quantitative approach to assess the factors influencing an individuals' decision to purchase insurance. However, the five point Likert scale ranging from (1) 'strongly disagree' to (5) 'strongly agree' was used to measure the intensity of respondents' perceptions of the scheme and health provider factors.

Future research

Further research using qualitative research should focus on the incidence and pattern of out-of pocket payment among subscribers of the national health insurance scheme. Of particular interest will be to establish the formality of these payments that are widely speculated.

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Appendix A: Informed Consent Form

Project Title: National Health Insurance Scheme: Predictors of Card Renewal among Subscribers in the East Gonja District

Institution of affiliation

School of Public Health, University of Ghana, Legon

Background of interviewer

My name is ……...from ……., helping a student to collect data solely for academic work toward the award ofmaster's degree in Public Health.

Purpose of the study

The study intends to assess factors that contribute to an individual's failure to renew NHIS membership to inform policy on UHC.

Procedure

Information to be included in this study covers background characteristics including age, sex, occupation, educational status, monthly income and your NHIS status. You will be asked about your perceptions of the services providers and scheme offer you. Data collection is solely by interviews.

Risks and benefits

You may feel uncomfortable with some of the questions. Answers to these questions are, however important to me as a researcher and other researchers.

Right to refusal

Your participation in this study is voluntary, you are not under any obligation to do so, and you are at liberty to withdraw from the study or can refuse to answer any question you do not feel comfortable with.

Anonymity and confidentiality

Be assured that any information given during the study will be used for the purpose of research. Any information given shall not be disclosed but treated with utmost confidentiality. Should you have any questions or concerns about the project or your participation, please contact 0246459621. You may also contact the GHS-ERC Administrator Hannah Frimpong 0507041223 for clarification.

Appendix B: Questionnaire