

ENSIGN GLOBAL COLLEGE, KPONG

**UPTAKE OF NATIONAL HEALTH INSURANCE AMONG PREGNANT WOMEN IN
GHANA**

BY

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DECLARATION

I, Mcclean Bismark Owusu, hereby declare that, except where explicit references are made, this dissertation is the product of my own original research, conducted under the guidance of Dr. Millicent Ofori Boateng. I affirm that this work has not been submitted, either in part or in full, for any other degree or purpose elsewhere.



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DEDICATION

I dedicate this research to the Almighty Father in Heaven, whose guidance has been my anchor throughout this journey. I extend my deepest gratitude to my parents, Mrs. Esther Asare and Dr. Daniel Asare, for their unwavering support and belief in my potential. To my beloved wife, Angela Ntim, your love and encouragement have been my strength. I also dedicate this work to my wonderful children, McDiesel Owusu and McCiara Diamond Owusu, whose smiles and laughter inspired me every day. Thank you all for being my pillars of support during my academic pursuit.

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ABSTRACT

Background: It is expected that with the National Health Insurance Scheme in place, equitable access to healthcare will be assured for all groups of people because access to quality health insurance has shown to have an impact on households. This research assessed the factors associated with the uptake of NHIS among pregnant women of reproductive age in Ghana.

Methodology: The study adopted a descriptive cross-sectional research design to analysed secondary data from 2022 Ghana Demographic and Health Survey (GDHS). Data analysis was performed into descriptive statistic, bivariate and multivariate analyses using SPSS version 21 software.

Results: The study found a high proportion (73%) of pregnant women in their reproductive age having a valid NHIS particularly pregnant women between the ages of 15-19 years and 20-24 years having the highest uptake in NHIS. The study again found out that pregnant women in Ashanti Region, Greater Accra region, and Eastern region as well as those in the highest wealth quintile and fourth wealth quintile have registered more on NHIS than pregnant women in other regions and wealth quintile. The bivariate analysis of NHIS uptake and pregnant women socio-demographic characteristics showed that there is a statistically significant relationship between NHIS uptake and region ($P = 0.034$), education ($P = 0.025$) and wealth quintile ($P = 0.011$).

Conclusion: This study concludes that NHIS uptake among pregnant women of reproductive age in Ghana is high and this could be due to free health insurance scheme registration for pregnant women in Ghana and free maternal health policy that grants exemption to payment of NHIS among pregnant women. Additionally, socio-demographic factors such as education, region, and wealth quintile were significant predictors of uptake of NHIS among women of reproductive age.

The study recommend that interventions should therefore be geared towards pregnant women empowerment and education on the importance of NHIS.

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LIST OF ABBREVIATIONS

AHU: Andersen's Healthcare Utilization Model
ANC: Antenatal Care
GDHS: Ghana Demographic and Health Survey
GMICS: Ghana Multiple Indicator Cluster Survey
GSS: Ghana Statistical Service
MDG: Millennium Development Goal
NHIA: National Health Insurance Authority
NHIF: NHIF National Health Insurance Fund
NHIS: National Health Insurance Scheme
PNC: Post-Natal Care
SDG: Sustainable Development Goal
UHC: Universal Health Coverage
WHO: World Health Organization

INTRODUCTION

1.1 Background to the study

For over twenty years, lowering maternal mortality has been a top objective worldwide. According to Agbanyo and Peprah (2020), the fifth Millennium Development Goal calls for a seventy-five percent decrease in maternal mortality rates between 1990 and 2015. Policymakers started experimenting with health financing solutions like vouchers and health insurance to overcome the financial constraints to expert delivery of care. In order to meet the MDG 5 and eventually the SDG 3's first target, Ghana, for instance, adopted the NHIS in 2003 and added a Free Maternal Care program to the scheme in July 2008 as part of health system reform strategies (Agbanyo, 2020; Agbanyo & Peprah, 2020; Phillips et al., 2018; NHIA, 2010).

The National Health Insurance Authority (NHIA) further modified the implementation guidelines in 2010 to encourage expectant mothers to register with the NHIS before seeking medical attention (Agbanyo & Peprah, 2020). The revised NHIS implementation guidelines provide free prenatal and facility-based delivery care to women with insurance. Women of reproductive age in Ghana are entitled to free services for the course of their pregnancy, childbirth, and postpartum care, regardless of where they live, according to the free maternity care policy (Ayanore et al., 2023). The policy offers free NHIS registration, free prenatal care for the duration of the pregnancy, and free postpartum care for three months to all expectant mothers (Ayanore et al., 2023; Dixon et al., 2014).

The Ghanaian government, with a focus on maternal and child health, redoubled its efforts in 2020 to achieve the target of 80% coverage of basic services through bold policy changes (WHO, 2022). Accelerating the implementation of Universal Health Coverage (UHC) and

refining the national health insurance program to lower costs associated with medical care, especially for low-income and vulnerable populations, are among the other strategies that Carrin and James (2005) list. (Ayanore et al., 2023). Due to their susceptibility to poor maternal and reproductive health outcomes, pregnant women and women of reproductive age especially those who reside in rural areas are crucial target populations for health insurance coverage (Apanga & Awoonor-Williams, 2018).

Ghana's healthcare finance has seen various changes over the years, starting with free healthcare on the eve of independence and continuing through the introduction of the nominal fee system in the 1970s and 1980s, when full cost recovery also referred to as the "Cash and Carry" system was implemented. Prior to 2003, tax income and user fees collected from patients at the time of treatment were used by Ghana to fund its health care system (Singh et al., 2015). However, it was discovered that user fees significantly reduced access to health services, especially for the impoverished, and that priority and vulnerable populations' exemptions were administered inconsistently (Singh et al., 2015). Consequently, the government investigated whether it would be possible to do away with user fees and introduce a district-level health insurance program (USAID, 2009).

Since its introduction, Ghana's National Health Insurance Scheme (NHIS) has emerged as one of the country's premier social protection initiatives, aiming to improve basic healthcare services' quality and expand access to healthcare for all Ghanaians, particularly the impoverished and vulnerable. The NHIS was the first program of its kind in sub-Saharan Africa. Access to healthcare services has significantly increased as a result of the installation of health insurance policies (Jamison et al., 2006). Studies show that improved utilization of prenatal care and supervised births have resulted from Ghana's free maternal care program, which was adopted

under the NHIS (Dzakpasu et al., 2012). Alhassan et al., (2016) report that the NHIS subscription in the Brong-Ahafo area was a major factor in the approximately 20% rise in facility delivery that occurred between January 2004 and December 2009. The data comes from Districts in the region.

1.2 Problem Statement

According to studies by Aboagye et al. (2023) and Goudge, Alaba & Govender et al. (2018), health insurance has reduced costs for the general public and protected those in vulnerable populations, including pregnant women. All groups of people should have equitable access to healthcare with the NHIS in place because it has been demonstrated that having access to high-quality health insurance improves healthcare, particularly for women who need maternity and child health services, by lowering out-of-pocket medical costs and lowering the risk of health shocks (Aboagye et al., 2023; Amu & Dickson 2016). However, in a number of nations, including Ghana, where national health insurance is viewed as a pro poor initiative, enrollment and adoption are far lower than expected (Aboagye et al., 2023; Adebayo, Uthman & Wiysonge et al., 2015).

Like in other developing nations, the main goals of health insurance were to lower the cost of healthcare and boost medication and healthcare consumption overall, especially for the most vulnerable populations, such as those living in impoverished areas (Badu et al., 2018; NHIA, 2015). However, for a variety of reasons, the majority of pregnant and women in their reproductive age do not continue to enroll in the NHIS (Ayanore et al., 2023; Mulenga, Bwalya & Gebremeskel, 2017). You should enumerate a few of the obstacles that still keep women from signing up for the NHIS. Women still face major barriers to receiving healthcare services even though they are more likely to experience illness, have fewer resources available to them, and

face various health risks. (Seidu et. al., 2020). For example, in 2011 31% of women and 44% of men had never participated in the program (Amo-Adjei et al., 2016). Even after the NHIS has been in place for more than 20 years, access and enrollment are still difficult, particularly for women (Aboagye et al., 2023; Scheil-adlung, Kuhl & Office, 2012). Despite the NHIS's poor design and implementation, there have been reports of worries that the program primarily favors the rich rather than the poor (Ayanore et al., 2023; Kwarteng et al., 2020). Additionally, research indicates that compared to people living in cities, people living in rural areas are less likely to be covered by health insurance (Ayanore et al., 2023; Kwarteng et al., 2020). However, study conducted in 2007 by Penfold et al. revealed that many women's access to the National Health Insurance Scheme (NHIS) is restricted by additional financial and logistical constraints.

Even after the free maternal health care policy was implemented as part of the health system reform strategies to improve maternal health and achieve the MDG 5, there are still notable differences in uptake rates among various population groups, especially among women in their reproductive age (Ayanore et al., 2023; National Development Planning Commission, 2010). A significant study vacuum exists in the context of pregnant women in Ghana as previous studies (Ayanore et al., 2019; Duku, 2018; Oyediran & Davis, 2023) primarily examined the factors influencing NHIS enrollment among women and the general population in Ghana. There are not much empirical research that particularly look into Ghanaian pregnant women's use of the NHIS. Furthermore, the ratio of pregnant women with valid NHIS registrations to those who are not has not been well documented in the literature that currently exists. Moreover, research assessing the variables linked to Ghanaian pregnant women's adoption of the NHIS is conspicuously lacking. This study examines the determinants linked to pregnant women in Ghana adopting the NHIS using nationally representative data, filling in several significant gaps in the literature.

1.3 Rationale of the study

The study's findings will shed further light on the particular variables influencing pregnant women in Ghana's adoption of the NHIS and have ramifications for attaining global objectives like the SDGs and universal health coverage in Ghana as well as goals for health equity. The results of this study will assist the government and other relevant parties in developing health insurance policies that will help them meet the targets of SDG 3.1 (reduced maternal mortality) and SDG 3.7 (universal health coverage). According to Mensah et al. (2010), achieving more people with health insurance could speed up the achievement of MDG 5. The study's findings will shed light on how maternal health care might help reach Millennium Development Goal No. 5.

This study will also help identify the hotspots of health insurance non-subscription, which will help better inform policies and programs that attempt to position Ghana towards the accomplishment of universal health care through sustainable health finance. Additionally, this study would advance our understanding of how pregnant women use the NHIS. Understanding the NHIS uptake among pregnant women would help policy makers, the government, and the delivery of health care. It would become actual evidence on the topic, adding to the body of previous research and serving as a catalyst for additional study. Researchers and academicians will gain from the study's findings since they will add to the corpus of knowledge. In addition, the study work will serve as a backup information source for researchers and students wishing to conduct additional research in this field.

1.4 Research Question

1. What is the uptake of NHIS among pregnant women in Ghana?

2. What is the proportion of pregnant women registered on the NHIS to those with valid NHIS?
3. What are the factors associated with the uptake of NHIS among pregnant women in Ghana?

1.5 General Objectives

The main objective of this study is to assess the factors associated with the uptake of NHIS among pregnant women of reproductive age in Ghana.

1.6 Specific Objectives

Specific objectives of the study are:

1. To assess the uptake of NHIS among pregnant women in Ghana.
2. To describe the proportion of pregnant women registered on the NHIS to those with valid NHIS.
3. To evaluate the factors associated with uptake of NHIS among pregnant women in Ghana.

1.7 Conceptual Framework

This section discusses the concepts that influenced the study. The goals of the conceptual framework are to organize and characterize ideas that are relevant to the research and to map their relationships. Such a framework facilitates concept analysis, conceptual mapping, research landscape mapping, organizing conceptual links, and gap identification in the literature. Andersen's Healthcare Utilization Model (AHU) will serve as the conceptual foundation for the research. The AHU has been extensively utilized to evaluate the variables linked to each person's health-seeking behavior, specifically the variables related to Ghanaian women of

reproductive age's adoption of the NHIS. The approach categorizes such factors under three domains: predisposing, enabling, and need factors. Age, sex, education, occupation, ethnicity, social contacts, and health views are among the commonly evaluated individual predisposing factors (Babitsch, Gohl, & von Lengerke, 2012).

The ability of the individual to fund and negotiate the organizational landscape necessary for service use is taken into account by enabling factors. They depend on the patient's capacity to bear the expense of their medical care. They also include the capacity of an organization to provide a trustworthy source of care appropriate for the patient's main complaint. According to Babitsch, Gohl, and von Lengerke (2012), the enabling elements that have been the subject of the most research are income and financial status, health insurance, a reliable supply of healthcare, and medical services. require considerations have to do with how much care a person feels they require. According to Azfredrick (2016), the need factors that have garnered the most attention lately are past medical illnesses or the self-reported severity of the chronic disease.

An illustration of the AHU operationalization used in this study may be found in Figure 1. Predisposing factors included age and gender, social standing (education, religion, living in an urban or rural area, marital status, and support network of family and friends), and position (rich, poor, or middle-class).

Regarding the relevant enabling elements for this research, funding and organizational structure were of particular interest. The most important factor in terms of funding was if the patient had health insurance. Transportation, distance, and cost were all taken into account by organizational infrastructure. The focus was on financing because access to healthcare is facilitated by an individual's capacity to pay for it. Furthermore, a patient's access to healthcare is contingent

upon the services provided by the organization or organizations they visit. The need factors that were recorded assessed needs. That is the expert opinion regarding the state of people's health and the necessity of medical attention. Predisposing, enabling, and needing variables all influenced Ghanaian pregnant women of reproductive age to use the NHIS.

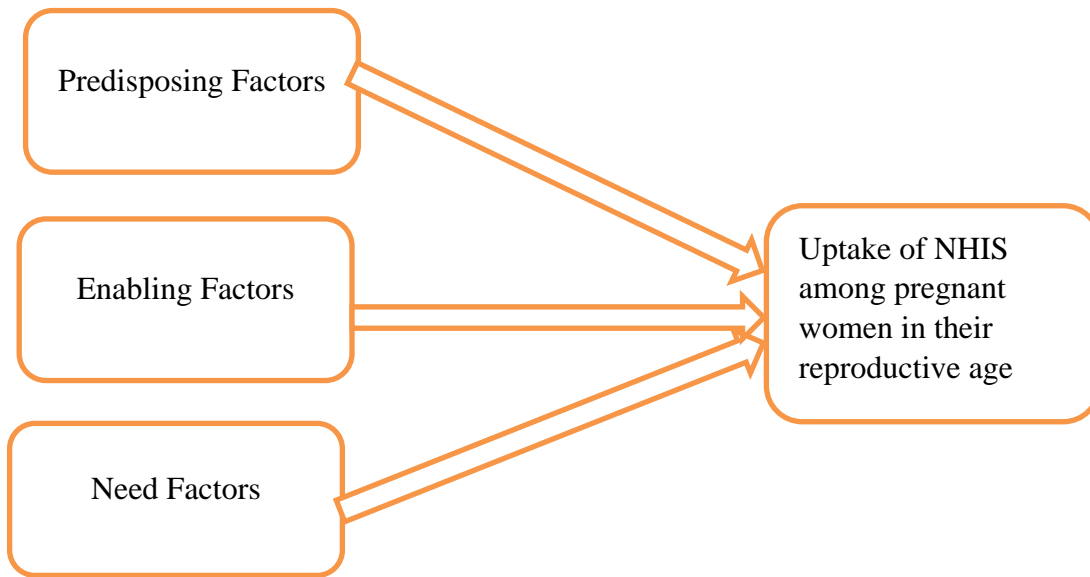


Figure 1: Conceptual Framework

Source: Authors construct

1.8 Profile of the study area

Ghana is a nation in West Africa bordered by the Ivory Coast and Togo. The country's southern border is the Gulf of Guinea, and its northern border is Burkina Faso. The state of Oregon is slightly larger than the nation. The majority of the terrain is made up of low plateaus and plains that are bordered by Lake Volta in the east and rainforests in the west. Ghana covers 239,567 km² (92,497 sq mi) and is home to a variety of biomes, including coastal savannas and tropical rainforests. Ghana is the second most populated country in West Africa, home to about 32 million people. The three main cities are Kumasi, Tamale, and Sekondi-Takoradi, with Accra serving as the capital and largest. The Akan, Mossi, Ewe, and Ga-Adangme

peoples live in Ghana. The official language is English; other languages are Hausa, Akan, and Ewe. The country's currencies are cedis. The Volta River basin dominates the largely flat terrain. The south is primarily forested, whereas the north consists of grassland plains. Situated on the southern coastal plain lies the historic Gold Coast. Elephants, leopards, and lions are among the diverse species found in the nation. Cacao is the principal export, whereas gold and diamonds are the leading exports. Ghana is a unitary multiparty republic with a single legislative body, and the president serves as both the head of state and government. The modern state takes its name from the ancient Ghana empire, which flourished in the western Sudan around 500 miles (800 km) northwest of it until the 13th century CE.

1.9 Scope of Study

The scope of the study includes all women in their reproductive age (15 to 49) who took part in the 2022 GDHS. The study makes use of information from the 2022 GDHS questionnaires for men and women. The study examined factors related to NHIS uptake among Ghanaian women of reproductive age, as well as the ratio of women registered on the NHIS to those with valid NHIS, other healthcare financing practices among this demographic, and recommendations for enhancing the quality of services offered at the NHIS offices and NHIS-accredited health facilities. To address the unique challenges facing service quality and participation in the National Health Insurance Scheme, recommendations were made to relevant stakeholders.

1.10 Organization of Report

The study was organized into six (6) main chapters: Introduction, Literature Review, Methodology, Results, Discussions, Conclusions and Recommendations. Chapter one introduced the background information of the study: the problem statement, the rationale of the study, the conceptual framework, the research questions, the general objective, the specific objectives and

the scope of the study. Chapter Two which is the literature review presented similar studies associated with the objectives of the study.

The research was arranged into six (6) sections which includes introduction, literature review, research methodology, findings, discussions, conclusions and recommendations. The background information for the study was presented in Chapter One and included are the problem statement, general objective, research questions, rational of the study, significance of the study, conceptual framework, profile of the study, and study scope. The Chapter Two which is the literature review included comparable papers related to the study's goals. The methodology was described in Chapter Three and included the following: research methodologies and design, study area, data collection techniques and instruments, study population, study variables, sampling, data handling, data analysis, ethical issues, and study constraints. A summary of the findings derived from data analysis of the study's primary objectives were presented in Chapter Four. In Chapter Five, the findings from the research questions were compared to previous findings in the literature. The study's conclusions and recommendations were finally presented in Chapter Six.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This study's chapter expounds upon and examines pertinent literature regarding Ghanaian women of reproductive age's adoption of NHIS. It provides definitions for important terms and analyses of prior research on the topic of study.

2.2 National Health Insurance Scheme in Ghana

Eliminating financial obstacles that kept individuals from getting healthcare was the aim of the NHIS. The Parliament of the Republic of Ghana subsequently enacted Act 650 in September 2003, formally establishing the NHIS as a framework for healthcare regulation (Mensah, Opong & Schmidt, 2010). Act 650 required the NHIS to create the National Health Insurance Authority, whose job it was to oversee the healthcare system. This included overseeing the National Health Insurance Fund, establishing membership cards, accrediting healthcare providers, and negotiating contribution rates with other plans. Pace & Brugiavini, 2016).

A full minimum set of services is provided by all authorized healthcare providers, thanks to this redesigned healthcare system. These services cover a broad spectrum, including maternity care, which includes prenatal care, normal delivery, and complex deliveries; general outpatient and inpatient care at accredited facilities; oral health; eye care; handling emergencies; and so on (Brugiavini & Pace, 2016; Mensah, Opong & Schmidt, 2010). It is important to remember, nonetheless, that this basic package does not cover some specialty therapies, such HIV retroviral medications, assisted reproduction, and cancer therapy (Brugiavini & Pace, 2016). Additionally, a variety of illnesses are included by the NHIS, such as diabetes, hypertension, asthma, skin

conditions, diarrhea, malaria, and a few other infections (Brugiavini & Pace, 2016). Consistent with the initial goal of the NHIS, this extensive coverage plays a major role in improving healthcare accessible generally and lowering financial obstacles. The NHIS has undergone several changes over time, most notably the implementation of Act 852 and the free maternity healthcare policy, which mandate NHIS membership and enable individual operations (Brugiavini & Pace, 2016). The NHIS is administered by the National Health Insurance Authority, and premium payments are required of all persons between the ages of 18 and 69 (Brugiavini & Pace, 2016).

The National Health Insurance Fund (NHIF) is financed by a combination of sources, including interest earned on NHIF reserves, 2.5% of social security contributions made by workers in the formal sector, insurance premiums from the informal sector, which account for 4% of NHIS revenues, and pooled contributions from a value-added tax of 2.5% designated for national health insurance, which accounts for approximately 66% of NHIS revenues (NHIA, 2013; Singh et al., 2015). Renewing enrollment in the program requires yearly registration at district NHIS offices or other authorized locations. This ensures ongoing access to medical care.

As mandated by the National Health Insurance Act of 2012 (Act 852), all citizens must join in the NHIS (NHIA, 2013). The policy does, however, have an exception that allows the most vulnerable and underprivileged segments of society to receive free healthcare access. The severely poor (i.e., indigents in the community identified by community leaders and social workers and sent to the NHIS) and the elderly (70 years and above) are among the premium exempt groups. Furthermore, expecting moms receive a premium waiver (Ayanore et al., 2019; Christmalls & Aidam, 2020).

Over 3500 public and commercial health institutions that have been recognized by the NHIA provide health services to participants of the plan (Fenny et al., 2016). Facilities must adhere to quality standards for a minimum number of certified medical staff members as well as the quantity and caliber of utilities, including a steady supply of power and water. In order to make sure that medical procedures and medication administration follow established medical practice and ethics, it also mandates post-accreditation monitoring (Ayanore et al., 2019; Christmals & Aidam, 2020). The initiative aims to both attract new members and convince covered ones to keep their insurance by emphasizing the quality of treatment provided at facilities. Valid NHIS cardholders may get medical care from public, missionary, private, for-profit healthcare facilities accredited by the National Health Insurance Authority (NHIA) (Ayanore et al., 2019; Christmals & Aidam, 2020).

2.3 Healthcare Financing in Ghana

Diverse health funding models around the globe indicate that there isn't a single risk pooling strategy that works for everyone. Numerous distinct health finance strategies are recognized and implemented in various nations, including social or voluntary health insurance, central government allocations (taxation), and others (Lagomarsino et al., 2012). The main method of paying for medical services in Ghana before the National Health Insurance System (NHIS) was put into place was through user fees, commonly referred to as cash-and-carry. Studies have indicated that this approach disenfranchises the underprivileged and vulnerable from receiving necessary medical treatment (Yazbeck, 2009). In response, the World Health Organization (WHO) assigned member nations the duty of ensuring universal health finance in 2005 by doing away with the need that patients pay out-of-pocket for medical treatments (World Health

Organization, 2010). Prepayment plans are acknowledged as an efficient way to reduce the cost of health care, particularly for the underprivileged and disadvantaged. The implementation of health insurance-related payment plans might lead to universal health finance. The developing world's nations frequently use this payment method. Various prepayment systems for health care have been established by countries including the UK, Germany, France, Italy, Canada, and Australia (Mossialos et al., 2016). There is evidence that the majority of developed countries pay for medical care in advance by using both public and commercial health insurance. In some nations, like Australia, Canada, Denmark, and Italy, private health insurance can serve as a substitute for public insurance or as an addition to cost sharing and non-covered benefits (Mossialos et al., 2016).

2.4 Uptake of National Health Insurance Scheme among Pregnant Women in Ghana

Before the NHIS was established, the Ghanaian government passed a law exempting women from delivery care costs in the country's four most disadvantaged districts: Northern, Upper East, Upper West, and Central (Singh et al., 2015). In 2005, this program was expanded to include all areas with the aim of providing free birth care, including C-sections, to all women. In the year that the government launched the NHIS, the Ministry of Health terminated the initiative because it was underfunded. Due to a loophole created as a result, women who were not covered by the NHIS plan were forced to pay for their maternity care. As a result, the Maternal Health Care Program was introduced by the Ministry of Health, waiving out-of-pocket expenses for women who enrolled in the NHIS program and later received a pregnancy confirmation (Singh et al., 2015).

The services offered include two post-natal care (PNC) appointments within six weeks of giving birth, six prenatal care (ANC) consultations, delivery care (including handling issues), and care for newborns up to three months of age. After three months, a child under the age of eighteen would no longer need to be registered, although parents would still need to do so (Dzakpasu et al., 2012). Given the program's strong focus on maternal and child health, the NHIS expects that women participating in it will use relevant maternity and child health services more frequently and ultimately experience improved health outcomes. That being said, very few studies have looked into this issue. A study on the effects of the NHIS found that facility delivery utilization was higher in the Brong Ahafo Region, particularly among the impoverished (Dzakpasu et al., 2012).

According to Mensah et al. (2010), participants from the Brong Ahafo and Upper East regions of the NHIS had a higher likelihood of obtaining ANC and receiving care in a facility. The study also discovered that compared to non-enrollees, participants had superior delivery outcomes and reduced baby death rates. Women who knew that delivery care was free were more likely to give birth at a medical facility than those who were unaware of this, per a prior analysis of Northern Ghana's pre-NHIS maternal delivery care exemption from 2004 to 2006 (Mills et al., 2008). Many pregnant women acquire coverage under the maternal health program, but they quickly stop using it, according to Singh et al. (2015).

Ayanore et al. (2023) assessed health insurance coverage and related characteristics among reproductive age women living in rural Ghana, encompassing 7340 women aged 15–49. They did this by using nationally representative data from the 2017–2018 Ghana Multiple Indicator Cluster Survey (GMICS). Despite the fact that over half of women had health insurance, their

research revealed that a sizable portion did not. Education level, radio listening, parity, pregnant status, wealth quintile, and residential area were also found to be associated with health insurance coverage.

Badu et al. (2018) employed quantitative methodologies in a cross-sectional design to examine the association between healthcare utilization and the National Health Insurance Scheme (NHIS) status among 380 respondents selected through a multistage cluster sampling procedure. The study concludes that proximal characteristics in families have an impact on the adoption of NHIS policies and subsequent healthcare utilization. Vulnerable demographics whose NHIS policies were less likely to be renewed included individuals of color, the elderly, and religious institutions.

Aregbeshola and Khan (2018) used secondary data from the 2013 Nigeria Demographic and Health Survey (NDHS) to examine the factors influencing NHIS participation among women of reproductive age. Relatively few Nigerian women who are of reproductive age have health insurance, according to their research. Furthermore, there was a correlation between the socioeconomic and demographic traits of women and their NHIS enrollment.

Fenny et al. (2016) looked into the causes of Ghana's low rate of health insurance uptake and renewal. Minimal framework was used to conduct qualitative interviews with significant local, regional, and national stakeholders. In addition, neighborhood-level focus groups were conducted. The transcripts were analyzed using an inductive and content analytic technique to identify and characterize the categories that account for the low uptake of health insurance. The results showed that sociocultural factors, like vulnerability within particular groups, like the elderly and the disabled, impeded access to the NHIS and that cultural and religious norms

discouraged program enrollment. Systemic problems include poor treatment quality, inadequate administrative processes within the NHIS, and unequal distribution of social infrastructure like healthcare facilities hindered access to the NHIS once more.

2.5 Factors Associated with the Uptake of NHIS Among Pregnant Women in Ghana

2.5.1 Sociodemographic Information

The sociodemographic information of Ghanaian households influences the NHIS's uptake. The decision of households to enroll in and renew their NHIS coverage is influenced by the sociodemographic data. Alatinga and Williams (2015) state that the social, economic, demographic, and health status of families are the main factors influencing these determinants. Across numerous regional and geographic borders, gender is one social factor that influences NHIS insurance enrollment (Alatinga & Williams, 2015). For example, prior studies have shown that women were more likely than men to enroll in and renew their NHIS coverage (Chankova, Sulzbach & Hatt, 2009). Studies show that women are 1.2–1.8 times more likely to join in and renew their NHIS policy subscription (Chankova, Sulzbach & Hatt, 2009) and 1.4–1.9 times more likely (Jehu-Appiah et al., 2011), respectively. Due in large part to their role as mothers and their vulnerability to healthcare, women's involvement in the NHIS program has increased.

2.5.2 Marriage

In Ghana, married individuals are more likely to enroll in and renew their NHIS policy (Amu & Dickson, 2016). For instance, compared to single persons, people in their reproductive age have 1.3 times (95% CI; 1.12, 1.73) higher likelihood of enrolling in the NHIS policy (Amu & Dickson, 2016). This group's view of the expense of obtaining care makes them more susceptible

to the burden of out-of-pocket healthcare bills, which is why they have participated in the NHIS at a higher rate.

2.5.3 Religious Affiliations

Religious affiliations have been observed to have an impact on households' ownership of NHIS policies. Prior studies have indicated that in certain regions, like Ghana's Eastern and Central Regions, households with ties to religion—such as Christianity, Islam, or tradition—were more likely than households without such ties to be active members of the NHIS (Jehu-Appiah et al., 2011). However, in a similar study carried out in Ghana's Upper West Region, the increase in NHIS policy ownership based on gendered identification varied according on religious affiliation. For instance, Muslim men had higher odds of never enrolling in and dropping out of the NHIS program (OR = 2.6 and OR = 1.7, respectively) than did their Christian counterparts. On the other hand, women who classified as Muslim and/or Traditional had higher enrollment rates than their Christian counterparts (OR = 2.1 and OR = 1.6) (Dixon, Luginaah, & Mkandawire, 2014). The population of the Upper West Region is primarily Muslim, which could account for this disparity.

2.5.4 Age of Household Members

Furthermore, it has been repeatedly demonstrated that the age of household members significantly predicts NHIS policy ownership (Amu & Dickson, 2016). Several research indicate that the age of the family influences the probability of NHIS enrollment and renewal (Jehu-Appiah et al., 2011). Previous studies have shown that elderly persons who were 70 years of age or older were more likely to participate in the NHIS and maintain coverage. Jehu-Appiah et al. (2011) report that studies have demonstrated that older adults (60–70 years old) are around 1.8–

4.2 times (mean = 2.45) more likely than people in lower age groups to enroll in and renew their NHIS coverage. In Ghana's Eastern and Central regions, for instance, people in the richest quintile are more likely to be NHIS members as they get older; those 70 years of age and older had a 13.6-fold higher chance of being actively enrolled in the NHIS than younger people (Jehu-Appiah et al., 2011). Differences in NHIS policy ownership among age groups are also influenced by gender identification and vulnerability. Young women and children, in particular, are more likely than other vulnerable demographics to own an NHIS policy (Chankova, Sulzbach & Hatt, 2009). Nonetheless, prior research revealed that, among women in their reproductive ages, women in their 45–49 years had a 0.64-fold lower likelihood of enrolling in the NHIS program than women under 45 (Amu & Dickson, 2016).

2.5.5 Size of Individual Households

Furthermore, the size of a household also reflects whether or not it has NHIS coverage. Manortey et al. (2014) found that as families get bigger, the likelihood of enrolling in and keeping up NHIS coverage decreases. A previous study (Manortey et al., 2014) found that participants in the NHIS were less likely to have a household size of 12 or more (AOR = 0.33; 95% CI: 0.24, 0.45). Enrolling in and renewing NHIS insurance may be more challenging for people with larger households. This could be connected to the higher charge or one-time payment for customers, particularly if they lack sufficient resources.

2.5.6 Education Level

Furthermore, the size of a household also reflects whether or not it has NHIS coverage. Manortey et al. (2014) found that as families get bigger, the likelihood of enrolling in and keeping up NHIS coverage decreases. A previous study (Manortey et al., 2014) found that

participants in the NHIS were less likely to have a household size of 12 or more (AOR = 0.33; 95% CI: 0.24, 0.45). Enrolling in and renewing NHIS insurance may be more challenging for people with larger households. This could be connected to the higher charge or one-time payment for customers, particularly if they lack sufficient resources. For instance, the likelihood of enrolling in the NHIS insurance among clients with postsecondary education increased from 29 for those in the first lowest quintile to 9.12 and 2.4 for those in the third and fourth quintiles, respectively, according to earlier study (Jehu-Appiah et al., 2011).

Again, there are differences based on gender identity in the relationship between educational attainment and ownership of NHIS plans. A previous study carried out in Ghana's Upper West Region found that men with only a primary education or no education had greater odds of never enrolling (OR = 4.9 and OR = 6.9, respectively) and dropping out (OR = 4.8 and OR = 3.3, respectively) than those with a university or college education. In comparison to women with a university degree, Dixon, Luginaah, and Mkandawire (2014) found that females with only a primary or no education also had higher odds of never enrolling (OR = 12.8 and OR = 23.9, respectively) and dropping out (OR = 1.6 and 2.06).

2.5.7 Health Status

Health status also has an impact on people's decisions to consistently enroll in and renew their NHIS coverage. Previous studies have shown that persons in poor health were 1.13–1.9 times more likely than those in great health to become active members of the NHIS (Jehu-Appiah et al., 2011). For example, individuals who self-report chronic diseases (Chankova, Sulzbach & Hatt, 2009) and who were hospitalized 1.9–2.2 times and 4.4 times, respectively, are more likely to be included in the NHIS system than people who do not have these issues. There may be a

correlation between frequent healthcare demands and the higher participation rate of people with chronic health conditions—particularly the older population—in the NHIS program. People who are not well are more likely to encounter health issues that require immediate medical intervention.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter sets out the research method adopted to achieve the research objectives. It comprises a description of the research methods and design, data collection techniques and tools, population, inclusion and exclusion criteria. This chapter also described and justified the study variable, sampling, data analysis, ethical considerations and limitation of the study.

3.2 Research Methods and Design

A cross-sectional descriptive design was used in the study. In order to characterize the current state of phenomena in relation to variables or conditions in a setting, this study design entails gathering information about their current status. The researcher can evaluate the variables linked to Ghanaian women of reproductive age's adoption of NHIS with the use of this study design. Additionally, the study used a quantitative research methodology. This methodology enables the study to collect and process data from the statistical service of Ghana 2022 Ghana Demographic and Health Survey (GDHS) in quantitative/numerical terms.

3.3 Data Collection Techniques and Tools

According to Cooper and Schindler (2003), every research needs to have a data collection strategy that fits the kind of project it is conducting. Additionally, the study needs to be able to collect data that answers the research questions in order to achieve its objectives. Utilizing a variety of techniques and procedures to gather data is essential for conducting effective research projects since it will allow for the completion of high-quality results. Secondary data was gathered from the 2022 GDHS for this investigation. The woman's questionnaire from the 2022

GDHS, specifically the part on health insurance coverage, provided secondary data for the study. Women between the ages of 15 and 49 who are sampled in 618 clusters are asked to complete the questionnaire. Data on adult women, including as health insurance coverage, was gathered using the woman's questionnaire. Interviews were conducted with women aged 15 to 49 who identified as household occupants or visitors who stayed overnight prior to the study.

3.3 Study population

The study population covers approximately 18,540 households in 618 clusters across all the 16 regions in Ghana. The study interviewed 15,014 women of reproductive (15 to 49).

3.4 Inclusion criteria

The study includes all pregnant women in their reproductive age (15 to 49) who took part in the 2022 GDHS who have complete observations on their NHIS coverage status and their healthcare utilisation patterns.

3.5 Exclusion criteria

The study excludes all participant who took part in the 2022 GDHS and were women in their reproductive age who were not pregnant.

3.6 Study Variables

This study examined two categories of parameters which are the dependent and independent. The uptake of NHIS among Ghanaian pregnant women who are of reproductive age is the dependent variable in this study. Demographics, participant socioeconomic status, access to and use of health services, type of coverage, use of health services, mode of payment, NHIS coverage,

validity, and reasons for discontinuing NHIS coverage were the study's independent variables of interest.

3.7 Sampling

Sampling is one of the most widely used methods for gathering data in research (Garson, 2012). According to Cohen, Manion, and Morrison (2014), selecting a sample from the population of interest is necessary since it is impossible to conduct research on every member of a target group, particularly when the community is very big. To achieve the objectives of the study, a selection method from the 2022 GDHS was applied. One in every two families selected, or 15,014 women between the ages of 15 and 49, were questioned from a stratified representative sample of 18,450 households divided into 618 clusters. The sample method employed in the 2022 GDHS was stratified two-stage cluster sampling. The aim of the study was to generate representative outcomes for most DHS variables across the country, considering both urban and rural areas, as well as all 16 regions. However, the researcher used the purposive sampling strategy to concentrate solely on pregnant women who were of reproductive age, as their focus is not on the entire sample size of 15,014 from the 2022 GDHS. Thus, 1,111 pregnant women make up the study's sample size.

3.9 Data analysis

The data analysis was done using statistical methods like inferential and descriptive tools. First, information was taken from the 2022 GDHS dataset, and questionnaire responses were cleaned, merged, and analyzed using the Statistical Package for Social Sciences (SPSS). The age, gender, place of residence, level of education, and socioeconomic position of the respondents were the first sociodemographic variables to be examined using basic proportions (frequencies and

percentages). In Ghana, relationships between sociodemographic characteristics and NHIS uptake among reproductive-age women were examined using chi-square tests and cross tabulations. The study employed multivariable logistic regression to examine the degree of correlation between socio-demographic characteristics and the adoption of NHIS among reproductive-age pregnant women in Ghana. There were significant relationships between the dependent and independent variables ($p < 0.05$) with a 95% confidence interval.

3.10 Ethical issues

Ethics are just moral precepts that should direct researchers during the whole study process. The request for ethical approval was made to the Ensign Institutional Review Board. Data from the 2022 GDHS were used in the study. The Ghana Health Service Ethical Review Committee and the Institutional Review Board of the ICF International examined and accepted the ethical clearance prior to the 2022 GDHS. Participants' consent to participate in the study and ethical approval are not relevant in this context.

3.11 Limitations of the study

The research conducted has few limitations that constraint the researcher. The researcher's first task was to fit her research within her office work routine. This has impacted research contributions and timely delivery. Furthermore, the sample size was insufficient in comparison to the research population, making it impossible to extrapolate the study's conclusions. Despite all of these drawbacks, the main goal of the study is still thought to have been accomplished.

CHAPTER FOUR

RESULTS

4.1 Introduction

The data gathered by the Ghana Statistical Service (GSS) through the 2022 Ghana Demographic and Health Survey (GDHS) is analyzed and interpreted using SPSS in this chapter. This chapter's contents provided a starting point for conversations and interpretations. The study looked at Ghanaian pregnant women who were of reproductive age and their use of government health insurance.

4.2 Socio Demographic Characteristic of the Respondents

This section describes pregnant women in their reproductive age who are registered on NHIS according to their background characteristics. From the Table 1 below, majority (24.66%) of the respondent are within ages of 35-39 years, with few (5.85%) within the age group of 15-18 years meanwhile majority (91.98%) of the respondent within 25-29 ages indicated they have NHIS with few (86.15%) within the age group of 20-24 reported they have NHIS.

With regards to residence of the respondents, majority (51.49%) are living in urban areas whilst the remaining few (48.51%) are living in rural areas. With the respondents' residence, majority (91.08%) in urban area indicated they have NHIS whilst (89.05%) of the respondents living in rural areas also indicating they have NHIS. In relation to the respondents' region, it can be observed that the majority (15.75%) of the respondents are in Ashanti region whilst few (2.25%) are in Ahafo region. However, the region that reported the highest uptake of NHIS is Ahafo region with all (100%) the respondents having NHIS whilst Central region reported the lowest with (83.93%) of the respondents having NHIS.

Furthermore, NHIS uptake according to the educational level of the respondents indicated that majority (55.45%) of the respondents have secondary education which few (9.99%) have more than secondary education. However, their NHIS uptake shows that respondents with more than secondary education have the majority (94.59%) of NHIS uptake whilst the respondents with primary education reported the lowest (87.13%) uptake of NHIS. With regards to the respondents' number of children, the study shows that majority (42.84%) of the respondents have between 3-4 children whilst 10.80% of the respondents have more than 5 children. Meanwhile, majority (90.88%) of the respondents with 1-2 children reported the highest NHIS uptake whilst respondents with no children reported the lowest (80%) NHIS uptake. Finally, the results from the respondents' wealth quintile indicates that majority (24.03%) of the respondents are within the fourth wealth quintile with few (18.36%) of the respondents within the second wealth quintile. However, the respondents in the highest wealth quintile have the majority (92.89%) of the NHIS uptake whilst the respondents in the lowest wealth quintile had the lowest (87.16%) NHIS uptake.

Table 1: NHIS Uptake (Registration) according to background characteristics

Background Information	Total (n=1,111)	Percent %	Yes NHIS	Percent %	No NHIS	Percent %
Age (N=1,111):						
15-19	65	5.85	56	86.15	9	13.85
20-24	121	10.89	110	90.91	11	9.09
25-29	212	19.08	195	91.98	17	8.02
30-34	232	20.88	213	91.81	19	8.19
35-39	274	24.66	252	91.97	22	8.03
40-44	129	11.61	117	90.70	12	9.30
45-49	78	7.02	68	87.18	10	12.82
Residence (N=1,111):						
Urban	572	51.49	521	91.08	51	8.92
Rural	539	48.51	480	89.05	59	10.95
Region (N=1,111):						
Western	74	6.66	65	87.84	9	12.16
Central	112	10.08	94	83.93	19	16.96

Greater	150	13.50	131	87.33	20	13.33
Volta	50	4.50	47	94.00	4	8.00
Eastern	99	8.91	92	92.93	7	7.07
Ashanti	175	15.75	163	93.14	14	8.00
Western North	32	2.88	29	90.63	3	9.38
Ahafo	25	2.25	24	96.00	1	4.00
Bono	42	3.78	42	100.00	0	0.00
Bono East	47	4.23	44	93.62	3	6.38
Oti	38	3.42	32	84.21	6	15.79
Northern	115	10.35	100	86.96	15	13.04
Savannah	37	3.33	32	86.49	5	13.51
North East	36	3.24	33	91.67	3	8.33
Upper East	48	4.32	47	97.92	1	2.08
Upper West	31	2.79	29	93.55	2	6.45
Education (N=1,111):						
No Education	213	19.17	185	86.85	28	13.15
Primary	171	15.39	149	87.13	22	12.87
Secondary	616	55.45	561	91.07	55	8.93
More than secondary	111	9.99	105	94.59	6	5.41
Number of Children (N=1,111):						
0	175	15.75	154	88.00	21	12.00
1-2	340	30.60	309	90.88	31	9.12
3-4	476	42.84	443	93.07	33	6.93
More than 5	120	10.80	107	89.17	13	10.83
Wealth Quintile (N=1,111):						
Lowest	218	19.62	190	87.16	28	12.84
Second	204	18.36	182	89.22	22	10.78
Middle	211	18.99	190	90.05	21	9.95
Fourth	267	24.03	243	91.01	24	8.99
Highest	211	18.99	196	92.89	15	7.11

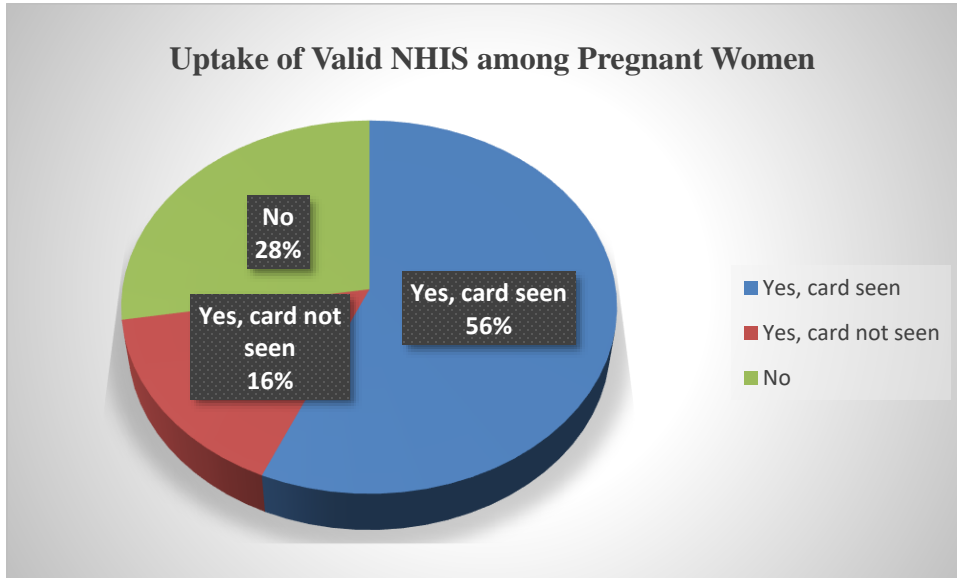
Source: (GDHS, 2022)

4.3 Uptake of Valid NHIS among Pregnant Women in their Reproductive Age

Figure 1 presents the uptake of valid NHIS among pregnant women in their reproductive age. It was found that 56% of expectant mothers who claimed to be insured by the NHIS had a current card (see card). However, 16% of the expectant mothers could not present their NHIS cards at the time of the interview (card not shown). Last but not least, 28% of women with NHIS

coverage lacked a valid card. Therefore, the study findings confirmed that majority of pregnant women in their reproductive age had a valid NHIS.

Figure 2: Uptake of Valid NHIS among Pregnant Women



Source: (GDHS, 2022)

4.4 Reasons for not having a valid NHIS

This section looks at reasons for not having a valid NHIS. To achieve this objective, pregnant women in their reproductive age were asked to give the reasons why they do not have a valid NHIS. The following results were obtained, along with their percentages. Table 2 shows that 26.4% of pregnant women who are of reproductive age report that their card has been lost, burned, broken, or not renewed. This suggests that most pregnant women in their reproductive age cannot finance their healthcare through NHIS because of improper handling of their NHIS cards. This is followed by 22.4% of the pregnant women in their reproductive age who indicate that they cannot afford the premium. This suggests that pregnant women in their reproductive age cannot finance their healthcare through NHIS because they do not have money. Another

14.9% of pregnant women also indicated that they do not need health insurance. Again, additional 10.3% of pregnant women indicated other reasons for not having a valid NHIS. Furthermore, 5.9% of pregnant women indicated that they do not trust the NHIS. This has to do with trust in the NHIS scheme for service providers to offer better services. However, pregnant women in their reproductive age representing 5.1%, 4.9%, 4.4% and 4.2% indicated that NHIS does not cover health services they need, those with insurance are given substandard services, they do not know where to register and they do not like the attitude of staff in a health facility respectively. Finally, 3%, 1.7% and 1.1% of pregnant women in their reproductive age indicated that there is no easy access to a health facility, they do not get sick, they do not have no time to go and get NHIS and they do not understand the scheme respectively.

Table 2: Reasons for not having a valid NHIS

Reasons	Frequency (N=1,111)	Percentage (%)
Cannot afford the premium	166	14.94
Do not trust the NHIS	76	6.84
Don't need health insurance	123	11.07
NHIS does not cover health services I need	67	6.03
Don't understand the scheme	44	3.96
Don't know where to register	63	5.67
No easy access to a health facility	55	4.95
Do not like the attitude of staff in a health facility	62	5.58
Those with insurance are given substandard services	66	5.94
Don't get sick	55	4.95
Have no time to go	48	4.32
Card not renewed/missing or lost/ burnt or broken	189	17.01
Other	97	8.73

Source: (GDHS, 2022)

4.5 Socio Demographic Factors Associated with NHIS Registration among Pregnant

Women in their Reproductive Age

The relationship between sociodemographic characteristics of respondents and their NHIS registration were assessed using the Pearson chi-squared test. The chi-squared test was carried out to test if there is a relationship between the dependent (NHIS registration among pregnant women in their reproductive age) and independent variables (age, residence, region, education, number of children and wealth quintile). It compares the observed frequencies from the data with frequencies which should be expected if there was no relationship between the two variables.

The bivariate analysis of the NHIS registration and respondent's socio-demographic characteristics in table 4.6 below showed a statistically significant relationship for region of respondents ($P = 0.034$), education of respondents ($P = 0.025$) and wealth quintile of respondents ($P = 0.011$).

Table 3: Bivariate Analysis of Socio Demographic Factors Associated with NHIS Registration among Pregnant Women in their Reproductive Age

<i>Background Information</i>	<i>NHIS Registration</i>		<i>P value</i>
	<i>Yes N (%)</i>	<i>No N (%)</i>	
Age (N=1,111):			0.085
15-19	56 (86.15)	9 (13.85)	
20-24	110 (90.91)	11 (9.09)	
25-29	195 (91.98)	17 (8.02)	
30-34	213 (91.81)	19 (8.09)	
35-39	252 (91.27)	22 (8.03)	
40-44	117 (90.7)	12 (9.3)	
45-49	68 (87.18)	10 (12.82)	
Residence (N=1,111):			0.157
Urban	521 (91.08)	51 (8.92)	
Rural	480 (89.05)	59 (10.95)	
Region (N=1,111):			0.034
Western	65 (87.84)	9 (12.16)	

Central	94 (83.93)	19 (16.96)	
Greater	131 (87.33)	20 (13.33)	
Volta	47 (94)	4 (8)	
Eastern	92 (92.93)	7 (7.07)	
Ashanti	163 (93.14)	14 (8)	
Western North	29 (90.63)	3 (9.38)	
Ahafo	24 (96)	1 (4)	
Bono	42 (100)	0 (0)	
Bono East	44 (93.62)	3 (6.38)	
Oti	32 (84.21)	6 (15.79)	
Northern	100 (86.96)	15 (13.04)	
Savannah	32 (86.49)	5 (13.51)	
North East	33 (91.67)	3 (8.33)	
Upper East	47 (97.92)	1 (2.08)	
Upper West	29 (93.55)	2 (6.45)	
Education (N= 1,111):			0.025
No Education	185 (86.85)	28 (13.15)	
Primary	149 (87.13)	22 (12.87)	
Secondary	561 (91.07)	55 (8.93)	
More than secondary	105 (94.59)	6 (5.41)	
Number of Children (N=1,111):			0.055
0	154 (88)	21 (12)	
1-2	309 (90.88)	31 (9.12)	
3-4	443 (93.07)	33 (6.93)	
More than 5	107 (89.17)	13 (10.83)	
Wealth Quintile (N=1,111):			0.011
Lowest	190 (87.16)	28 (12.84)	
Second	182 (89.22)	22 (10.78)	
Middle	190 (90.05)	21 (9.95)	
Fourth	243 (91.01)	24 (8.99)	
Highest	196 (98.89)	15 (7.11)	

Significant at 0.05 level **

4.6 Relationship Between Socio Demographic Factors and Uptake (Registration) of NHIS among pregnant women in their reproductive age

Table 4 shows the relationship between socio demographic characteristics and uptake (registration) of NHIS among pregnant women in their reproductive age. The logistic regression analysis adjusting for sociodemographic characteristics such as (age, residence, region, education, number of children and wealth quintile) showed that NHIS registration among pregnant women in their reproductive age and their socio-demographic characteristics is not statistically significant as the $p > 0.05$.

Table 4: Logistic Regression Analysis of Uptake of NHIS among Pregnant Women in their Reproductive Age

<i>Background Information</i>	<i>Adjusted OR (CI)</i>	<i>P-value</i>
Age (N=1,111):		
15-19	1.00	
20-24	1.36 (1.16–1.59)	0.9
25-29	1.08 (0.92–1.28)	0.83
30-34	1.04 (0.88–1.22)	0.95
35-39	1.05 (0.88–1.24)	0.98
40-44	0.85 (0.71–1.02)	0.88
45-49	0.74 (0.56–0.98)	1.13
Residence (N=1,111):		
Urban	1.00	
Rural	1.21 (1.05–1.39)	1.07
Region (N=1,111):		
Western	1.00	
Central	0.75 (0.53–1.0)	0.69
Greater	1.22 (0.99–1.50)	1.36
Volta	0.82 (0.67–1.02)	0.91
Eastern	1.25 (1.01–1.54)	1.18
Ashanti	2.53 (2.02–3.18)	2.82
Western North	0.97 (0.80–1.18)	1.32
Ahafo	1.62 (1.32–1.98)	2.13
Bono	1.16 (0.96–1.40)	1.56

Bono East	1.59 (1.37–1.86)	1.81
Oti	1.23 (1.04–1.45)	1.59
Northern	1.10 (0.93–1.30)	1.41
Savannah	0.97 (0.82–1.15)	1.27
North East	0.95 (0.79–1.13)	1.36
Upper East	0.93 (0.77–1.11)	1.29
Upper West	0.71 (0.57–0.89)	1.05
Education (N=1,111):		
No Education	1.00	
Primary	1.18 (1.06–1.32)	1.26
Secondary	1.81 (1.53–2.14)	1.81
More than secondary	6.40 (3.96–10.34)	4.77
Number of Children (N=1,111):		
0	1.00	
1-2	1.05 (0.92–1.19)	0.99
3-4	1.19 (1.06–1.34)	1.15
More than 5	1.26 (0.96–1.66)	0.85
Wealth Quintile (N=1,111):		
Lowest	1.00	
Second	1.41 (1.24–1.61)	1.87
Middle	1.58 (1.34–1.87)	2.14
Fourth	2.99 (2.39–3.74)	3.84
Highest	0.60 (0.45–0.81)	0.97

**P-value<0.05; OR=odds ratio; CI= confidence interval

CHAPTER FIVE

DISCUSSIONS

5.1 Introduction

The data that were analyzed using regression analysis and descriptive statistics are summarized and discussed in this chapter. The primary goal of the study was to look into how Ghanaian women in their reproductive age who are pregnant use public health insurance.

5.2 Discussion

5.2.1 Socio Demographic Characteristics and Uptake (Registered) of NHIS among Pregnant Women in Ghana

The study revealed that pregnant women in their reproductive age between 15-19 years and 20-24 years were more likely to uptake in NHIS with both having the highest percentage of 17.9%. This shows that younger women of adolescent age are more fertile and likely to become pregnant than older women, which explains why they participate in the NHIS at higher rates. Despite the fact that older women are more likely to become unwell as they age and may need to make larger health care expenditures, their participation in the NHIS remains low. The results of other studies corroborate this finding (Kirigia et al., 2005; Kiplagat, Muriithi & Kioko, 2013; Jehu-Appiah et al., 2011).

According to the study, women were less likely to get health insurance in the Central, Oti, Savannah, Greater Accra, Northern, and Western regions. The low enrollment rate in these regions may be caused by the fact that, with the exception of Greater Accra and the Western region, many of these regions such as Northern, Oti, Savannah, and Central have rural communities and a high percentage of women from low-income households who are unaware of

the benefits of health insurance. Moreover, the majority of health insurance providers are centered in cities, making them inaccessible to women living in rural areas. This result is in line with other research (Kimani et al., 2014; Mulenga, Bwalya & Gebremeskel, 2017) that indicated a geopolitical zone was linked to a decreased likelihood of receiving health insurance coverage. Previous studies in Ghana showed that women in the middle and northern regions had higher health insurance coverage, whereas those in the coastal region had the lowest coverage, according to Amu and Dickson (2016).

According to the study's findings, pregnant women who completed secondary school or more likely than not had a higher chance of taking part in the NHIS than women who only completed primary school or had no education at all. One explanation could be that educated pregnant women are more aware of the benefits of health insurance and make well-informed decisions regarding their health, including getting health insurance. Results from additional investigations (Kirigia et al., 2005; Kiplagat, Muriithi & Kioko, 2013; Wang, Temsah & Mallick, 2014) corroborate this conclusion. For instance, those with minimal to no education are more likely to have dropped out of the program entirely or to have never registered (Dixon, Luginaah, & Mkandawire, 2014).

In addition, compared to women from the second and lowest wealth quintiles, pregnant women from the highest, fourth, and medium wealth quintiles were more likely to have health insurance coverage. One explanation could be that women in the poorest households have less access to resources, are unable to pay for health insurance, and have trouble making subscription payments. The results align with previous research demonstrating that a greater socioeconomic status is a significant determinant of NHIS enrollment (Sarpong et al., 2010; Mulenga, Bwalya &

Gebremeskel, 2017). Additionally, Parmar et al. (2013) discovered compelling evidence of enrollment inequality brought about by a confluence of sociocultural, political, and economic factors, with older people in the richest quartiles enrolling at a higher rate than those in the poorest quartiles.

5.2.2 Proportion of Pregnant Women Registered on NHIS to those with Valid NHIS

According to the study, 73% of pregnant women who are of reproductive age are registered on the NHIS and have a valid NHIS. This might be because pregnant women in Ghana can register for a free health insurance plan. An additional contributing reason to the high percentage of pregnant women with valid NHIS could be their urban residence, high level of wealth quintile, and educational background. Once more, the results may potentially be related to the free maternal health policy, which exempts pregnant women from paying the NHIS. According to previous research (Amu & Dickson, 2016; Kazungu & Barasa, 2017; Mulenga, Bwalya & Gebremeskel, 2017), the NHIS has a high uptake rate. For example, studies have shown that pregnant women in their reproductive ages had higher enrollment and policy renewal probabilities in the NHIS (Amu & Dickson, 2016). According to the study's findings, pregnant women's high NHIS uptake rate may contribute to a decrease in the burden of healthcare finance and out-of-pocket expenses.

5.2.3 Factors Associated with Uptake of NHIS among Pregnant Women in Ghana

According to the research on the reasons why pregnant women do not have a valid NHIS card, the finding show that majority of these women did possess a valid card; nevertheless, it was either lost, burned, broken, or not renewed. This implies that a significant number of pregnant women within the reproductive age group do not possess a valid NHIS card due to incorrect

management of their cards. The majority of women in their reproductive years cannot afford the NHIS subscription, according to the report. The data indicates that a significant proportion of reproductive age pregnant women were not aware of Ghana's free health insurance scheme registration for expectant mothers or the free maternal health policy that waives the national health insurance program (NHIS) premium for expectant mothers.

Once more, the study revealed that some pregnant women expressed little need for health insurance and no faith in the NHIS. This relates to service providers' confidence in the NHIS program to deliver superior services. This is consistent with a prior study on the causes of non-NHIS insurance by Ayanore et al. (2019), which discovered that mistrust is a major factor influencing enrollment rates in Ghana. Nonetheless, the findings also demonstrated that NHIS does not provide necessary health care for pregnant women in their reproductive age, and those who have insurance are provided with subpar care.

Others expressed dissatisfaction with certain health facilities' personnel attitudes. This result is in line with study conducted in 2016 by Fenny et al., which demonstrated that certain insured individuals do complain about the poor quality of healthcare services received at the facilities, including lengthy wait times, unprofessional behavior from staff members, and medicine shortages (Fenny et al., 2016). Additionally, a qualitative study carried out in Ghana revealed that the reason for the nation's failure to get 100% health insurance membership is the perceived low quality of medications and healthcare services (Kumi-Kyereme, Amu & Darteh, 2017). Moreover, many pregnant women reported that they are unsure of how to register and that obtaining a health facility.

It has been observed that rural women are not able to participate in the NHIS due to long travel times to registration centers, inflexible registration procedures, and dishonest NHIS registration agents' actions (Gobah & Liang, 2011). Longer travel times between medical facilities can occasionally result in higher medical care costs than those associated with NHIS enrollment. This might deter people from signing up for the program. Furthermore, the results demonstrated that pregnant women reported not getting sick, not having time to receive an NHIS card, and not understanding the program.

5.2.4 Relationship Between Uptake of NHIS among Pregnant Women in their Reproductive Age and their Socio Demographic Characteristic

In order to ascertain the association between the uptake (registered) of NHIS among pregnant women in their reproductive age and their sociodemographic characteristics (age, residence, region, education, number of children, and wealth quintile), the study ultimately conducted regression analysis and the chi-squared test. The bivariate analysis revealed a strong correlation between the area, wealth quintile, and education and the uptake (registration) of NHIS among pregnant women in their reproductive age. As a result, the study comes to the conclusion that there is substantial evidence linking the area, wealth quintile, and education of pregnant women in their reproductive age to the uptake of NHIS.

The results of a logistic regression analysis that controlled for sociodemographic variables like age, place of residence, region, education, number of children, and wealth quintile revealed that there is no statistically significant relationship between the sociodemographic characteristics of pregnant women in their reproductive age and their NHIS registration. The link between the number of children, age, domicile, area, education, and wealth quintile of pregnant women in

their reproductive age and the uptake of NHIS is not well captured by the model. Similar studies (Kazungu & Barasa, 2017; Kirigia et al., 2005; Onwujekwe et al., 2010) discovered that residence location was a significant predictor of women's NHIS uptake, as more women in urban areas participated in the study and had higher NHIS than women in rural areas. This finding was consistent with those findings.

5.3 Chapter Summary

The study's outcomes were covered in this chapter. The conversation demonstrated that a significant percentage of pregnant women in their reproductive age (73%) are registered on the NHIS and have a valid NHIS. Additionally, pregnant women in their reproductive age range of 15–19 and 20–24 years were more likely to participate in the NHIS. The study concluded that there is substantial evidence linking the number of children, age, domicile, area, level of education, and wealth quintile of expectant mothers to their use of the NHIS during their reproductive years. and the region, wealth quintile, and education are the best indicators of NHIS uptake among pregnant women in their reproductive age. To ensure consistency, these were all examined in light of the published literature.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

The study's results and recommendations are covered in this chapter. The primary topics of importance from the study and discussion are highlighted in this chapter. The study's conclusions and suggestions are the main topics of the first section. The study used data from the Ghana Statistical Service's 2022 Ghana Demographic and Health Survey (GDHS) to investigate the acceptance of national health insurance among pregnant women in Ghana who were of reproductive age (GSS).

6.2 Conclusion

According to the study's findings, pregnant women in Ghana who are of reproductive age have a high uptake of NHIS. This may be because pregnant women in Ghana are eligible to register for a free health insurance plan and are covered by a free maternal health policy that exempts them from paying the NHIS. According to the study's findings, pregnant women's high NHIS uptake rate may contribute to a decrease in the burden of healthcare finance and out-of-pocket expenses. Sociodemographic variables like location, education level, and wealth quintile also significantly predicted the uptake of NHIS among women who were of reproductive age. It follows from this that the NHIS is more than merely a program that supports health care for the poor.

Moreover, the research indicates that financing health insurance for pregnant women from the lowest quintile of wealth, without any education, and residing in rural areas may not be possible because of incorrect management of HNIS cards, difficult access to medical facilities, and insufficient knowledge and understanding of NHIS. The report concludes that in order to achieve

the nation's goal of 80% coverage for critical health services and the aims for universal health coverage (UHC) by 2030, efforts must be increased. A high rate of health insurance coverage among the populace and the settlement of healthcare financing concerns affecting Ghanaian pregnant women of reproductive age's utilization of the NHIS are necessary for this.

6.3 Recommendation

1. The study found that pregnant women of reproductive age in Ghana face several obstacles to NHIS uptake. Therefore, the study suggests that the Ministry of Health and the National Health Insurance Authority focus their interventions on empowering pregnant women and educating them about the significance of NHIS uptake.
2. The Ministry of Health and the National Health Insurance Authority ought to work together to promote and inform pregnant women about Ghana's free health insurance program registration as well as the free maternal health policy that exempts pregnant women from paying the NHIS.
3. The study once more urges the Ministry of Health to take into account the crucial role that community-based organizations play in providing rural residents with simple access to hospitals as a substitute. The Ministry of Health should ensure that communities have access to high-quality healthcare facilities, trained medical staff, and good transportation to referral facilities in the event that a pregnant woman has an emergency.
4. Finally, the Ministry of Health and the National Health Insurance Authority ought to devise a plan to consistently motivate expectant mothers to participate in the NHIS registration process.

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