Health Care Reform in Ghana: Factors Affecting Insurance Enrollment

가나 의료개혁 연구: 의료보험 가입 영향 요인을 중심으로

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Health Care Reform in Ghana: Factors Affecting Insurance Enrollment

Samuel Danaa* and Kim, Pan Suk**

I. Introduction

The Republic of Ghana, which in subsequent parts of this paper will be referred to simply as Ghana, has been a country operating a constitutional democracy with a presidential system of government since 1992. According to the Ghana Statistical Service, Ghana has a population of approximately 30.28 million (GSS, 2019), with heterogeneity in ethnic, linguistic, and religious orientation. In 2003, the National Health Insurance Authority (NHIA) of Ghana was formally established under the National Health Insurance Act (Act 650). Subsequently, in October 2012, the government replaced Act 650 and promulgated Act 852, a new law that consolidated the National Health Insurance Scheme (NHIS). NHIS was

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initiated to remove administrative bottlenecks, introduce transparency, reduce opportunities for corruption in the system, and improve the effective governance of the scheme (NHIA, 2012). The reawakening of interest in health care financing was due to the realization that new mechanisms are required to run an effective and more efficient health care system in the country.

In the 1980s and 1990s, the wide prevalence of full cost-recovery or cost-sharing mechanisms required contributions from users of public sector facilities—primarily through direct out-of-pocket payments or user fees. In recent years however, the consensus has shifted towards prepayment in health care financing, whereby potential clients or subscribers regularly contribute to the cost of health care through tax payment and health insurance contributions, ultimately providing greater financial protection to households compared to out-of-pocket health care financing (Perker & Carrin, 2004; World Health Organization, 2000).

Ghana's NHIS is one of the most ambitious health care financing schemes in sub-Saharan Africa designed to improve financial and social protection is (Grépin & Dionne, 2013). Ghana, regarded as a trailblazer for rolling out a universal health care program, which acts as "a pro-poor" social protection measure, has been closely watched by other African countries for its progress (Escobar et al., 2011). Sarpong et al. (2010) referred to this by stating that Ghana is one of the few countries in Africa to have successfully rolled out a national health insurance scheme that is still operational. In addition, Sodzi-Tettey et al. (2012) further revealed that Ghana's NHIS is a standard of study for many African countries.

Legally, membership enrollment into the NHIS is deemed mandatory, but in practice, membership is optional (Witter & Garshong, 2009). No penalty exists for failing to enroll, and persons are not automatically registered. To enroll, Ghanaians are required to report in-person to a designated NHIS office, fill in the necessary registration documents, and pay the required registration fee to cover the costs of the biometric photo identification card and other administrative charges (Blanchet et al., 2012). The NHIS benefit package consists of basic health

care services, which includes outpatient consultations, essential drugs, inpatient care, shared inpatient accommodation, maternity care (normal and cesarean delivery), eye care, dental care, and emergency care. Generally, about 95% of the ailments in Ghana are covered under the NHIS. However, some services that are classified as not necessary or extremely expensive are excluded from the list. The services not covered are cosmetic and plastic surgery, medicines not listed on the NHIS drugs list (including antiretroviral drugs), assisted reproduction, organ transplantation, and private inpatient accommodation (Dalinjong & Laar, 2012).

According to Agyepong and Adjei (2008), health care financing in Ghana, like in other developing countries, has gone through a myriad of twists and turns. Before Ghana's independence in 1957, health care was typically financed through out-of-pocket payments at the point of service use. By the late 1950s to the early 1970s, the state provided free medical care to Ghanaians, in line with the socialist policies of the first post-colonial government - making the state the primary actor for free health care services in post-independent Ghana. This was largely possible because of the relatively small population size (about 8 million), and especially due to the country's flourishing economy during that era. However, the provision of free health care services could not be sustained due to the economic crisis in the 1970s and early 1980s that adversely affected all sectors of the economy, which led to budget cuts, especially on social spending such as health and education (Dalinjong & Laar, 2012).

Significantly, in 1972, out-of-pocket fees at the point of service delivery, generally referred to as "cash-and-carry," were re-introduced in many health care centers in the country. By 1985, user fees for public health care services at various facilities were raised substantially, as part of the Structural Adjustment Program adopted during that period. As a result of the challenges that came with this health care financing strategy, the NHIS was established to provide equitable and universal access to health care services for all citizens. The main goal of the NHIS was to ensure that every resident of Ghana would belong to a health

insurance scheme that guaranteed access to health care with adequate coverage within five years of its implementation (Agyepong & Adjei, 2008).

While the national strategy has previously emphasized creating awareness and encouraging people to enroll in the schemes based on its benefits, recent studies suggested that enrollment varies largely by gender, regions, ethnicity, income level, and occupation, among other important socioeconomic and demographic factors (Dixon, Tenkorang, & Luginaah, 2011; Dixon et al., 2013). Others have contested the recent enrollment figures by alleging that they may have been exaggerated due to the lack of up-to-date records on active memberships and adequate means of tracking current enrollment (Dixon, 2013). To be able to fully comprehend this for policy recommendation and implementation, it is therefore important to examine current enrollment and the factors that influence client registration, retention, renewal, and withdrawal from the scheme. Although enrollment factors mark just one aspect of the progress and success of the health insurance policy in Ghana, previous studies have focused on the social and financial characteristics of the clients who enroll in NHIS (Dixon, Tenkorang, & Luginaah, 2011; Dixon, 2013; Jehu-Appiah et al., 2011; Sarpong et al., 2010). There are a limited number of studies examining the factors associated with the client's perceptions of service quality and how this influences enrollment in the national health insurance scheme, especially in rural communities in Ghana.

Since its enactment into law in 2003, many studies have focused widely on assessing the enrollment rates and access to the NHIS (Dixon et al., 2011; Jehu-Appiah et al., 2011; Sarpong et al., 2010). Other research has evaluated the effects of the NHIS on health care use in selected geographical areas, for instance, in the Accra Metropolitan Area (Blanchet et al., 2012) and some districts of the Brong-Ahafo and Upper East regions of Ghana (Mensah et al., 2010). Studies have also used quantitative data approaches to assess clients' perceptions of the service provider of the scheme (Atinga et al., 2011; Dixon et al., 2013; Jehu-Appiah et al., 2011). Other studies have focused on examining the

clients' relationship with the scheme as service users, particularly with respect to the equity in consumer utilization of and access to services (Owoo & Lambon-Quayefio, 2013), and to client moral hazard behavior (Yawson, Biritwum, & Nimo, 2012; Yilma, van Kempen, & de Hoop, 2012).

In light of the previous information, the main objective of this paper is to examine the impact factors and perceptions of health service on the enrollment of health insurance in Ghana, which was implemented over a decade ago. This assessment will contribute significantly to the literature on health insurance in Ghana given that relatively few researchers have examined limited aspects of the NHIS. This study is meaningful because while national level health insurance schemes have been extensively researched in developed countries, relatively little research has been done in developing countries such as Ghana. Undeniably, this research will also contribute significantly to policy development, because regardless of the objective, the reality of service quality and the influence of socioeconomic and demographic factors on insurance enrollment, it is member's subjective judgments that are some of the key factors that ultimately influence their enrollment in the NHIS.

II. Evolution of Health Insurance in Ghana

The health insurance scheme in Ghana is still evolving following earlier district pilot schemes that were rolled out by the government and other non-governmental organizations during the 1990s. These non-governmental organizations in Ghana assumed a more significant pioneering role in implementing health insurance schemes. The premier non-governmental health insurance schemes were the Nkoranza Community Health Insurance Scheme, established in 1992 as a provider-based scheme, and the West Gonja District Health Insurance Scheme, set

up in 1995. Independent from these initial schemes, other health insurance systems were subsequently established in four districts of the Eastern Region. They included models in the Kwahu South, New Juaben, Suhum Kraboa Coaltar, and Birim South districts in the eastern region of Ghana (Arhinful, 2003). After these initial achievements, the Parliament of Ghana subsequently passed the National Health Insurance Bill on August 26, 2003, to formally launch the nationwide program on the implementation of the District Health Insurance Schemes (DHIS) (Badasu, 2004).

Following the National Health Insurance Act's (Act 650) passage into law in 2003, a significant amount of effort regarding health insurance moved away from the DHIS in an effort to harmonize all the district health insurance schemes into a single national health insurance policy framework. Even though the NHIS is still in its primary stage and not advanced compared to other schemes in developed nations, a myriad of challenges adversely affects its full and efficient implementation.

According to Jehu-Appiah et al. (2011), the NHIS of Ghana is financed through the following mechanisms: a national health insurance levy of 2.5 percent on selected goods and services; a 2.5 percent monthly payroll deduction that is part of the contribution to the Social Security and National Insurance Trust (SSNIT) for formal sector workers; government budgetary allocation; and donor funding. In addition, formal sector workers who pay the payroll deduction (SSNIT) are also required to pay a mandatory registration fee to a District Mutual Health Insurance Scheme (DMHIS; this is part of the NHIS, thus, at the local district level, the schemes are managed by the DMHIS) for them to access health care services. Informal sector members, on the other hand, are required to pay an annual premium to the NHIS. However, low-income, pregnant women, pensioners, persons above the age of 70, and persons below the age of 18 are exempt from making premium payments. No other cost-sharing or co-payments are required with the NHIS, except for the paid premium. NHIS membership covers a range

of health care services in public facilities and all children under 18 years old can access free health services, provided their parents or guardians are registered under the NHIS (NHIA, 2008; Ministry of Health Ghana, 2009; Gajate-Garrido & Owusua, 2013). Table 1 highlights the key features of Ghana's NHIS.

Table 1. Main Features of Ghana NHIS

Feature	Description
Funding	National Health Insurance Fund (NHIF) was established to pay for: ■ Subsidies to schemes ■ Reinsurance for schemes ■ Cost of enrolling low-income persons ■ Supporting access to health care Funds will come from: ■ National Health Insurance Levy (NHIL) – 2.5% of a value-added tax ■ Payroll deductions (2.5% of income) for formal sector employees ■ Other funds voted by Parliament, income from investments, any donations, or loans. Additionally, DHMIS also mobilizes funds through premiums from informal sector persons set in agreement with the NHIA.
Membership	Legally, membership is mandatory (via either the DHMIS or a private insurance policy). Formal sector workers have automatic payroll deductions (SSNIT contributions). Informal sector workers are charged premiums that are income-based. In the beginning, there is a six-month gap between joining the scheme and becoming eligible for benefits.
Exemptions	Select categories and groups are exempt from making payment for their membership (SSNIT pensioners, persons over age 70, those under 18 where both parents are members, and low-income persons). The NHIA will transfer subsidies to cover the cost of their enrollment. Low income is defined as someone who meets all the following listed criteria:

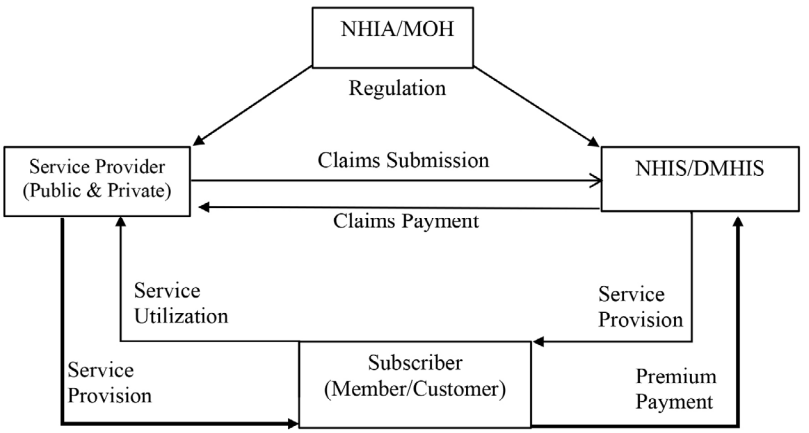
	■ is unemployed and has no visible source of income; ■ does not have a fixed place of residence according to standards determined by the scheme; ■ does not live with a person who is employed and who has a fixed place of residence; and ■ does not have any identifiable consistent support from another person.
Benefits package	All providers must offer a minimum package, which is designated and covers a wide variety of services. There is an established National Health Insurance Drug List, where 95% of all health care is covered. All services are included except the following: rehabilitation (excluding physiotherapy); appliances and prostheses; cosmetic surgery; HIV retroviral drugs; assisted reproduction; echocardiography; angiography; orthotics; kidney dialysis; heart and brain surgery other than those resulting from accidents; cancer treatment other than cervical and breast cancer; organ transplantation; non-listed drugs; treatment abroad; medical examinations for visas; VIP wards; and mortuary services.
Eligible providers	All service providers are eligible once accredited. Accreditation is reviewed every five years. Quarterly reports are to be submitted to the NHIC by providers. Providers are required to make payments within four weeks after a claim has been presented to DMHIS.
Organization	The NHIA was established to regulate the market. Its duties include the accreditation of providers, setting the premium contribution rates with schemes, dispute resolution, managing the NHIF, and approving membership cards. Every district is required to have a DMHIS. Benefits are supposed to be transferable across district schemes. Each DHMIS must submit annual reports to the NHIA and undertake an annual audit of accounts. Private MHIS are not eligible for subsidies from NHIA.
Accountability	The National Health Insurance Council (NHIC) was established to oversee the NHIA and license schemes (evaluated every two years). Its representatives include main stakeholder groups, such as the Ministry of Health, Ghana Health Services, regulatory bodies, consumers, and the Executive Secretary of the NHIA.

	The president of the Republic of Ghana is mandated to appoint the NHIC Chair and Executive Secretary. The NHIC proposes a formula for the allocation of funds to Parliament for annual approval and provides an annual report to Parliament on its use of funds. A board governs each DHMIS. There are established rules for handling complaints against providers or schemes.

Source: Adapted from Witter & Garshong (2009); as summarized from Act 650 (2003); and Legislative Instrument (LI) 1809 (2004).

Regarding the health service delivery and financing framework under the Ghana NHIS, Figure 1 highlights the major actors and their interactive relationships. The Ministry of Health (MOH) and NHIA are the main bodies mandated by law to carry out policy and regulatory functions. The NHIS, with its representation in the various districts (DMHIS), is partnered with the licensed service providers, who are supposed to collaborate on claims management to provide for the health needs of the subscribers as the clients or end users of their service.

Figure 1. Health Service Delivery and Finance Framework under the NHIS in Ghana



Source: Adapted and Modified from the MOH Ghana (2004).

III. Research Methods

This quantitative research was undertaken in the Saboba district in the Northern region of Ghana. The native ethnic group in the district is the Konkomba who speak Likpakpaln. The Saboba district is located in the Eastern corridor of Northern region and shares borders with the Chereponi district to the North, the Gusheigu district to the West, the Yendi municipality to the South and the Republic of Togo to the East. A majority of the inhabitants (about 90%) work in agriculture, mainly in crop farming and animal rearing. With an estimated population of over 74,704 people based on the 2010 Population and Housing Census growth estimates, with males representing 49.2% and females about 50.8% (GSS PHC, 2010).

The Saboba district was selected for this study based on key reasons such as - the district is one of the poorest in Northern Ghana with a large vulnerable population including women and children with greater health needs. The district exhibits important features helpful for understanding the dynamics and complexities of the factors that affect insurance enrolment in Ghana. Another reason that influenced the selection of the study area is the researchers' familiarity with the district and the fact that there exists no comprehensive study on this key topic since NHIS was implemented.

This research adopted a cross-sectional approach in which data was collected from individual respondents between October to November of 2018. A multi-stage sampling technique was used to administer the survey questionnaire to the individual respondents. The Saboba district was purposely selected based on the researcher's familiarity with the area and for the fact that many people in this district do not always renew their insurance when it expires, as well as a general refusal to enroll. The district was first divided into five clusters of North, East, South, West, and Central. The second stage involved the selection of three of the five sub-clusters through a simple random sampling. Ten communities were selected from the three clusters through a systematic sampling technique. In the end, the final sample size of 665 was distributed and administered across the individual respondents among the communities through a simple random sampling process.

Data was collected through a structured questionnaire survey divided into various sections: socioeconomic and demographic characteristics, respondent's insurance status and their reasons for either enrolling, not renewing or never enrolling in insurance membership as well as the perception of service quality. The socioeconomic and demographic characteristics were comprised of the following: respondent's age, sex, education, marital status, occupation, monthly income, household size, religion, location of residence, income reliability, monthly expenditure, and distance to the health facility. Respondents insurance enrolment

status data was comprised of: their current NHIS status, self-perceived health status, their perception of level of satisfaction with NHIS service provision at the various health facilities, and the main source of payment of premiums and registration fees. NHIS status was categorized into “never insured” (respondents who have never been insured with the NHIS), “previously insured” (respondents who were previously insured but did not renew their insurance), and “currently insured” (respondents who currently hold active card bearing membership of the NHIS and could access health insurance services at any service provider at the time of the study). Respondents were also asked to answer questions on a 5-point Likert Scale (ranging from “very dissatisfied” to “very satisfied”) on their satisfaction with the service quality. Responses were also collected on the perceptions of the factors that influence enrollment and retention on a 5-point Likert scale (ranging from “strongly disagree” to “strongly agree”) on the technical quality of care, adequacy of service delivery, NHIS benefits, convenience, price, provider attitudes, peer pressures, and community health belief and attitudes.

The data was analyzed using SPSS version 22. Descriptive statistics were used to assess the sample characteristics. Chi-square statistical analysis was used to examine the correlation between the respondents’ characteristics and their NHIS status. Inferential statistics through a simple linear regression model was used to examine the associations between the independent variables (sex, age, household size, education, religion, income reliability, monthly expenditure, distance to the nearest health post, perceived health status, perceived NHIS service provision, and main source of payment) and the dependent variable of insurance enrollment, which was their NHIS status.

IV. Findings

4-1. Socio-economic and Demographic Characteristics of Respondents

Table 2 presents the background information on the respondents' socioeconomic and demographic characteristics. The results show that a majority of the respondents were male representing 55.3% of total respondents, while 44.7% were female. The majority of the respondents (85.6%) were younger than 41-years-old. Most of the respondents were currently not married (54.3%), while the remaining 45.7% have been engaged or married at one point. Nearly all of the respondents lived in a household with less than 11 people (94.9%). The majority lived in either the sub-district (30.5%) or in rural communities (57.45%). In terms of education, 31.1% had no formal education, 2.9% had primary education, 5.4% completed junior high school, the majority had a high school education (49.2%), and the remaining 11.4% had completed higher education comprised of a higher national diploma or a university education. More than half of the respondents (59.8%) were Christians whereas 16.8% were Muslims, and the remaining 23.4% were Traditional Believers or non-religious. For employment, most of the respondents were students (48.4%), 30.2% were farmers, 8.9% were public servants or teachers, 7.8% were unemployed, and 4.7% had trade school careers. The monthly income of respondents was mostly less than 100 GHS (66.3%), 18.5% earned between 100 to 399 GHS, 7.1% earned between 400 to 699 GHS, 5% earned between 700 to 999 GHS, and only 3.2% earned more than 1,000 GHS a month.

For income reliability, 23.6% indicated that it was very reliable, 31.7% was somewhat reliable, 18.0% was somewhat unreliable, and the remaining 26.6% was very unreliable. The respondent's monthly expenditure was mostly below 99 GHS

(69.8%), 19.4% spent between 100 to 399 GHS, 7.1% spent between 400 to 699 GHS, 2.9% spent between 700 to 999 GHS, and less than one percent of respondents spent more than 1,000 GHS a month. Most respondents (63.9%) lived in a house that their family owned, 15.8% lived in a self-owned house, 12.5% rented housing, 6.3% had free rent, and the remaining 1.5% had houses due to an inheritance. Most of the respondents (60.9%) indicated they had electricity in their dwellings, and the remaining 39.1% had no electricity. As far as the distance to the nearest health facilities, a majority of respondents lived less than 11 kilometers away (80.7%), and the rest of the respondents lived over 11 kilometers or more to the nearest health facility (19.3%). Respondents that reported they were currently insured through NHIS made up 44.7%, while 49.8% were previously insured, and the remaining 5.6% were never insured. For perceived health status, 36.1% reported very good health, 38.0% reported good health, 12.2% reported fair health, 9.6% reported poor health, and the remaining 4.1% reported they had very poor health. In relation to NHIS service provision, 10.4% of respondents reported that it was worse than their previous provider, 24.4% reported it was the same, and the remaining 65.3% reported that it was better. Almost half (47.2%) of the respondents who had previously been insured or were currently insured indicated that they paid for insurance from their personal income, 36.5% indicated someone else in their household paid, 4.5% through other relatives outside the household, 1.7% through remittances, 0.5% through friends, 0.6% through neighbors, and the remaining 3.5% through the government or through their employer.

Table 2. Background Characteristics of Respondents

Variables	Number of Respondents (N = 665)	Percentage (%)
Sex		
Male	368	55.3
Female	297	44.7
Age (Years)		
11 – 20	313	47.1
21 – 30	166	25.0
31 – 40	90	13.5
41 – 50	54	8.1
51 – 60	15	2.3
61 – 70	16	2.4
70 or Older	11	1.7
Marital Status		
Single	361	54.3
Married	230	34.6
Divorced	19	2.9
Widowed	25	3.8
Cohabitating	30	4.5
Household Size		
5 people or less	458	68.9
6 –10	173	26.0
11–15	29	4.4
16 people or more	5	.8
Location of Residence		
District Capital	80	12.0
Sub-district	203	30.5
Rural	382	57.4
Education Level		
No Education	207	31.1
Primary School	19	2.9
JHS/Middle School	36	5.4
High School	327	49.2
HND/University	76	11.4

Religion		
Christian	398	59.8
Muslim	112	16.8
Traditional	155	23.4
Occupation		
Unemployed	52	7.8
Farming	201	30.2
Teacher/Public Servants	59	8.9
Trade Job	31	4.7
Student	322	48.4
Monthly Income (in Ghanaian Cedi)		
Less than 99 GHS	441	66.3
100 - 399 GHS	123	18.5
400 - 699 GHS	47	7.1
700 - 999 GHS	33	5.0
1,000 GHS or more	21	3.2
Income Reliability		
Very Reliable	157	23.6
Somewhat Reliable	211	31.7
Somewhat Unreliable	120	18.0
Very Unreliable	177	26.6
Monthly Expenditure		
Less than 99 GHS	464	69.8
100 - 399 GHS	129	19.4
400 - 699 GHS	47	7.1
700 - 999 GHS	19	2.9
1,000 GHS or more	6	.9
Housing Type		
Self-Owned	105	15.8
Family Owned	425	63.9
Free Rent	42	6.3
Rented	83	12.5
Inherited	10	1.5
Electricity in House		
Yes	405	60.9
No	260	39.1

Distance to Health Facility (kilometers)		
Less than 5	461	69.3
6 – 10	76	11.4
11 – 15	56	8.4
16 – 20	33	5.0
21 – 25	26	3.9
25 or more	13	2.0
NHIS Status		
Currently Insured	297	44.7
Previously Insured	331	49.8
Never Insured	37	5.6
Perceived Health Status		
Very Good	240	36.1
Good	253	38.0
Fair	81	12.2
Poor	64	9.6
Very Poor	27	4.1
NHIS Service Provision		
Worse	69	10.4
Same	162	24.4
Better	434	65.3
Main Source of Insurance Payment		
Never Insured	37	5.6
Personal Income	314	47.2
Household Members	243	36.5
Relatives	30	4.5
Remittance	11	1.7
Friends	3	.5
Neighbor	4	.6
Government/Employer	23	3.5

Note: JHS=Junior High School, HND=Higher National Diploma

4-2. Relationship between Respondents' Socio-demographic Factors and NHIS Status

As shown in Table 3, location of residence, religion, occupation, monthly income, income reliability, monthly expenditure, housing type, distance to a health facility, perceived health status, NHIS service provision, and main source of payment were found to be statistically significant and associated with NHIS status. Among the male respondents, 42.7% were currently insured, 50.5% were previously insured, and 6.8% were never insured. As compared to 47.7% of female respondents who were currently insured, 48.8% were previously insured, and 4.0% were never insured. Gender, however, was not found to be statistically significant (p = 0.077). Respondents below 21 years of age had the highest percentage (40.3%) of those that were currently insured, while 52.7% had been previously insured, and 7% had never been insured. The age of respondents was also found not to be statistically significant (p = 0.283).

Of the single respondents, 38.5% were currently insured, 54.8% were previously insured, and 6.6% had never been insured. This was followed by 55.2% of married respondents who were currently insured, 40.9% who were previously insured, and 3.9% who had never been insured. Marital status was found not to be statistically significant (p = 0.068)). Households with 5 people or less had 43.9% that were currently insured, 49.8% that were previously insured, and 6.3% that were never insured, although household size was not found to be statistically significant (p = 0.310). Fewer rural respondents (37.4%) were currently insured than the 56.8% of rural respondents were previously insured, and only 5.8% had never been insured. In addition, 55.2% of respondents that lived in the sub-district showed they were currently insured, while 38.4% of sub-district residents had previously been insured, and 6.4% had never been

insured; location of residence was found to be statistically significant (p = 0.002). About 44.4% of respondents with no formal education were currently insured, 50.2% were previously insured, and 5.3% had never been insured. 40.4% of respondents with high school education level were currently insured, 53.2% were previously insured, and 5.4% had never been insured. However, 72.4% of respondents with higher education were currently insured, 23.7% were previously insured, and 3.9% had never been insured. Education was not found to be statistically significant (p = 0.113).

Respondents' religious background influenced insurance status, with 47.2% of Christians currently insured, 47.7% were previously insured, and 5.0% had never been insured. Similarly, 50.0% of Muslims were currently insured, while 43.8% had previously been insured, and 6.3% had never been insured; religion was statistically significant (p = 0.002). In relation to the occupation of respondents, 38.5% of students indicated they were currently insured, 55.3% were previously insured, and 6.2% were never insured. About 42.3% of those who were farmers were currently insured, 52.2% had previously been insured, and only 5.5% had never been insured. Occupation was found to be statistically significant (p = 0.000). Of the respondents whose monthly income was less than 100 GHS, 39.5% of them indicated that they were currently insured, 55.3% indicated they were previously insured, and 5.2% had never been insured. In addition, of the respondents with income earnings between 100 and 399 GHS, 47.2% of them indicated that they were currently insured, 45.5% had been previously insured, and 7.3% indicated they had never been insured. Monthly income was found to be statistically significant (p = 0.000). Income reliability was also found to be significant at (p = 0.000) with 62.4% of respondents whose income was very reliable being currently insured, 35.0% had been previously insured, and 2.5% had never been insured. Monthly expenditure of respondents was found to be statistically significant (p = 0.000). Most respondents belonging to family-owned houses (47.1%) indicated they were currently insured, 45.6% were previously

insured, and 7.3% were never insured. Housing type was found to be statistically significant (p = 0.021).

On the distance to a health facility, 52.1% of respondents who had a distance less than 6 kilometers stated they were currently insured, 41.9% were previously insured, and 6.1% had never been insured. Distance to the health facility was found to be statistically significant (p = 0.000). About 48.5% of respondents with a very good or good health status were currently insured, 45.4% had been previously insured, and only 6.1% had never been insured. This is compared to 35.2% of respondents who felt their health status was poor or very poor and currently insured, 58.2% were previously insured, and 6.6% had never been insured. Perceived health status was found to be statistically significant (p = 0.012). NHIS service provision was significant (p = 0.020); 48.2% of the respondents who indicated NHIS was better were currently insured, 46.1% had been previously insured, and 5.5% had never been insured. About one-third of respondents indicated their status was worse (33.3%), a majority were previously insured (60.9%), and 5.8% had never been insured. The main source of insurance payment was statistically significant, with 53.5% of those paying from their personal incomes indicating they were currently insured, and about 46.5% had previously been insured.

Table 3. Socio-demographic Characteristics of Respondents and Health Insurance Status

Variables	Health Insurance Status			Chi-square	P-Value
	Currently Insured (n = 297)	Previously Insured (n = 331)	Never Insured (n = 37)		
Sex					
Male	157(42.7)	186(50.5)	25(6.8)	3.074	0.077
Female	140(47.7)	145(48.8)	12(4.0)		
Age (Years)					
11 – 20	126(40.3)	165(52.7)	22(7.0)		
21 – 30	83(50.0)	76(45.8)	7(4.2)		
31 – 40	45(50.0)	41(45.6)	4(4.4)	18.321	0.283
41 – 50	30(55.6)	22(40.7)	2(3.7)		
51 – 60	4(26.7)	11(73.3)	0(0.0)		
61 – 70	6(37.5)	9(56.3)	1(6.3)		
70 or Older	3(27.27)	7(63.63)	1(9.09)		
Marital Status					
Single	139(38.5)	198(54.8)	24(6.6)		
Married	127(55.2)	94(40.9)	9(3.9)	22.503	0.068
Divorced	9(47.4)	10(52.6)	0(0.0)		
Widowed	7(28.0)	17(68.0)	1(4.0)		
Cohabitating	15(50.0)	12(40)	3(10.0)		
Household Size					
5 people or less	201(43.9)	228(49.8)	29(6.3)		
6 –10	81(46.8)	87(50.3)	5(2.9)	5.551	0.310
11–15	13(44.8)	13(44.8)	3(10.3)		
16 people or more	2(40.0)	3(60.0)	0(0.0)		
Location of Residence					
District Capital	42(52.5)	36(45.0)	2(2.5)		
Sub-district	112(55.2)	78(38.4)	13(6.4)	21.639	0.002
Rural	143(37.4)	217(56.8)	22(5.8)		
Education					
No Education	92(44.4)	104(50.2)	11(5.3)		
Primary School	7(36.8)	12(63.2)	0(0.0)		
JHS/Middle School	11(30.6)	23(63.9)	2(5.6)	31.453	0.113

High School	132(40.4)	174(53.2)	21(6.4)		
HND/University	55(72.4)	18(23.7)	3(3.9)		
Religion					
Christian	188(47.2)	190(47.7)	20(5.0)		
Muslim	56(50.0)	49(43.8)	7(6.3)	13.074	0.002
Traditional	51(35.9)	83(58.5)	8(5.6)		
No Religion	2(15.4)	9(69.2)	2(15.4)		
Occupation					
Unemployed	24(46.2)	25(48.1)	3 (5.8)		
Farmer	85(42.3)	105(52.2)	11 (5.5)		
Teacher/Public Servant	47(80.8)	11(17.3)	1 (1.9)	28.418	0.000
Trade Job	17(54.8)	12(38.7)	2 (6.5)		
Student	124(38.5)	178(55.3)	20 (6.2)		
Monthly Income (in Ghana Cedi)					
Less than 99 GHS	174(39.5)	244(55.3)	23(5.2)		
100 - 399 GHS	58(47.2)	56(45.5)	9(7.3)		
400 - 699 GHS	27(57.4)	17(36.2)	3(6.4)	28.418	0.000
700 - 999 GHS	20(60.6)	11(33.3)	2(6.1)		
1,000 GHS or more	18(85.7)	3(14.3)	0(0.0)		
Income Reliability					
Very Reliable	98(62.4)	55(35.0)	4(2.5)		
Somewhat Reliable	84(39.8)	108(51.2)	19(9.0)	33.149	0.000
Somewhat Unreliable	42(35.0)	73(60.8)	5(4.2)		
Very Unreliable	73(41.2)	95(53.7)	9(5.1)		
Monthly Expenditure					
Less than 99 GHS	187(40.3)	249(53.7)	28(6.0)		
100 - 399 GHS	58(45.0)	66(51.2)	5(3.9)		
400 - 699 GHS	31(66.0)	12(25.5)	4(8.5)	32.129	0.000
700 - 999 GHS	17(89.5)	2(10.5)	0(0.0)		
1,000 GHS or more	4(66.7)	2(33.3)	0(0.0)		
Housing Type					
Self-Owned	53(50.5)	49(46.7)	3(2.9)		
Family Owned	200(47.1)	194(45.6)	31(7.3)		
Free Rent	14(33.3)	27(64.3)	1(2.4)	21.181	0.021
Rented	28(33.7)	53(63.9)	2(2.4)		
Inheritance	2(20.0)	8(80.0)	0(0.0)		

Distance to Health Facility (km)					
Less than 5	240(52.1)	193(41.9)	28(6.1)		
6–10	35(46.1)	39(51.3)	2(2.6)		
11–15	12(21.4)	40(71.4)	4(7.1)	60.505	0.000
16–20	6(18.2)	24(72.7)	3(9.1)		
21 or more	4(10.3)	35(89.7)	0(0.0)		
Perceived Health Status					
Very Good/Good	239(48.5)	224(45.4)	30(6.1)		
Fair	26(32.1)	54(66.7)	1(1.2)	17.270	0.012
Poor/Very Poor	32(35.2)	53(58.2)	6(6.6)		
NHIS Service Provision					
Better	209(48.2)	200(46.1)	25(5.8)		
Same	65(40.1)	89(54.9)	8(4.9)	7.830	0.020
Worse	23(33.3)	42(60.9)	4(5.8)		
Main Source of Insurance Payment					
Never Insured	0(0.0)	0(0.0)	37(100.0)		
Personal Income	168(53.5)	146(46.5)	0(0.0)		
Household Members	96(39.5)	147(60.5)	0(0.0)		
Relatives	6(20.0)	24(80.0)	0(0.0)	702.087	0.000
Remittance	4(36.4)	7(63.6)	0(0.0)		
Friends	1(33.3)	2(66.7)	0(0.0)		
Neighbor	2(50.0)	2(50.0)	0(0.0)		
Government/Employer	20(87.0)	3(13.0)	0(0.0)		

4-3. Reasons for Enrolling, Never Enrolling, and Not Renewing NHIS Membership

Table 4 reveals that of the majority of the 297 (44.7%) respondents that were currently enrolled, 60.3% indicated that the scheme offered financial protection against illness, and 25.6% indicated that it was better than the "cash-and-carry" model. Other reasons for never enrolling in the NHIS include not being able to afford the premium payments (56.8%). In addition, 10.8%, of respondents indicated they were mostly healthy and did not need to be insured, 16.2% had no confidence in the scheme, and 13.5% said the registration office was too far for them, respectively. For the respondents that did not renew their NHIS membership (n = 331, 49.8%), a majority (52.0%) of respondents indicated that they could not afford the renewal payment and that it was too expensive, 10.6% indicated they were not satisfied with the quality of service, and 13.6% stated they had to buy drugs outside the facility even though they had an insurance policy.

Table 4. Reasons for Enrolling, Never Enrolling, and Not Renewing NHIS Membership

Variables	Number of Respondents (N)	Percentage (%)
Reasons for Enrolling in the NHIS (n = 297; 44.7%)		
Currently Unenrolled (n = 368; 55.3%)		
- Financial protection against illness	179	60.3
- It a better than the "cash and carry" model	76	25.6
- The school insured my child	11	3.7
- Community leaders asked me to join	9	3.0
- Employer paid for my membership	11	3.7
- Other reason	11	3.7

Reasons for Never Enrolling in the NHIS (n = 37; 5.6%)		
Currently Enrolled/Not Renewed (n = 628; 94.4%)		
– Cannot afford the premium, it is too expensive	21	56.8
– I am mostly healthy and do not need to be insured	4	10.8
– I have no confidence in the scheme	6	16.2
– The registration point is too far	5	13.5
– Other reason	1	2.7
Reasons for Not Renewing in the NHIS (n = 331; 49.8%)		
Currently Enrolled or Never Enrolled (n = 334; 50.2%)		
– Cannot afford the renewal payment, it is too expensive	172	52.0
– I am not satisfied with the service quality	35	10.6
– Difficulty in accessing services, and there are delays	15	4.5
– No transportation money, and the distance is too far	26	7.9
– Inappropriate timing of the premium payment	7	2.1
– I had to buy drugs outside the NHIS facility	45	13.6
– I did not use service last year/mostly healthy	29	8.8
– Other reason	2	0.6

4-4. Factors that Influenced NHIS Enrollment – Regression Analysis

Table 5 shows the results of a linear regression analysis of the factors that influenced respondents' decision to enroll in the NHIS. Model 1 shows the results of the socioeconomic and demographic characteristics. Model 2 is comprised of socioeconomic and demographic characteristics of the respondents' and their perceived health status. Model 3 reflects the respondents' socioeconomic and demographic factors, perceived health status, respondents' perceptions of NHIS service provision, and their primary source of payment for premiums and

registration fees.

The results of Model 1 showed that household size (β = -0.084, $p < 0.05$) and monthly expenditure (β = -0.137, $p < 0.001$) had negative statistical significance with respondent's health insurance enrollment status. Other socioeconomic and demographic factors, religion (β = 0.080, $p < 0.05$) and distance from respondents' residence to nearest health facility showed a positive statistically significant relationship with the respondent's insurance status (β = 0.219, $p < 0.001$). In Model 2, respondent's household size (β = -0.089, $p < 0.05$) and monthly expenditure (β = -0.116, $p < 0.01$) were negatively statistically significant with respondent's health insurance status.

Distance to the nearest health post (β = 0.214, $p < 0.001$) and perceived NHIS service provision (β = 0.116, $p < 0.01$) were statistically significant with health insurance status. In Model 3, gender (β = 0.079, $p < 0.05$), religion (β = 0.077, $p < 0.05$), distance to the nearest health post (β = -0.212, $p < 0.001$), perceived health status (β = 0.082, $p < 0.05$) and main source of payment (β = 0.155, $p < 0.001$) were found to be positively significant. However, household size (β = -0.092, $p < 0.05$), monthly expenditure (β = -0.098, $p < 0.05$) and perceived NHIS service provision (β = 0.084, $p < 0.05$) had negative statically significant relationship with dependent variable of respondent's health insurance status.

Table 5. Results of Regression Analysis of Factors that Influence Insurance Enrollment

Variables	Model 1		Model 2		Model 3	
	B (SE)	β	B (SE)	β	B (SE)	β
Sex	.073 (.045)	.061	.085 (.045)	.071	0.094 (.044)	**.079***
Age	.002 (.002)	.041	.001 (.002)	.014	.002 (.002)	.035
Household Size	−.017 (.007)	**−.084***	−.017 (.007)	**−.089***	−.018 (.007)	**−.092***
Education Level	−.005 (.017)	−.014	−.004 (.017)	−.009	−.015 (.017)	−.038
Religion	.340 (.159)	**.080***	.290 (.159)	.068	.331 (.157)	**.077***
Income Reliability	.038 (.020)	.071	.034 (.020)	.065	.032 (.020)	.061
Monthly Expenditure	−.099 (.029)	**−.137*****	−.084 (.030)	**−.116****	−.071 (.030)	**−.098***
Distance to Nearest Health Post	.018 (.003)	**.219*****	.017 (.003)	**.214*****	.017 (.003)	**.212*****
Perceived Health Status			.062 (.021)	**.116****	.044 (.021)	**.082***
Perceived NHIS Service Provision					−.074 (.033)	**−.084***
Main Source of Payment					.183 (.047)	**.155*****
Constant	1.217 (.202)***		1.154 (.202)***		1.054 (.232)***	
R2	.099		.111		.139	
Adjusted R2	.088		.099		.125	
F	8.998***		9.081***		9.593***	

Note: β=Beta, SE=Standard Error, *p < 0.05, **p < 0.01, ***p < 0.001, B= Coefficient.

V. Discussion

The study revealed that a large number of respondents who participated in the study were currently insured with the NHIS (n = 297, 44.7%), where almost half of the sample was previously insured (n = 331, 49.8%), and only a small number were never insured with the NHIS (n = 37, 5.6%). The findings further revealed about half of the respondents were enrolled, but there was a high dropout rate (49.8%) due to the respondent's failure to renew after the expiration of their insurance policy. As previously stated, this high dropout rate can be attributed to the issues related to the affordability and the perceived expensive nature of the scheme, considering the pervasive level of poverty in the rural communities. Other reasons for dropping out included a low level of satisfaction with the service quality, the extra cost incurred from buying drugs that were not provided through the NHIS health services, while others respondents felt that they did not use the service, hence there was no need to renew, in addition to the difficulty in accessing services or the delays. Even though the number was not very high, some respondents also stated the timing of the premium payment was inappropriate, and they had difficulty in accessing transportation along with other issues related to the distance of providers. These findings are consistent with previous studies of (Jehu-Appiah et al., 2011; Boateng & Awunyor-Vitor, 2013), where participants cited the expensive nature of premiums and a low level of satisfaction with the service quality as the key reasons for failing to renew insurance membership.

While the results indicated that there was a significant influence from some of the socioeconomic and demographic factors, - age, income, occupation, and level of education were not significant. The non-significant relationship for occupation and respondent enrollment in the NHIS is inconsistent with the findings from previous studies (Butler, 1999; Savage & Wright, 1999), which showed that

people who had employment were more likely to enroll. Education did not have any influence on enrollment in the NHIS because most participants in this study had a higher level of education. The study reaffirmed that, the cost of insurance and the premiums charged is an important factor that influenced client's enrollment and demand for insurance policies. As a result, people who perceived premiums and registration fees to be higher failed to enroll or dropped out leading to lower enrolment, while those who perceived a lower insurance cost lead to higher enrolment. This study therefore also confirmed that the respondent's decision to enroll was influenced by their perception of the cost of the insurance premium and registration fees. Similarly, perceptions about service quality largely influenced people's decision to enroll or even opt out of the scheme.

Arguably, one of the most significant findings of this study was the negative relationship between household size and enrollment. It revealed that the larger households were more likely not to enroll compared to small households. Monthly expenditure also showed a negative relationship, where the more expenditure the respondents incurred, the less likely they were to have extra income to pay for NHIS enrollment. Surprisingly, the significant positive relationship between the distance to the health facility and enrollment means that most respondents who had enrolled lived very far away from health facilities. In the same vein, the negative statistical relationship between the perceived NHIS service provision and enrollment indicated that most respondents that were enrolled still reported poor service quality. Thus, once clients get enrolled, they still perceive the quality of service as poor with regular complaints. This further demonstrates that a client's health insurance status is to some extent influenced by their perceptions of the quality of services delivered. Policymakers should, therefore, undertake measures that will help innovate and improve the quality of the services, especially to the poorest and most vulnerable communities, to encourage enrollment.

VI. Conclusion and Limitations

This study has provided some significant outcomes on key socioeconomic and demographic factors, as well as on the influence of citizen's perceptions of NHIS enrollment in Ghana. By using a cross-sectional approach on a district level, this paper examined the factors related to citizen's perception of the quality of NHIS service provided as compared to the status of enrollment. Government and other policymakers should pursue policies that reflect a proper balance between maximizing enrollment while minimizing dropout, especially among poorer rural dwellers. On the other hand, the perceptions about the NHIS and the quality of care also influence people's prospects of enrolling in the scheme. It is therefore important to note that enhancement to the quality of service and the entire administration of the scheme could invariably improve people's enrollment over time.

Importantly, this study presents policy implications for the sustainability of the NHIS in Ghana. Policy managers should adopt practical strategies to ensure affordability and improve the quality of the services provided. Ensuring strict policies to make the insurance uptake more affordable and improving the quality of care will invariably raise enrollment figures. Enhancement of data through disaggregated data will help to identify and effectively target low-income households for the implementation of premium exemption policies to effectively improve enrollment. Alternatively, introducing flexible premium payment policies could be a strategic measure to enhance enrollment, renewal, and retention of clients in the NHIS, since many rural inhabitants do not earn regular incomes. More so, to further ensure premium payments are less prohibitive but still affordable to the low-income and the vulnerable populations, a differential premium payment plan is recommended, where individuals pay based on their ability to do so, replacing the current flat rate across the board. Thus, while

premiums are meant to vary across income levels, in practice they are fixed at the same levels for all categories.

Since the study revealed that larger household sizes had a statistically negative relationship with enrollment, eliminating the registration fee component for children who are currently exempted from premium payments is highly recommended. This is because such exemptions will make provision for many larger households with children reducing the per head cost burden of registration to encourage more households to enroll unto the NHIS. In sum, the insurance policy cost should be reviewed to reflect the socioeconomic status of each client to reduce the burden on low-income individuals. Other inimical factors to enrollment should also be addressed, including the institutional challenges to improving the service quality, which will help accelerate the process of achieving universal health coverage in Ghana.

Although this paper revealed significant and interesting findings, there are some limitations. For instance, this study may suffer from methodological shortcomings, since the responses were primarily taken from individuals, and the authors did not sample views from NHIS staff and other health care providers in the district to provide a more balanced and objective view. The sample size of 665 respondents from one single district cannot be generalized to the entire population of the district, region, or entire country, and the policy implications based on the results should be extrapolated with caution. Moreover, the use of a quantitative research approach to examine the perceptions of people could suffer constrictions of not providing more detailed accounts of the expression and emotions of how participants feel, which cannot be captured quantitatively. Notwithstanding these limitations, this study assumed the adoption of a Likert scale to measure the levels of perceptions of respondents. This study offers significant findings that provide relevant policy recommendations in relation to the citizen's perception of the quality of the services with proposed measures to help improve and sustain Ghana's NHIS, especially in rural communities.

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Abstract

Health Care Reform in Ghana: Factors Affecting Insurance Enrollment

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The main objective of this study is to examine the impact factors and perceptions of service quality that influence respondents' decision to enroll in the National Health Insurance Scheme (NHIS). A cross-sectional study was used in the Saboba district in the Northern region of Ghana. The results revealed that of the 44.7% respondents are currently insured, 49.8% had been previously insured, and 5.6% had never been insured. Key reasons cited for enrollment were for financial protection against illness (60%) and that NHIS is considered to be better than the old system of "cash-and-carry" (25%). The main reasons found for non-renewal or dropout were that respondents could not afford the premium payment, which they considered to be relatively expensive (52%), they had to buy drugs outside of the facility (13.6%), and they were not satisfied with service quality (10.6%). Similarly, some of the reasons that were given for never enrolling also related to the unaffordability of premiums (56.8%), no confidence in the scheme (16.2%), and registration centers being too far (13.5%). Gender, household size, religion, monthly expenditure, distance to the nearest health post, perceived health status, perceived service provision, and main source of payment for NHIS premiums and fees were found to be statistically significant and influenced respondent enrollment in NHIS.

Keywords: Ghana, Health Care Reform, Health Insurance, Factor, Perceptions of Service Quality

국문초록

가나 의료개혁 연구: 의료보험 가입 영향 요인을 중심으로

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이 연구의 주요 목적은 가나의 “국민건강 보험계획” (NHIS) 가입 결정에 영향을 끼치는 여러 영향 요인 등을 조사하는 것이다. 본 연구는 가나 북부의 사보바(Saboba) 지역을 중심으로 횡단면 연구(a cross-sectional study)를 한 것이다. 연구결과 44.7 %의 조사응답자가 현재 보험에 가입되어 있고, 49.8 %는 과거에 보험에 가입했었고, 5.6 %는 보험에 가입하지 않고 있다고 파악되었다. 건강보험 등록을 하는데 언급된 주요 이유는 질병에 대한 재정적 보호(60 %)가 제일 크게 언급되었고, NHIS가 이전의 현금지불제도(25 %)보다 우수한 것으로 인식되는 점이 두번째 이유로 파악되었다. 그리고 보험에 가입했다가 재가입을 하지 않거나 중도에 가입을 탈퇴하는 주된 이유는 가입비가 상대적으로 비싸다는 점(52 %)이 제일 큰 이유였고, 시설 외부에서 약물을 구입해야 하는 점(13.6 %), 그리고 서비스 품질에 대한 불만족(10.6 %) 등이 지적되었다. 또한 의료보험에 전혀 가입하지 않은 이유로는 보험료가 비싸서 그 비용을 지불할 수 없는 상황(56.8%)이 크게 지적되었고, 그 외 국민건강 보험계획에 대한 불신(16.2 %), 보험가입 등록센터가 너무 멀다는 점(13.5 %) 등이었다. 여러 요소 중에서 성별, 가구 규모, 종교, 월별 지출, 보건 소까지의 거리, 인지된 건강 상태, 인지된 서비스 제공,

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NHIS 보험료, 비용지불을 위한 주요 재원과 같은 요소가 통계적으로 유의미한 것으로 밝혀졌으며 이들 요소가 NHIS의 보험등록에 영향을 미치는 것으로 파악되었다.

주제어: 가나, 의료개혁, 의료보험, 서비스 인식, 영향 요인

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