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UNIVERSITY OF GHANA, LEGON

ASSESSMENT OF QUALITY HEALTH CARE AMONG THE INSURED AND UNINSURED PATIENTS IN THE SEFWI WIAWSO MUNICIPALITY OF THE WESTERN NORTH REGION, GHANA

BY

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DECLARATION

I hereby declare that excluding precise references which have been duly acknowledged, this submission is my own work towards my MPH dissertation and that, to the best of my knowledge, it contains no material previously submitted by another person nor material which has been accepted for the award of any other degree of the University or elsewhere.

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ABSTRACT

Background: In 2004, Ghana began the implementation of a National Health Insurance Scheme (NHIS) to minimize out-of-pocket expenditure at the point of use of service. Evidence suggests most health facilities are faced with challenges in the delivery of quality healthcare services.

Objective: To assess the perception of quality of healthcare among NHIS insured and uninsured patients in the Sefwi Wiawso Municipality.

Methods: The study adopted a cross-sectional study design that used mixed methods data collection approach. A total of 380 participants were selected for the quantitative approach using a simple random technique and 10 out of the 380 participants selected using purposive sampling technique. Structured questionnaire was used to gather data for the quantitative data and semi-structured interview guide was used in gathering data for qualitative data. In analysing the quantitative data, T-test was used to assess the difference in perception on the quality of care between insured and non-insured patients. Chi square was used to test for the association between the variables and multiple logistic regressions was used to determine the strength of association between the dependent and independent variables at a 5% probability level. In analysing the qualitative data, manual coding was used to generate themes that resonated with objectives of the study.

Results: There was no statistical difference between the quality of care experienced by NHIS insured and non-insured. There was 1.2times greater the odds of experiencing quality healthcare among those aged 51-60 years compared to those aged 18-30 years (COR = 9.88, 95% CI= 1.30, 74.96). Also, there was a significant association between showing empathy and quality of healthcare (COR=4.05; 95%CI=1.71, 9.62). The quality of healthcare delivery was confirmed by participants through the qualitative findings.

Conclusion: The study concludes that there is no difference between the quality of healthcare among insured and uninsured NHIS users. The study also concludes that patients' socio-demographic characteristics such as educational level, employment status, monthly income and marital status influence quality of healthcare. Again, the study concludes that health facility factors such as thoroughness during consultation, adequate physical examination, show of empathy and short waiting time enhances quality healthcare. It is recommended for the National Health Insurance Authority (NHIA) to reconsider expanding the range of service coverage to cater for expensive medications and other complex surgeries to reduce the cost borne by patients.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Before the National Health Insurance Scheme (NHIS) was "established in 2003, Ghana implemented most of the known healthcare financing mechanisms including general tax and donor funding, out-of-pocket payments, community-based, health insurance schemes. However, these approaches have not been successful in improving access to quality healthcare and reducing out-of-pocket expenditures (Nyonator & Kutzin 1999)." An example in case is the implementation of the user fee policy (cash and carry) in the public sector in 1985 that in inequities in financial access and utilization of basic and essential health services between different socio-economic groups and between poor rural and richer urban dwellers (Asenso-Okyere et al. 1998; Nyonator & Kutzin 1999)." Several "low-income households, regularly postponed medical treatment, resorted to self-treatment, or used alternatives provided by unregulated healers, spiritualist, and itinerant drug vendors, often with disastrous results (Oppong, Phyllis & Kari, 2009)."

Undeniably, NHIS has "had a positive effect on the medical services in general" in Ghana as corroborated by researchers (Aryeetey, Nonvignon, Amissah, Buckle, & Aikins, 2016; Amoah, 2012). Sulzbach et al. (2009), established that NHIS had reduced admissions considerably from 2.4 % in 2004 to 1.9 % in 2007. Additionally, few individuals were 'arrested' in medical centres because of their failure to settle their medical cost and a substantial decrease in on-the-spot payment to access medical service. In contrast, Brugiavini and Pace (2010), discovered that the NHIS had not meaningfully 'abridged' on-the-spot payment at medical centres, but rather heightened medical assistance use.

Essentially, "an increase in demand for health care suggests an increase in supply of services by expanding available inputs such as equipment, trained staff and consultation rooms" (Fenny, Enemark, Asante & Hansen, 2014). "Patient dissatisfaction with poor quality service is likely to affect their decisions to remain enrolled unto NHIS, which ultimately makes the scheme less attractive to new members (Fenny, et al., 2014). Therefore, while removing financial barriers to improve access to care, the quality of healthcare delivery could be influenced by patient and health facility factors.

The occupation and income levels of patients are influenced by their educational level and these to a large extent impact on their knowledge, their choices and perception of access to healthcare services (Diop, 2005; Dixon et al., 2014). In addition, joining long queues and waiting for longer hours to access health care affect the perception of patients on the quality of healthcare delivery (Swami et al. 2012).

In the Sefwi Wiawso Muncipality, there are assertions that "the insured NHIS members were unsatisfied with treatment offered them at health facilities. They faced longer queues at health facilities and therefore, endured longer waiting times mainly due to the administrative bottlenecks (Kofi Moses, insured NHIS member, 2019, personal communication)." Therefore, the study aimed to "examine the quality of care accessed by NHIS insured and uninsured members in the Sefwi Wiawso Municipality any differences in quality health care delivery experiences between NHIS insured and uninsured members."

1.2 Problem statement

In order to "ensure equitable access to quality healthcare services, it was imperative for the removal of the financial barriers, hence, the Government of Ghana initiated and passed the

National Health Insurance Law, 2003 (Act 650) and the National Health Insurance Regulations, 2004 (L.I. 1809) aimed at abolishing the 'Cash and Carry' system at the point" of service delivery (Government of Ghana, 2004; Agyepong & Adjei, 2008). "By the end of 2009, about 62% of the population was registered with the scheme with 50% fully covered with valid identity cards. The scheme being a social health protection intervention and linked to the country's poverty reduction strategy has about 65% of its membership not paying annual premium." Furthermore, "in-patient utilization stepped up from 28,906 in 2005 to 1,451,596 in 2011 and from 1.43 million in 2012 to 1.61 million in 2013. Also, out-patient utilization of healthcare services rose from 0.6 million in 2005 to 27.35 million in 2013 (NHIA, 2013). The disbursement of claims jumped from GH¢616.47 million in 2012 to GH¢785.64 million in 2013 (NHIA, 2013)." Data obtained from the Sefwi Wiawso Municipality area buttress this point as it "indicated that there had been an increment of 2.7% in the number of insured patients with NHIS reporting to the hospital between 2016 and 2018 (Sefwi Wiawso Municipality, 2018).

Notwithstanding the increment in NHIS enrolment, there are difference in perception with regards to quality healthcare delivery. Healthcare delivery is perceived as quality by patients who seek services in a private hospital compared to public ones (Curry & Sinclair 2002; Jabnoun & Chaker, 2003; Yesilada & Direktor, 2010). Also, the lack of empathy, responsiveness, effective communication and reliability are perceived as the difference in quality healthcare delivery (Bahrain & Ramez 2012; Essiam 2013). "Furthermore, patients factors such as level of education (Amo-Adjei, et al. 2016; Gishu et al. 2019), religion (Adamu, 2011; Chiswick, & Mirtcheva, 2010), employment status (Duku, et al. 2018; Amo-Adjei, et al. 2016) and monthly income (Abuosi et al. 2016; Baltussen et al., 2002) affect their perception the quality of healthcare delivery. Yet again, long waiting time, and long

queues affect the perception of patients on the quality of healthcare delivery (Swami et al. 2012).

Since the introduction of the NHIS, studies have focused on assessing client interaction with the scheme as consumers, particularly on utilization and access to services (Owoo & Lambon-Quayefio, 2013; Kanchebe & van der Geest, 2013; Blanchet, Fink & Osei-Akoto, 2012), equity (Jehu-Appiah, Aryeetey, Spaan, de Hoop, Agyepong & Baltussen 2011; Odeyemi & Nixon, 2013), client perceptions of quality of care (Jehu-Appiah, Aryeetey, Spaan & Agyepong, 2011; Dixon, Tenkorang & Luginaah, 2013). "There is, however limited evidence on NHIS and access to quality healthcare delivery in the Western North Region of Ghana. Against this background, the perception of quality of health care accessed by NHIS insured and uninsured members in the Sefwi Wiawso Municipality in the Western North Region"

1.3 Justification

While the health sector is making efforts to provide financial access to health care by implementing policies, including the NHIS, quality of health care delivery does not appear to commensurate with the expectations of patients. This could contribute to the issue of non-enrolment among the population, especially the informal sector people who pay direct premiums. Nevertheless, it appears that studies had minimally examined the issue of quality of health care among insured and uninsured patients in the Sefwi Wiawso Municipality. Consequently, this study evaluated this in order to help policy makers know the extent of the problem in order to promote policies that would enhance the perception of quality of health care among both insured and uninsured patients. This will help to contribute to literature in the field of health financing and quality of health care.

There appears to be differences in the provision of quality healthcare to NHIS insured and uninsured patients attending health facilities. This could explain why there is reduced enrolment among the uninsured clients (informal sector members) in the communities. This appears to be a gap in literature that is yet to be filled. This study sought to address it.

Even though the perception of quality of health care may depend on the patient (socio-demographic characteristics: age, education, occupation, income, religion, marital status) factors, it seemed that few studies might have assessed how these variables could influence patients' satisfaction with heath care delivery at health facilities in the Sefwi Wiawso Municipality. This study sought to fill this gap in literature by finding out the association between patient factors and perception of quality of health care.

Health facility (Long queues at hospitals, Poor attitude of health personnel, Unavailability of prescribed medicines, Long Waiting time) factors could influence patients' perception of quality of health care in health institutions: Yet, it appears that previous studies did not examine how such health facility factors could be improved to encourage enrolment and utilisation of available health care that is of high quality. This study sought to fill this gap in the current literature.

1.5 General objective

To assess the perception of quality of healthcare among NHIS insured and uninsured patients in the Sefwi Wiawso Municipality.

1.5.1 Specific objectives

1. To compare the difference in perception of quality of health care by health insurance status in the Sefwi Wiawso Municipality.
2. To examine the influence of patient factors on the perception of quality of healthcare among NHIS insured and uninsured patients in the Sefwi Wiawso Municipality.

3. To assess the influence of health facility factors on the perception of quality of healthcare among NHIS insured and uninsured patients in Sefwi Wiawso Municipality.

1.6 Research questions

1. What is the difference in perception of quality of healthcare by health insurance status in the Sefwi Wiawso Municipality?
2. What is the influence of patient factors on the perception of quality of healthcare among NHIS insured and uninsured patients in the Sefwi Wiawso Municipality?
3. What is the influence of health facility factors on the perception of quality of healthcare among NHIS insured and uninsured patients in Sefwi Wiawso Municipality?

1.4 Outline of the dissertation

The dissertation is presented in six chapters. Chapter one is the introduction where the background to the study, problem statement, justification, objectives and research questions are presented. Chapter two is the literature review and conceptual framework where the importance of health, access to quality healthcare, National Health Insurance Scheme (NHIS) and quality of care, factors influencing perception of quality of health care, patient (socio-demographic characteristics) factors, healthcare facility factors, theoretical framework for quality of care, which comprised the technical and functional quality model, the GAP model and the SERVQUAL model. This was followed by the conceptual framework and summary of the chapter. Chapter three is the methods where the philosophical assumption, study design, study area, study population, sampling strategies, sample size determination, sampling method, study variables, data collection, data processing and analysis, ethical consideration and chapter summary. Chapter four is the results where the quantitative and

qualitative findings are presented. Chapter five is the discussion where the results are discussed based on the objectives of the study. Chapter six is the summary and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents review of related studies on the topic under consideration. It is divided into five sections comprising importance of health, access to quality healthcare, overview of national health insurance scheme (NHIS), patient characteristics influencing enrolment onto NHIS and healthcare facility factors of registering onto NHIS.

2.1 Importance of health

Health is the state of physical and mental well-being essential to living a meaningful, pleasant and productive life (Kuffour, 2011). Health as explained by Byrne (2004), is an important component of flourishing modern societies, a foundation of well performing economies, and a shared principle. The World Health Organization (WHO, 1963), informed that health is not just the nonexistence of diseases but the state of complete physical, mental, and social well-being.

It is very clear how contemporary pecuniary advancement has been achieved as a result of good health, longer, healthier, more productive human lives (Kuffour, 2011). It is the fundamental to economic advancement and not just a quality of live (Byrne, 2004). Health is regarded by WHO as a right for every human being (WHO, 2015). Health is crucial to the well-being of a community as well as individual's well-being (Olujimi, 2007). It strongly affects the earning capacity of an individual and is key to the ability of an individual enjoying and appreciating all aspects of life (Olujimi, 2007). Health from a wide scope, constitute medical and public health viewpoints (Kuffour, 2011). It gives much attention to the needs of the poor or assailable and disfavoured groups (Asher, 2004). It involves particular responsibilities of government with regards to healthcare and the fundamental factors of

health as well as roles to ensure non-discrimination and people's right to participate in relevant decision making (Asher, 2004).

WHO (2006) lines up the social and economic environment, the physical environment and an individual's personal characteristics and behaviours as the principal factors of health. In general, the health status of an individual is greatly influenced by his/her living conditions. The social and economic environments are principal determinants of an individual's health status, given the fact that higher education levels are linked with a higher standard of life as well as a higher income (WHO, 2006).

Without good health, individuals may contract diseases, which could lead to unnecessarily short life time (Anderson, 2014). Anderson (2014) again noted that good health is quite easy to attain. However, individuals have to change their lifestyle, which is sometimes hard. Consequently, most of today's diseases can be attributed to poor lifestyle of individuals. Other signs are that good health is a productive factor in a competitive economy (Kuffour, 2011). The absence of an individual at work is not just costly towards their sickness payments, but also towards their replacement by other workers and subsequently lower productivity for their employer (Kelley, Mitchell, & Ruggieri, 2009). For example, about 15 % of the working population in the European Union (EU) are affected with chronic diseases (Harbers & Achterberg, 2012). This according to Byrne does not only place a burden on the diseased persons, but also on those who aid them; about 15 million people in the current EU need the aid of a third person to carry out the primary functions of normal life (Byrne, 2004).

It is revealed that poor health affect earnings by decreasing salaries or restraining involvement in the work force (Kuffour, 2011). Currie and Madrian (2005), noticed a correlation between health and the labour market, but little agreement has come out concerning the degree of that connection. Three means by which ill health can decrease

wages has been identified: reductions in productivity; costs for the employer to accommodate the individual; or discrimination. Nonetheless, a conclusion was drawn that the negative correlation that existed between earnings and health was not chiefly the result of wage difference, but the amount of time worked (Currie & Madrian, 2005).

The essence of a healthy population cannot be understated looking at their contributions to their family lives and the economy at large (Kuffour, 2011). Monies and sometimes valuable assets are sold off to fund the recovery process of sick individuals, to make up for 'wasting' productive hours 'babysitting' the sick and/or visiting at the hospital (Kuffour, 2011).

It is against this backdrop that the present study seeks to add to literature by assessing the role of NHIS in ensuring quality healthcare delivery for the insured and uninsured in the Sefwi Wiawso Municipality.

2.1.1 Access to quality healthcare

Kuffour (2011) asserts that lots of the troubles faced with regard to health are avertable and curable through better accessibility to healthcare services. It is hard to come up with tolerable definition for access because it is affected by a lot of factors (Obasi, 2013). Obasi (2013) indicates that factors affecting the use of services determine access. Obasi continues to state that access is affected by system infrastructure allowing or restricting use through hours of operation, the appointment system, walk in facilities and telephone services (Obasi, 2013). Culture, another factor, which affects access by integral differences in the social system (Kuffour, 2011). Gender also influences access, forcing women into gender specific roles that have damaging effect on their health or forced to seek permission to obtain healthcare (Kuffour, 2011). Access in this study was defined as the ability to use healthcare services, particularly the number of times an insured and uninsured NHIS member visits a healthcare facility in a one-year period.

2.1.2 National Health Insurance Scheme (NHIS) and quality of care

Through the National Health Insurance Act of 2003, which was replaced by Act 852 of 2012, the Ghana's National Health Insurance Scheme (NHIS) was birthed and is one of very few efforts by a Sub-Saharan African country to carry out a national-level, universal health insurance programme (Kirigia, Preker, Carrin, Mwikisa, & Diarra-Name, 2006). A newly-created National Health Insurance Authority (NHIA) was licensed to ensure the enforcement of a national health insurance policy that see to it that all residents have access to basic healthcare services (NHIA, 2003). The NHIA warrants and controls district level mutual health insurance plans (DMHISs) and in addition different plans permitted under the Act; certifies suppliers, decides in counsel with DMHISs, first-class ranks, and for the most part regulates and gives an account of NHIS activities (NHIA, 2010).

Financing of NHIS is from four essential sources to be specific; taxation on merchandise and enterprises, a reserved part of government managed savings charges from formal division laborers, user charges and diverse assets from speculation returns, legislature, or subscribers (NHIA, 2010). The 2.5% assessment on products and ventures, called the National Health Insurance Levy (NHIL), is by a wide margin the biggest source, including around 70% of incomes. Government managed savings charges, which represent an extra 23%, premiums for around 5%, and different assets for the staying 2% (Yankah, 2009).

The NHIS, including all DMHIS had a solitary arrangement for assistance that was set by Legislative Instrument 1809 and portrayed by the NHIA as covering 95% of disease conditions that torment individuals in Ghana (Witter & Garshong, 2009). The NHIS covers outpatient administrations, including laboratory testing and activities, for example, treatment for hernia; majority of admission cases, including expert operations, most medical

procedures, and clinic settlement; oral wellbeing medications; all maternity administrations, including cesarean deliveries; emergency care; and, at long last, all medications on the midway settled NHIA Medicines List (NHIA, 2009).

The NHIS bundle avoids some extremely costly systems, for example, certain medical procedures, cancer medications (other than breast and cervical disease), organ transplants, and dialysis; non-indispensable administrations, for example, corrective medical procedure; and some prominent things, for example, human immunodeficiency virus (HIV) antiretroviral drugs (Blanchet, Fink, & Osei-Akoto, 2012). Other than the services the scheme does not cover, there are couple of formal cut-off points set on NHIS individuals' utilization of advantages, there is no cost-sharing on premiums (i.e., no co-installments, coinsurance, or deductibles), no yearly or lifetime limits and minimal successful entryway keeping. Rewards were planned to be "portable" from one district to the next, however genuine "portability" has been blended and is one purpose behind the ongoing presentation of one, national NHIS card to supplant district cards (Blanchet et al., 2012).

2.2 Factor influencing the perception of quality of healthcare

This section presents analysis of factors influencing perception of quality of health care delivery in health institutions based on literature.

In a study to assess the quality of physiotherapy services, Curry and Sinclair (2002), used the SERVQUAL model in three physiotherapy services in Dundee, Scotland. In this study, they considered the ten original criteria for evaluation and combined them into five; tangibles, reliability, responsiveness, assurance (including competence, courtesy, credibility, and security) and empathy (including access, communication, and understanding). The findings indicated, that the services were highly appreciated by customers even though it was realized

that the perception gaps were slightly negative and services could be improved. Their study proved that assurance and empathy were very important for quality healthcare."

Additionally, "Jabnoun and Chaker (2003), in their study compared public and private hospitals in the United Arab Emirates. The factor analysis of the results revealed five dimensions, thus empathy, tangibles, reliability, responsiveness and supporting skills. The study found that there were significant differences between private and public hospitals in terms of overall service quality in empathy, tangibles, reliability and administrative responsiveness dimensions. Their findings indicated that public hospitals are perceived to be better than private hospitals on service quality."

Furthermore, "Irfan and Ijaz (2011) conducted an empirical study to compare the quality of healthcare services delivered by the public and private hospitals to gain patient satisfaction in Pakistan. For this purpose, the SERVQUAL instrument was used to measure the patients' satisfaction about service quality delivered in these hospitals. In their work it is noted that private hospitals are delivering better quality of services to their patients as compared to public hospitals."

Also, "Ramez (2012), employed the SERVQUAL model to evaluate service quality of healthcare providers in Bahrain, the primary objective of the study was to ascertain the relationship between the dimensions of service quality and patients' satisfaction, analysing the behavioral intention of patients. This researcher revealed that empathy, responsiveness and tangible dimensions had the largest influence on the overall service quality. Therefore concluded that there was a positive and significant relationship between overall service quality (OSQ) as well as patients' satisfaction (SAT) and their behavior intention (BI)."

In Ghana, "a cross-sectional survey study adopted the SERVQUAL dimensions to examine the quality dimensions and patient satisfaction with healthcare delivery in a Public University hospital (Essiam, 2013). The findings indicated that patients' satisfaction is best explained by perceived responsiveness, followed by perceived empathy, perceived assurance, perceived tangibility, and perceived reliability. The study further recommended that findings would be of interest to hospital administrators, policy makers, stakeholders and academics investigating the main relationships between the SERVQUAL dimensions and patient satisfaction using the hierarchical regression model."

Nevertheless, "Spencer et al (2014) observed why hospitals vary in the quality of care delivered to patients in the USA. The study examined the Agency for Healthcare Research and Quality's innovative Inpatient Quality Indicators and pooled 2006–08 State Inpatient Database records from eleven states. The findings indicated that privately insured patients had lower risk-adjusted mortality rates than did Medicare enrolees for twelve out of fifteen quality measures examined. It further stipulated that Medicare patients appeared particularly vulnerable to receiving inferior care and recommended that in order to help reduce care disparities, public payers and hospitals should measure quality healthcare for different insurance groups and monitor differences in treatment practices within hospitals."

Yet again, "Esian et al. (2012) explored quality healthcare improvement at individual, group and organizational levels and identified the restraining forces using formative evaluation, and the implications for current UK policy, particularly quality, innovation, productivity and prevention. A total of 11 multi-disciplinary groups drawn from the NHS England Healthcare Trusts were sampled. The results showed that there was a limited focus on patient-centred

services in the eleven groups and therefore directed managers and policy makers to undertake an evaluative health policy to improve healthcare quality centred on patients' needs."

From "the Nouna District in Burkina Faso, objective quality of care evaluations by Robyn, Sauerborn and Bärnighausen (2013) showed that providers were less likely to weigh, take the temperature, perform a physical examination, use a stethoscope, and inform patients about the diagnosis of their illness, when the patients were enrolled in the community-based insurance (CBI). The authors, however, found that there was no difference between the enrolled and non-enrolled respondents about the availability of medicines." This study "seems to be the opposite to Jehu-Appiah, Aryeetey, Agyepong, Spaan and Baltussen (2012) who found that both insured and uninsured households had positive perceptions with regards to quality of care, but were negative about providers' attitudes. The attitude of staff towards insured patients also differs, even in the same health facility." In "India, a focus group discussion with staff at ASHWINI hospital found that whereas some patients complained that the nurses in the hospital reproached them for 'being uninsured', some of the staff rather considered the insured patients as a nuisance (Devadasan et al., 2011)."

From the studies reviewed on quality healthcare delivery and NHIS membership, the findings are inconclusive from the global perspective (Spencer et al., 2014; Esian et al., 2012; Devadasan et al. 2011) to the local perspectives (Robyn, Sauerborn & Bärnighausen, 2012; Jehu-Appiah, et al. 2012). Most of these used different research approach at arriving at their conclusion, that is, while some used quantitative approaches, others used qualitative approaches. This study, however, sought to use both quantitative and qualitative approaches to assess quality of healthcare delivery among NHIS members. Again, to the best knowledge

of the researcher, this is the first study being undertaken in the Western North Region of Ghana to assess the quality of healthcare delivery among NHIS insured and uninsured.

2.2.1 Patient (socio-demographic characteristics) factors and quality of healthcare

This section present analysis of patient factors influencing the quality of health care delivery in health institutions based on literature. These factors are presented as income, sex, education, marital status, occupation, income, religion, and insurance status.

2.2.1.1 Income

A study was done to "compare perceptions of quality of care between insured and uninsured out-patients in selected hospitals in Ghana to determine whether there was any unequal treatment between insured and uninsured patients in terms of quality of care (Abuosi et al., 2016). This was a cross-sectional survey of 818 out-patients conducted in 17 general hospitals from Upper East, Brong Ahafo and Central Regions. There was a significant difference between insured and uninsured patients in respect of financial access to care. Nevertheless, Diop (2005) in a research noticed that most homes investigated in Senegal could pay insurance contributions as the incidence of insurance contribution was about 1.2% of total household expenditures and about 5% of non-food expenditures. Another study conducted in Burkina Faso revealed that minimum demand for community-based insurance is as a result of institutional inflexibility and not poverty as such (WHO, 2000)."

2.2.1.2 Education

A study assessed how perception of service quality under Ghana's insurance programme contributed to health insurance subscription (Amo-Adjei et al., 2016). The study used the 2014 Ghana Demographic and Health Survey (GDHS) dataset and descriptive proportions

and binary logistic regression techniques were applied to generate results. The findings of this study revealed that in terms of rising education and perception of quality, service under the NHIS was rated as worse. This means that being and educated and insured exposed the limitations of services provided under the NHIS.

Similarly, Gishu et al. (2019) examined "patient's perception of the quality of nursing care in a tertiary centre in Ethiopia. Data were collected prospectively using Quality of Nursing Care Questionnaires-patient of Safford and Schlotfeldt and a total of 340 patients were included using systematic random sampling. The nursing care performance was low for education and physical care (mean score of 2.79 and 2.89 respectively). While only 36% of the respondents were satisfied with the nursing care, patient education had the strongest (AOR of 7.4) association with satisfaction."

2.2.1.3 Religion

Adamu (2011) examined the different elements that could influence the use of "maternal health services across the six geopolitical zones in Nigeria. The study adopted an analytical ecological study design, which involved the analysis of secondary data on utilization of maternal health services based on Andersen's Health-seeking Behavioural Model. The conclusion drawn by this study was that employment in the northern region; and mother's age and religion in the south influenced accessibility to healthcare services."

2.2.1.4 Occupation

Duku et al. (2018) examined an alternative explanation for the low enrolment in health insurance in Ghana by analysing differences in perceptions between the insured and uninsured of the non-technical quality of healthcare. Data from a survey of 1,903 households living in the catchment area of 64 health centres were used for the analysis. The findings

from the study revealed that uninsured (88.3%) were more likely to be gainfully employed and also more likely to spend more (GH₵3,847.30) on household consumption and healthcare. This implies that quality of healthcare delivery was considered better among the uninsured compared to the insured.

Amo-Adjei et al., (2016) studied "how perception of service quality under Ghana's insurance programme contributes to health insurance subscription. The study used the 2014 Ghana Demographic and Health Survey (GDHS) dataset and descriptive proportions and binary logistic regression techniques were applied to generate results. The findings revealed that significant differences in perceptions of service quality among females also existed by occupation."

The present study sought to add to literature by assessing the effect of patient characteristics on the perception of quality of healthcare delivery among NHIS insured and uninsured in the Sefwi Wiawso Municipality.

2.2.2 Healthcare facility factors

This section present analysis of health facility factors influencing the quality of health care delivery in health institutions based on literature. Studies suggest that waiting time, poor attitude of health professionals, long queues, unavailability of medicines at health facilities play a role in the quality of healthcare delivery (Swami et al., 2012; Anderson, 2014; Dalinjong & Laar, 2014). Some of these have been explained below.

2.2.2.1 Waiting time

Anderson (2014) observed that without good health, people may experience debilitating diseases and an unnecessarily short life span. Fortunately, health insurance has become one panacea to this concern. Yet, the burden of workload on the healthcare practitioners and other

ancillary staff has increased tremendously and this has caused the waiting times at health centres to be extremely high and this affected perception of quality of healthcare delivery. Swami et al., (2012) looked at the problems and prospects of micro health insurance in Botswana, and reported that increased utilization of health services had led to an increased workload for hospital staff. Thus, patients who visited public healthcare facilities were made to wait for a considerably longer time before they were attended to by a doctor and this affected the quality of care received. Therefore, most of the people joined the Itekanele scheme to enjoy the services that came with it. "Dalinjong and Laar (2012) examined the influence of the NHIS on the behavior of health care providers in their treatment of insured and uninsured clients in Bolgatanga (urban) and Builsa (rural) districts in Ghana and reported that most of the insured perceived and experienced long waiting times, verbal abuse and discrimination in favor of the affluent and uninsured."

2.2.2.2 Poor attitude of health personnel

A "focus group discussion with staff at ASHWINI (2011) hospital in India found that whereas some patients complained that the nurses in the hospital reproached them for 'being uninsured', some of the staff rather considered the insured patients as a nuisance." Contrary to this finding, a study evaluated patient satisfaction with the quality of health care provided at the Modilon General Hospital, Madang, Papua New Guinea (PNG) where 92 patients from different wards were interviewed and aspects of patient satisfaction were graded with Likert type scales. The majority of participants were satisfied with the staff attitude (Kuzma & Kolodziejczyk, 2018). Though this study did not compared quality of healthcare among insure and uninsured patients, the findings have good implication for this study because of the similarities in service in hospitals. Turkson (2009) and Fekadu (2011) envisaged "that patients' satisfaction and quality of care might be improved through paying more attention to

the perspectives of the patient, improving the competencies and skills of providers and improving the working environment by better management and motivation of staff." Dalinjong and Laar (2012) "examined the influence of the NHIS on the behavior of health care providers in their treatment of insured and uninsured clients. The study took place in Bolgatanga (urban) and Builsa (rural) districts in Ghana and reported that health providers had negative attitudes towards insured patients."

2.2.2.3 Long queues at hospital

Previous studies discovered that public hospitals rendered disappointing service to patients in the area of health personnel interactions, duration to secure a schedule, admittance to essential cure and time spent in accessing healthcare (Nwankwo et al., 2010; Yousapronpaiboon & Johnson, 2013; Bisschoff & Clapton, 2014). "Al-Hawary et al., (2011) indicated that hospitals in Jordan that were considered to provide high quality service was due to hospital staff (including academic/professional qualifications and sound medical experience), comfortable accommodations for in-patients and caring staff (including doctors, nurses, and health professionals) but hospitals" thought to provide low quality health service was because of an unsatisfactory amount of dispensing channels to give out prescription and time spent to book an appointment with a health expert. Findings from these studies have implications for the present in those patients, whether insured or uninsured patients, are likely to experience such long queues at the hospitals. This study sought to fill this gap by assessing how long the insured or uninsured queued at hospitals in Sefwi Wiawso Municipality.

2.2.2.4 Availability of prescribed medicines

A study interrogated the health seeking behaviour of uninsured NHIS cardholders, "majority of the insured indicated that they received good quality of service" in contrast to uninsured NHIS cardholders (Cobah & Liang, 2011). "Unavailability of essential drugs and long

waiting time respectively, were the major reasons stated for the low quality of service received. From the perspective of the non-NHIS members, quality of healthcare delivery in the district was low" (Cobah & Liang, 2011: 46). Baltussen et al., (2002) indicated that from the patient's perspective, the supply of drugs was a very vital determinant for the utilization of health service and healthcare quality in Burkina Faso." Similarly, "in the Nouna District in Burkina Faso, a study on objective quality of care evaluations by found that there was no difference between the enrolled and non-enrolled respondents about the availability of medicines (Robyn et al., 2013).

2.3 Theoretical Framework for quality of care

Theoretical frameworks guide the researcher by suggesting a format from which to view the intended research, a guide for determining what study variables will be of interest and even assisting in the interpretation of research results (Current Nursing, 2010). Essentially, a theoretical framework provides a perspective from which the collected data may be understood. A number of theoretical models have been used to assess quality of healthcare delivery (Current Nursing, 2010). Some of these theoretical models are presented below subsequent to detailed discussion of the model that best guides the present study.

2.3.1 Technical and functional quality model

This model was propounded "by Gronroos (1984) and it is grounded on two key dimensions of service quality, which are the technical quality and the functional quality. This researcher indicated that functional quality is the result or the outcome of the service, while technical quality refers to the process or the way the service has been delivered" (ACR, 2015). Gronroos (1984) further argues that a technical quality is what consumer actually receives as a result of their interaction with the service firm and functional quality is how he/she gets the

technical outcome. This analyst indicates in his model that the corporate image is instrumental to service firms and this is built up mainly by the technical and functional quality of service, including the other factors (tradition, ideology, word of mouth, pricing and public relations) (Gronroos, 1984; Nitin et al., 2005)."

Additionally, "this model has been applied in the study of quality healthcare, the accuracy of medical diagnosis, where the processes and procedures are defined as technical quality. In the stands of this purview, technical quality transcends patients' judgment while functional quality is overtly explained by the experiences of patients (Asubonteng et al., 1996; Yousapronpaiboon & Johnson, 2013)." Yet, "some studies have indicated that most clients are not able to make justifiable assessment of the technical quality due to their lack of general technical knowledge of attributes (empathy, reliability, affordability and responsiveness etc) primary used in the evaluation of health service quality (Wiesniewski & Wiesniewski, 2005; Devebakan, 2005; Atinga et al., 2011)." Despite "the popularity of the technical and functional quality models, it does not ensure effective representation of all views of patients; this led to the development of the GAP model (James, 2004; Bart Lariviere, 2014)." In effect, this model guided the analysis of the qualitative study.

2.3.2 The GAP model

This model, as proposed "by Parasuraman, Zeithaml and Berry (1985) suggests that service quality is a key function of the differences between expectation and perception along the quality dimension. This model was developed based on a gap analysis. The various gaps in the model are visualized as:"

Gap1: "Difference between consumers' expectation and management's perceptions of those expectations, thus not knowing what consumers expect (Parasuraman et al., 1985; Nitin et al., 2005; Gunawardane, 2011)."

Gap 2: "Difference between management's perceptions of consumer's expectations and service quality specifications, thus improper service-quality standards (Dabholker et al. 2000, Drain, 2001)."

Gap 3: "Difference between service quality specifications and service actually delivered, that is the service performance gap (Groonroos 1984; Matterson, 1992; Nitin et al., 2005)."

Gap 4: "Difference between service delivery and the communications to consumers about service delivery, thus whether promises match delivery (Parasuraman et al., 1988; Groonroos, 1984; Nitin et al., 2005)."

Gap 5: "Difference between consumer's expectation and perceived service. This gap depends on the size and direction of the four gaps associated with the delivery of service quality on the marketer's side (Parasuraman et al., 1988; Nitin et al., 2005)."

This model "was used in the study of service quality in the healthcare industry (Rose et al., 2004; Taner & Antony, 2006; Saunders et al, 2009; Peprah, 2013)." A study on quality in health services with the objective to measure the satisfaction of users, using the Gap Model." The choice "of this model was based on the analysis of perceptions and expectations of users of health services, based on the five dimensions: reliability, responsiveness, tangibility, empathy and assurance (Gonclaves et al., 2014). The study further indicated the difference between the expected service and the received service." Gaps "or shortcomings were derived that may be the main obstacles for users to perceive the provision of such services with quality." Hence, the SERVQUAL model, guided the study.

2.3.3 The SERVQUAL model

This model, as proposed "by Parasuraman et al., (1988), is a multi-item scale used to assess perceptions of customers of service quality. This scale decomposes the notion of service quality into five main dimensions as earlier indicated. These dimensions are:"

i. Reliability: "The model defines this dimension, as whether the organization is reliable in providing the service. Does it provide as promised? More so, reliability reflects a company's consistency and certainty in terms of performance. Again, reliability is the most important dimension for the consumer of services."

ii. Tangibility: "In this regard, Parasuraman et al (1988) describes tangibility mainly as how the service provider's physical installations, equipment and people are. Since there is no physical element to be assessed in services, customers often trust the tangible evidence that surrounds it when making their individual assessment."

iii. Responsibility: "The key issue raised here is whether company employees are helpful and capable of providing fast service. Furthermore, it is responsible for measuring company and employee receptiveness towards clients."

iv. Empathy: "This dimension deals with the capacity of a person to experience another's feelings."

v. Assurance: "It deals with the knowledge and courtesy of employees and their ability to inspire trust and confidence by customers.

2.4 Conceptual framework

The conceptual framework in Figure 1.1 presents quality health care among NHIS insured and uninsured. Patients' socio-demographic factors, such as age, education, occupation, income Dixon, Tenkorang, Luginaah, Kuuire & Boateng, 2014levels and religious beliefs to a

large extent affect the use of NHIS services among patients (Olaniyan & Sunkanmi 2012; Levy & DeLeire, 2009). The occupation and income levels of patients are influenced by their educational level and these to a large extent impact on their knowledge, their choices and perception of access to healthcare services (Diop, 2005 ;). Thus, the probability of enrolling onto NHIS is largely influenced by the socio-demographic factors of patients.

Healthcare facility factors influence the perception of persons in accessing health care services. Joining long queues at all times and waiting for longer hours at an NHIS accredited healthcare facility to access health care can affect other patients from enrolling onto the NHIS (Swami et al. 2012). The attitude of healthcare personnel towards NHIS cardholders will likely influence 'cash and carry' individuals not to register onto the NHIS (Kumari et al. 2009; Nwankwo, Frimpong, & Dason, 2010).

In the nutshell, the use of NHIS services is influenced by socio-demographic, geographic and healthcare facility factors. "All of these factors have individual components, which will link up to influence the final output, which is access to quality of healthcare delivery in the Sefwi Wiawso."

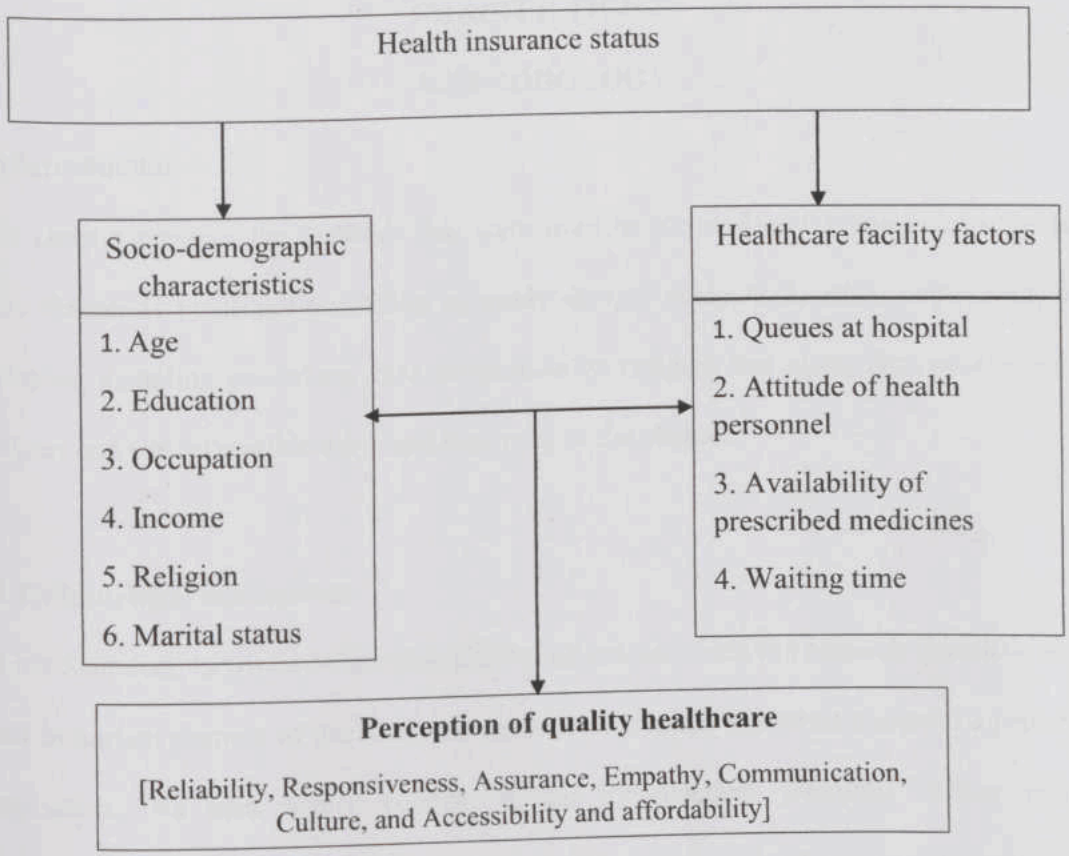

Figure 2.1: Conceptual framework

Source: Researcher's construct (2020)

2.5 Summary of the chapter

The importance of the NHIS in facilitating the delivery of quality healthcare in Ghana cannot be overlooked. However, the Sefwi Wiawso Municipality continues to face huge challenges with the health of its people. Generally, the doctor to patient ratio is low, and this can adversely affect healthcare delivery for members and non-members registered onto NHIS. The results of this study can help provide a better understanding on whether registered NHIS members receive quality healthcare or not. This research can contribute to the practical and effective way of ensuring that all members 'captured' on the NHIS receive quality healthcare to reduce the incidence of preventable deaths from the society.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the methods that were used to gather data for analysis in the study. This chapter is presented according to study design, study area, study population, study variables, sampling procedure, data collections techniques and tools, data processing and analysis and ethical consideration and summary of the chapter.

3.1 Philosophical assumption

As per Saunders, Lewis and Thornhill (2009), situations where the research questions are the most important element of the research, the best philosophy that must underpin a research is pragmatism. An idea and/or concept driven by practical scenarios further explains pragmatism (Goldkuhl, 2004). Though there is a thing such as reality among pragmatists, this trend of reality is a continuously fluctuating ground on the actions and inactions of the individual. Subsequently, preempted and projected objectives set by businesses are attainable by connecting their engagements to reasoning and purpose. Questions such as "where", "what", ""how" are common among pragmatists who seek to unravel research based actions based on its projected significance (Creswell, 2003).

By the adoption of pragmatism, the unit of analysis was based on patients' perception on the quality of healthcare delivery among the insured and uninsured. Within this paradigm, a division can be created between the action taken, the results and consequence of the action. Furthermore, to present an appropriate alternative to the combating conflict of positivism and anti-positivism in understanding a social phenomenon, adopting the paradigm enabled for the integration of findings.

3.2 Study design

A cross sectional study is a study that assesses all variables in a sample systematically, often to quantify potential causative associations between exposures and outcomes (Vandenbroucke et al., 2007). A cross sectional study is ideal for this study because it is generally quick, easy and often based on a questionnaire survey and inexpensive to perform (Sedgwick, 2014). The deductive approach towards research according to Rovai, Baker and Ponton (2014), is regarded as a quantitative research while the inductive approach uses a qualitative research design (Denzin & Lincoln, 2011). Thus, quantitative research mainly centres on numerical evaluation (Research Design Service, 2012) and qualitative canters on the collection of statements (Goddard & Melvillle, 2004).

Subsequently, the study adopted a cross-sectional study design, which used a mixed methods (quantitative and qualitative) approach to assess the perception of quality of healthcare among NHIS insured and uninsured patients in the Sefwi Wiawso Municipality.

3.3 Study area

The Sefwi Wiawso Municipal Assembly "covers an area of 1,280sq.km representing 7% of land area and the seventh largest in the Western Region. The municipality lies in the North Eastern part of the Western Region between latitudes 6N and 6.30N and longitudes 2.45W and 2.15W. It is bordered to the north by Brong Ahafo Region, the then Brong Ahafo Region, currently, Bono Region and Ahafo Region, to the west, it is bordered by Juabeso and Bia Districts and by Aowin/Suaman to the south. It is also bordered by Bibiabi-Anhwiaso Bekwai District to the east and Wassa Amenfi to the south-east. The Municipal capital, Sefwi Wiawso is 156km away from Kumasi by a first-class asphalted road, and 260km away from Sekondi-Takoradi, the regional capital."

Geography:

Most part of the Municipality is generally undulating and lies between 152.4m – 510m above sea level. The highest point, the Krokoa peak which is 510m above sea level lies roughly to the South-West of Sefwi Wiawso. The main drainage feature is the Tano River and its tributaries. The Tano River runs roughly in a North-South direction and enters the sea in La Cote d'Ivoire. The major tributaries include the Suhien, Kunuma, Sui and the Yoyo.

Demography:

As per "the final results of Ghana's 2010 Population and Housing Census, the Municipality's population currently stands at 139,200 which is made up of 69,753 (50.1%) males and 69,447 (49.9%) females, which are slightly higher than the regional average for both males and females. The sex ratio for the district is 104 males per 100 females. The Municipality has a child (0-14) dependency ratio of 74.4 and an Adult (65+) dependency ratio of 6.8. The total dependency ratio is 81.5, which is slightly higher compared to the regional value of 79.8.

Economic status:

Agriculture is the major economic activity in the Municipality in terms of employment and income generation, with about 66 percent of the working population engaged in this sector which constitutes the main source of household income in the Municipality. Some of the crops include cocoa, palm tree, plantains, cocoyam, cassava and maize. Majority (71.3%) of the proportion of the population 15 years and older in the Municipality are economically active. More than 9 in every 10 persons of the population aged 15 years and above are employed, which is positive for the economic development of the Municipality.

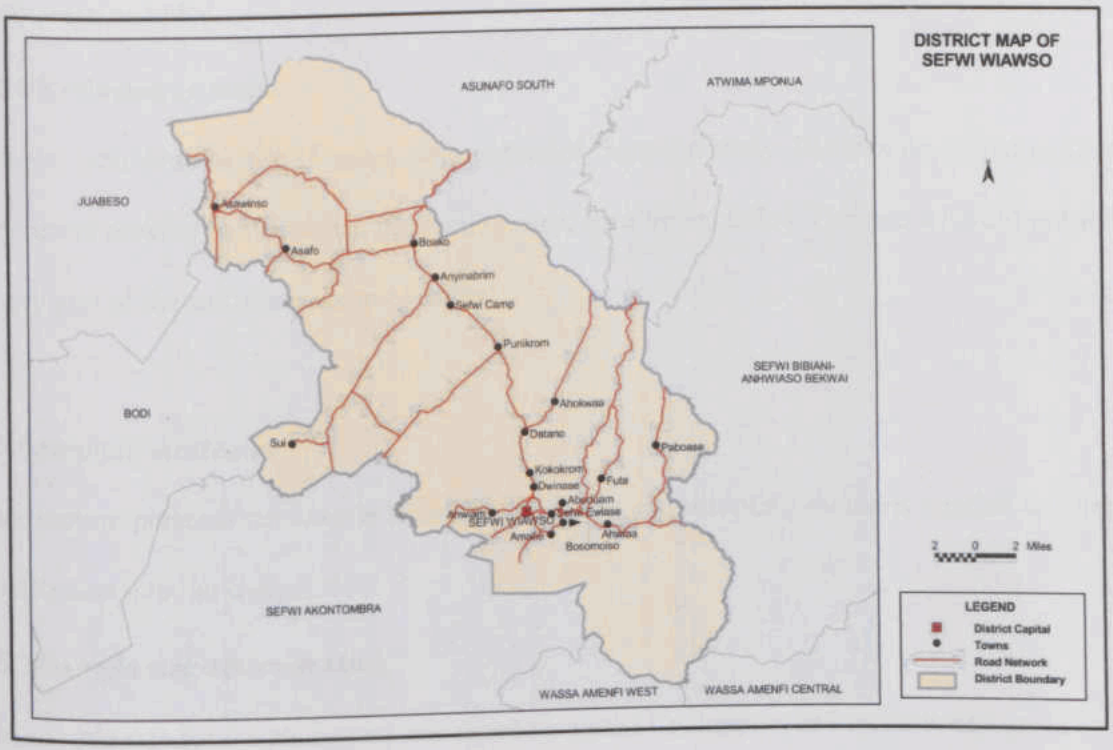

Figure 3.1: Map showing Sefwi Wiawso Municipality

Source: Ghana Statistical Service (2010).

3.4 Study population

The study systematically selected patients who fall into the criterion at the out-patient department (OPD) of which included those registered as "well as not registered onto the National Health Insurance Scheme (NHIS)."

3.4.1 Inclusion criteria

Patients aged 18 years and above registered onto the NHIS as well as those not registered onto the NHIS. These patients should be on treatment for at least, 12 months (January–December, 2019). Patients who lived in any part of the study area (Sefwi Wiawso

Municipality) and accessed healthcare in any NHIS accredited facility being used for the study were included.

3.4.2 Exclusion criteria

Patients who were below 18 years were excluded from the study. Patients described as first-time users seeking healthcare at the facility were also be excluded. Patients who did not live in any part of the study were also excluded

3.5 Sampling strategies

This section presents the sample Size determination and sampling methods applied to select participants into the study.

3.5.1 Sample size determination

The sample size for the study was calculated using the Cochran's (1975), formula;

$$n = \frac{(z)^2 p(1-p)}{d^2}$$

Where:

n = desired sample size,

Z = Reliability coefficient for 95% confidence interval usually set at 1.96.

P = proportion of patients enrolled on NHIS 0.62 (Gobah & Liang, 2011).

Q= (1-0.62)

d = degree of accuracy desired set at 0.05 probability level.

Substituting,

$$n = \frac{(1.96)^2\ 0.62(1-0.62)}{(0.05)^2}$$

= 362.03~362, Using a 5% non-response rate, the final sample size for the study was 380.

3.5.2 Sampling method

Multistage sampling strategy was adopted in selecting the research participants. A multistage random sampling is a sampling technique that allows variables to be selected at various stages (Ajay & Micah 2014). The choice for a multistage sampling technique is that it permits available resources to be concentrated on a limited number of variables of the sample frame. It involved simple random sampling and stratified sampling techniques to select participants (insured and uninsured patients).

Simple random sampling was ideal for the reason that it provides an unbiased and better estimate of the parameters, especially for a homogenous population (Ajay & Micah, 2014). Simple random sampling was used to select the patients registered and unregistered onto NHIS. This was done by getting the data of all the 'active' patients who have enrolled onto the NHIS for at least, one year (2019) as well as patients who have not been enrolled on the NHIS for the same period from the records/biostatistics department of the hospitals. These were selected from the folders of all patients who accessed healthcare services with or without NHIS cards at the Municipal hospitals in the Municipality. A list containing a total of eleven thousand, six hundred and thirty-seven (11, 637) patients who have enrolled onto the NHIS was obtained from the statistical/biostatistics department of the municipal hospitals, and this served as the sample frame. The selection of patients from the database was done by generating 380 patients from a sample frame of 11, 637 by dividing by the sample size to determine the skip or sampling interval (k). The answer was used to select the first participant and the skip interval applied for consecutive selection of subsequent participants to be included in the study. Patients (insured and non-insured) whose numbers were selected were then be identified and subsequently, included in the study.

Ali (2014) explained that stratified sampling involves dividing a population into distinct subgroups according to some important characteristics, such as socioeconomic status and selecting a random number from each subgroup. Stratified sampling technique was used to sample patients who sought healthcare in Sefwi Wiawso Municipality. One stratum comprised patients who had enrolled onto the NHIS and the other stratum comprised patients who have not enrolled onto the NHIS, but they all seek healthcare in Sefwi Wiawso Municipality.

Purposive sampling represents a group of different non-probability sampling techniques. Also known as judgmental, selective or subjective sampling, purposive sampling relies on the judgement of the researcher when it comes to selecting the subjects (e.g., people, cases/organisations, events, pieces of data) that are to be studied. Participants, who were registered members of the NHIS and those unregistered with NHIS who sought medical care at the same health facility were purposively selected to be part of the study. The selection of the participants varied based on the length of time they had visited/use the health facility (within 6 months to 1 year).

3.6 Study variables

The variables that were measured in the study was divided into dependent and independent as shown below.

3.6.1 Dependent variable

Quality healthcare.

3.6.2 Independent variables

The independent variables are as follows:

Difference in perception of quality of health care by health insurance status: Insured and uninsured patients.

Personal / Socio-demographic factors: Age, marital status, education, income, occupation, religion.

Healthcare facility factors: queues at hospital, attitude of health personnel, availability of prescribed medicine, waiting time.

The above variables and their operational definitions as well as scale of measurement are detailed in table 3.1.

Table 3.1: Study variables showing dependent and independent variables

Independent variables	**Operational definition**	**Scale of measurement**
Socio-demographic factors		
Age	Age at last birthday	Continuous
Marital status	Married, single, divorced	Nominal
Occupation	Self-employed and salary work	Nominal
Education	None, primary, secondary/vocational/technical, tertiary	Ordinal
Income	Monthly profit	Nominal
Religion	Christian, Muslim, Traditionalist	Nominal
Proportion of insured and non-insured patients		
NHI status	insured and uninsured users	Nominal
Healthcare facility factors		
Queues at hospital	Provision of quality care	Ordinal
Attitude of health personnel	Work overload and patient's impatience	Nominal
Availability of prescribed medicine	Poor NHIS financing	Nominal
Waiting time	Limited resource personnel	Ordinal
Dependent variable		
Quality healthcare delivery	Fairness in the distribution of healthcare in populations)	1= good 0= poor

3.7 Data collection

This section presents the data collection techniques used in this study as quantitative and qualitative.

3.7.1 Quantitative data collection

The quantitative approach used structured questionnaire to seek relevant information to address the specific objectives of the study. The questionnaire was adapted from Aduo-Adjei (2015). The questionnaire was validated with studies reported a Cronbach Alpha of 0.7 (Curry & Sinclair, 2002; Jabnoun & Chaker, 2003; Irfan & Ijaz, 2011; Ramez, 2012).

The questionnaire was divided into three sections; Section A consisted of information on the Difference in perception of quality of health care by health insurance status: (acceptability, affordability, accessibility, accommodation and adequacy). Section B collected information relating to patients' characteristics: age, marital status, religion, education, employment/occupation, income. Section C gathered data on: healthcare facility factors: queues at hospital, attitude of health personnel, availability of prescribed medicines, and waiting time. The SERVQUAL model was used to measure the quality of care as the dependent variable.

To administer the questionnaire, respondents were issued with an informed consent form to sign after reading the content. Additionally, the informed consent form was read to respondents who could not read but requested to see documentation that guides the study (Appendix A). The administration of the questionnaire was done by the researcher with assistance from three trained assistants. Interviewer-administered strategy was used to collect information from the participants in the selected hospital. It took a respondent an average of 20 minutes to complete each questionnaire. That is, the questionnaires for the study were administered from Monday to Friday from 7am to 4pm each day from August to September, 2020 using exit interviews.

3.7.2 Qualitative data collection

In-depth interviews (IDIs) were employed to collect the data from participants (hospital attendees). The IDIs was done for 10 participants who were either first timers or regular attendees of the hospital or insured or uninsured. The qualitative approach was aimed at soliciting the perception of patients, who were either insured or uninsured, on the quality of healthcare delivery. A semi-structured interview guide was used to guide the interviews. The IDIs was conducted by the principal investigator in English or Twi, the most widely spoken Ghanaian language in the municipality, based on the preferences of the participants. Also, the IDIs took place at a venue convenient to both the researcher and the selected participant. IDIs were carried out using a face-to-face approach and were as well recorded with an audio recorder. Handwritten notes were also be taken. Each interview lasted for about ten minutes.

3.7.3 Pretesting

This was undertaken at the Sefwi Wiawso Municipal Hospital. It included twenty respondents. This was undertaken to ensure the wordings, phrases and sentences were understandable and directed at the outcome of the study. It was also done to ensure that poorly worded questions, phrases and sentences that did not answer to the objectives of the study were deleted.

3.7.4 Quality assurance

The researcher selected three research assistants who had public health background and adequate training was given to them. The content of the training included; data collection techniques, hospital entry ethics, translation of questionnaire and interview guide into various local languages and ethical guidelines. The principal researcher was part of the team during the entire questionnaire administration to ensure that relevant information in line with the objectives of the study was captured. Also, the researcher solely undertook the IDIs. The questionnaire was checked for errors and completeness before final entry into appropriate

software (Microsoft Excel) for statistical analysis. The recorded IDIs were listened to three times prior to transcribing and coding.

3.7.5 Validity and reliability

The Cronbach Alpha was used to test for the reliability of the research instrument (questionnaire). As a result, the various scale items being measured were correlated positively but were not perfect correlation because perfect correlation among items defeats the assumption that no single item is a perfect measure of a concept that is represented by a construct.

The extent to which the findings of a study can be generalized across an identified population, context, and time explains internal validity (Dellinger & Leech, 2007; Modell, 2005), while the degree to which the researcher is confident about the conclusion of the causal relationship between variables/events explains external validity (Tashakkori & Teddlie, 1998). This study therefore employed collinearity as indicators of the internal consistency of the measurement scales for the quantitative side of the research. On the qualitative side of the research, the semi-structured interview guide was validated by the academic supervisor of the researcher.

3.8 Data processing and analysis

This section presented the data analysis on two fronts as the quantitative and qualitative data analysis as follows:

3.8.1 Quantitative data analysis

The data collected was cleaned by running proportions to check for inconsistently coded variables prior to exporting into Stata for the final analysis. Simple proportions and means were used to describe categorical and numerical data, respectively. The relationship between the patients' characteristics and health facility factors and quality of healthcare delivery as analysed initially used the simple descriptive statistics. The completed questionnaires were

analysed using STATA 15.0. Chi square test and/or cross tabulation as used to estimate quality healthcare (dependent variables) and patient /socio-demographic factors (independent variables).

Chi square "analysis was used to measure the association between health facility factors and quality healthcare. T-test statistic was used to compare quality of care by health insurance status among insured and uninsured patients. A confidence interval of 95% was used to show significant relations between the dependent (quality healthcare) variable and the independent variables (patient characteristics and health facility factors)."

The dependent variable was 'access to quality healthcare, which was divided into 'access to healthcare' and 'quality of healthcare' as explained below. Access to healthcare (measured using acceptability, affordability, accessibility, appropriateness and adequacy). Quality of healthcare (measured using tangibles, reliability, responsiveness, assurance, and empathy). These quality health care variables were measured on five-point Likert questions. For every wrong response to a question, a code value of "0" was assigned and for every correct response, a code value of "1" was assigned. That is, response options strongly disagree, disagree and neutral were considered wrong response and agree and strongly agree considered as correct response. These scores were added up to score quality of healthcare delivery. A score of 4 and less was considered as poor and scored '0' and a score of 5 or more was considered as good and scored '1'.

On the perception on the level of quality of healthcare among insured NHIS users and the uninsured, the questions were categorized into the seven dimensions and "adopted for the study, reliability, responsiveness, assurance, empathy, accessibility and affordability. For the purpose of rating, a five-point Likert scale was used, ranging from strongly disagree=1.0 – 1.49, disagree=1.50–2.49, neutral=2.50–3.49, agree=3.50 – 4.49, strongly agree= 4.50–5.0."

The health facility factors were measured on five-point Likert questions. For every wrong response to a question, a code value of "0" was assigned and for every correct response, a code value of "1" was assigned. That is, response options strongly disagree, disagree and neutral were considered wrong response (No) and agree and strongly agree considered as correct response (Yes).

3.8.2 Qualitative data analysis

The interviews conducted were initially listened to for about three times. The recorded interviews were then transcribed verbatim. The transcripts were read all over again before they are imported into NVivo 11 software for analysis. A thematic content analysis employing both deductive and inductive analysis was used. A codebook was created based on the objectives of the study and the subject areas that was explored during the interviews. Each transcript was opened in the NVivo software and line-by-line reading and coding into nodes of all the statements was done. The coding was reviewed, where some nodes were rearranged and others merged to develop themes. Subsequently, the codebook was revised as the coding of the transcribed data continued. Afterwards themes emerged and were exported into word for further interpretation of the data. Also, each node was exported back into Microsoft Word for easy reading and selection of the best quotes which was presented in the results section of the work.

3.9 Ethical considerations

Ethical issues involved in the study were addressed by doing the following.

3.9.1 Ethical clearance

Ethical clearance was obtained from the Ethical Review Committee of the Ministry of Health/Ghana Health Services with GHS-ERC Number (GHS-ERC023/12/19) as a requirement to conduct a research in a health facility.

3.9.2 Approval from study area

A letter of introduction from the School of Public Health (SPH) was sent to the Regional Director of Health Services, Western North Region, to seek permission to collect data from Hospitals in the Municipality for the study. A similar letter was sent to the Medical Superintendents of the selected Hospitals to disseminate the information to the various departments for easy access to information that was needed to complete the study.

3.9.3 Description of subjects involved in the study

Consent was sought from patients who have enrolled and those who have not enrolled onto the NHIS. That is to say that, the subjects of the study were patients registered with NHIS as well as patients who had not enrolled onto the NHIS in the Sefwi Wiawso Municipality of the Western North Region.

3.9.4 Potential risks/benefits

The researcher anticipated minimal risk to participants. However, care was taken to ensure that questions on questionnaire and interview guide administered were not sensitive to inflict any emotional injury on participants.

3.9.4 Privacy/Confidentiality

Participants were assured of confidentiality and privacy of the information provided.

3.9.5 Data storage and usage

Information was gathered with a structured questionnaire and interview guide. The research instrument (questionnaire) containing the data was saved in a locker for two years before disposing them off. Analysed data / information was saved on laptop and memory sticks/pen drives under protected password and discarded after five years. Same way, the transcribed data was saved in a password protected file.

3.9.6 Description of the consenting process

The purpose of the study was provided to the research participants. A participant's consent form was designed and used for the participants. A consent was designed with contained the purpose of the study. It was read to participants who could not read prior to participating in the study. A participant either appended a signature or thumb print to show consent.

3.9.7 Voluntary withdrawal

Participants were assured that participation in this research is entirely voluntary. They were free to withdraw their consent and discontinue participation in the study at any time without prejudice from the researcher / team.

3.9.8 Compensation

Respondents were not provided any reward/compensation to respond to the questionnaire.

3.9.9 Protocol amendments

Amendment of protocol was communicated as per the recommendation from the Ghana Health Service Ethical Review Committee, the protocol was amended to ensure easy assistance from personnel in the study area during questionnaire administration.

3.9.10 Declaration of conflict of interest

The researcher had no conflict of interest in this study

3.9.11 Funding information

The entire work was funded by the researcher.

3.9.12 Covid 19 protocols

Strict GHS ERC guidelines which are in line with the World Health Organization (WHO) was adopted and strictly adhered to in the data collection process. The ideals of hand washing with soap under running water or sanitizing the hands with alcohol-based hand sanitizers was used by all participants before participating in the study. Second, all participants and

investigators were encouraged to wear facemask during interview sessions. These facemasks were provided by principal investigator at no cost to study participants.

CHAPTER FOUR

RESULTS

4.0 Introduction

This chapter presents results based on analysis of the data collected through the questionnaire administration and in-depth interviews. The chapter is presented in sections covering the main objectives of the study as difference in perception of quality of healthcare by health insurance status, patient (socio-demographic characteristics) factors and perception of quality healthcare, and health facility factors and perception of quality healthcare. Subsequently, this chapter is presented in two main sections: quantitative results and qualitative results.

4.1 Quantitative results

This section presents results of the quantitative study.

4.1.1 Socio-demographic characteristics of respondents

Out of the 380 questionnaires administered, 372 were correctly completed. This represents a 97.9% response rate. The average age of respondents was around 39 years (38.9 ± 16.2 years) with 39.5% being in the 18-30 years age bracket. Majority of the respondents were married (60.2%), completion of Junior High School (27.2%), Christians (85.5%), work in the private sector (53.5%) and earned average monthly income range of GHS100-500. Additionally, most of the respondents (81.5%) were enrolled onto the National Health Insurance Scheme (NHIS). The socio-demographic characteristics of respondents are shown in Table 4.1

Table 4.1 Socio-demographic characteristics of respondents (n=372)

	Frequency	%age
Age (mean ± SD)	38.9 ± 16.2	
18 – 30 years	147	39.5
31 – 40 years	75	20.2
41 – 50 years	63	16.9
51 – 60 years	47	12.6
61 years and over	40	10.8
Educational level		
No formal education	58	15.6
Primary	34	9.10
Junior High School (JHS)	101	27.2
Senior High School (SHS)/Technical/Vocational	79	21.2
Tertiary	100	26.9
Marital status		
Single	120	32.3
Married	224	60.2
Divorced	28	7.50
Employment status		
Private sector	199	53.5
Government employee	79	21.2
Student	59	15.9
Unemployed	35	9.40
Religion		
Christian	318	85.5
Muslim	54	14.5
Average income		
100 – 500 GHS	145	39.1
600 – 1000 GHS	110	29.7
Above 1000 GHS	116	31.2
National Health Insurance Scheme (NHIS) status		
Enrolled	303	81.5
Not enrolled	69	18.5

4.2 Difference in perception on quality of healthcare by insured and non-insured NHIS

Table 4.2 presents details "of the difference in perception on the quality of healthcare delivery among NHIS insured and uninsured in the Sefwi Wiawso Municipality. There was no statistically significant difference between the quality of healthcare delivery among respondents enrolled onto the NHIS and those not enrolled."

Table 4.2 Differences in perception on quality healthcare delivery among NHIS insured and uninsured in Sefwi Wiawso Municipality (n=372)

	Patients perception on quality healthcare delivery		
Variables	Mean	SD	Mean difference
Reliability			-0.003
Insured	1.92	0.265	
Uninsured	0.261	0.261	
Responsiveness			-0.019
Insured	1.82	1.84	
Uninsured	0.383	0.369	
Assurance			0.021
Insured	1.93	1.91	
Uninsured	0.249	0.284	
Empathy			0.075
Insured	1.86	0.349	
Uninsured	1.78	0.415	
Communication			-0.024
Insured	1.80	0.399	
Uninsured	1.83	0.382	
Culture			-0.055
Insured	1.74	0.438	
Uninsured	1.79	0.405	
Accessibility and affordability			-0.044
Insured	1.83	0.381	
Uninsured	1.87	0.339	

The Cronbach Alpha was used to determine the internal consistency of the SERVAL scale and the results are shown as follows

Variables	No of items	Alpha value
Reliability	4	0.711
Responsiveness	4	0.709
Assurance	4	0.700
Empathy	4	0.811
Communication	4	0.710
Culture	4	0.699
Accessibility and affordability	2	0.681

4.3 Chi square analysis: association between patient (socio-demographic characteristics) factors and quality of health care among insure and uninsured patients'

The results presented in Table 4.3 show the relationship between respondents' socio-demographic characteristics and quality healthcare delivery. There was no statistically

significant association between quality healthcare delivery and insured and uninsured ($p>0.05$). Similarly, religious affiliation was not significantly associated with quality of healthcare delivery. However, there was statistical significance association between age, educational level, marital and employment status and average income and quality of healthcare delivery ($p<0.05$).

Table 4.3 Patient factors on quality healthcare among the insured and uninsured in Sefwi Wiawso Municipality

	Quality healthcare			
	Poor, n (%)	Good, n (%)	X^2	p-value
Age			9.6500	0.040*
18 – 30 years	26 (57.8)	121 (37.0)		
31 – 40 years	7 (15.6)	68 (20.8)		
41 – 50 years	6 (13.3)	57 (17.4)		
51 – 60 years	1 (2.2)	46 (14.1)		
61 years and over	5 (11.1)	35 (10.7)		
Educational level			9.6957	0.023*
No formal education	3 (6.7)	55 (16.8)		
Primary	0 (0.0)	34 (10.4)		
JHS	15 (33.3)	86 (26.3)		
SHS/Technical/Vocational	11 (24.4)	68 (20.8)		
Tertiary	16 (35.6)	84 (25.7)		
Marital status			7.3938	0.030*
Single	22 (48.9)	98 (30.6)		
Married	22 (48.9)	202 (61.8)		
Divorced	1 (2.2)	27 (8.2)		
Employment status			11.8225	0.006*
Private sector	14 (31.1)	185 (56.6)		
Government employee	12 (26.7)	67 (20.5)		
Student	13 (28.9)	46 (14.1)		
Unemployed	6 (13.3)	29 (8.8)		
Religion			0.4783	0.652
Christian	40 (88.9)	278 (85.0)		
Muslim	5 (11.1)	49 (15.0)		
Average income			6.9406	0.022*
100 – 500 GHS	20 (44.4)	125 (38.3)		
600 – 1000 GHS	6 (13.3)	104 (31.9)		
Above 1000 GHS	19 (42.2)	97 (29.8)		
NHIS status			3.542	0.087
Insured	64 (92.7)	280 (92.4)		
Uninsured	5 (7.3)	23 (7.6)		

X^2, Chi Square n: cell frequency. % : column %ages. *: $p<0.05$.

4.4 Chi square analysis: Association between health facility factors and quality of healthcare among insure and uninsured patients'.

Details of the health facility factors that influence quality healthcare "are shown in Table 4.4. There was no statistically significant" between the provision of long queues and quality healthcare delivery ($X^2 = 1.7253, p = 0.189$). However, a statistical association was observed between availability of prescribed medicine ($p<0.000$), attitude of healthcare personnel ($p<0.000$) and waiting time in the waiting room ($p<0.000$) and quality of health care delivery.

Table 4.4 Health facility factors and quality healthcare delivery in Sefwi Wiawso Municipality

	Insured, n (%)	Uninsured, n (%)	Quality healthcare		X^2	p-value
			Poor, n (%)	Good, n (%)		
Queues at the health facility					1.7253	0.189
No	54 (17.8)	11 (15.9)	11 (24.4)	54 (16.5)		
Yes	249 (82.2)	58 (84.1)	34 (75.6)	273 (83.5)		
Attitude of health personnel					24.0719	<0.000*
No	53 (17.5)	9 (13.0)	19 (42.2)	43 (13.2)		
Yes	250 (82.5)	60 (87.0)	26 (57.8)	284 (86.8)		
Availability of prescribed medicine					6.4795	0.011*
No	95 (31.4)	25 (36.2)	22 (48.9)	98 (30.0)		
Yes	208 (68.6)	44 (63.8)	23 (51.1)	229 (70.0)		
Waiting time in waiting room					15.4418	<0.000*
No	123 (40.6)	25 (36.2)	30 (66.7)	118 (36.1)		
Yes	180 (59.4)	44 (63.8)	15 (33.3)	209 (63.9)		

X^2, Chi Square n: cell frequency. % : column %ages. φ: Fisher's exact test of association. *: p<0.05.

4.5 Multiple logistic regression: association between patient factors, health facility factors and quality of health care

Table 4.5 shows details of the association between independent variables (socio-demographic and health facility factors) and quality of healthcare.

There was a significant association between patient characteristics (age, educational level, marital status, employment status, average monthly income) and quality of healthcare. For example, there was 1.2times greater the odds of experiencing quality healthcare among the elderly (specifically those aged 51-60 years) compared to the young (specifically, those aged 18-30 years) (Crude Odds Ratio [COR] = 9.88, 95% Confidence Interval [CI] = 1.30, 74.96). Additionally, there was 71% reduced odds among respondents with tertiary education to experience quality healthcare compared to those with no formal education (COR=0.29; 95%CI = 0.08, 1.03).

Additionally, there was a significant association between health facility factors (attitude of health personnel, availability of prescribed medicine and waiting time). For example, there was 95% increased odds of experiencing quality healthcare after being shown empathy by health personnel during consultation (COR=4.05; 95%CI=1.71, 9.62).

Table 4.5 Multiple logistic regression between independent variables and quality healthcare delivery

	Adjusted OR (95%CI)	p-value	Crude OR (95%CI)	p-value
Age				
18 – 30 years	Ref		Ref	
31 – 40 years	1.36 (0.42, 4.39)	0.612	2.09 (0.86, 5.06)	0.103
41 – 50 years	0.99 (0.26, 3.74)	0.992	2.04 (0.80, 5.24)	0.138
51 – 60 years	4.62 (0.47, 45.05)	0.188	9.88 (1.30, 74.96)	0.027*
61 years and over	0.32 (0.07, 1.38)	0.126	1.50 (0.54, 4.21)	0.437
Educational level				
No formal education	Ref		Ref	
JHS	0.28 (0.06, 1.28)	0.100	0.31 (0.09, 1.13)	0.076
SHS/Technical/Vocational	0.94 (0.17, 5.35)	0.945	0.34 (0.09, 1.27)	0.100
Tertiary	0.88 (0.15, 5.28)	0.887	0.29 (0.08, 1.03)	0.055
Marital status				
Single	Ref		Ref	
Married	1.27 (0.41, 3.88)	0.679	2.06 (1.09, 3.90)	0.026*
Divorced	6.64 (0.50, 88. 14)	0.151	6.06 (0.78, 47.0)	0.085
Employment status				
Private sector	Ref		Ref	
Government employee	0.35 (0.09, 1.38)	0.134	0.42 (0.19, 0.96)	0.04*
Student	0.32 (0.08, 1.22)	0.096	0.27 (0.12, 0.61)	0.002*
Unemployed	0.41 (0.11, 1.48)	0.174	0.37 (0.13, 1.03)	0.056
Average income				
100 – 500 GHS	Ref		**Ref**	
600 – 1000 GHS	6.47 (1.98, 21.13)	0.002*	2.77 (1.07, 7.16)	0.035
Above 1000 GHS	1.06 (0.40, 2.81)	0.900	0.82 (0.41, 1.61)	0.561
NHIS status				
Insured	Ref		Ref	
Uninsured	0.43 (0.08, 1.14)	0.064	0.92 (0.19, 1.03)	0.135
Availability of prescribed medicine				
No	Ref		Ref	
Yes	3.53 (1.11, 11.19)	0.032*	5.55 (2.34, 13.18)	<0.000*
Attitude of health personnel				
No	Ref		Ref	
Yes	3.88 (1.52, 9.93)	0.005*	4.83 (2.46, 9.46)	<0.000*
Waiting time in waiting room				
No	Ref		Ref	
Yes	3.36 (1.50, 7.56)	0.03*	3.54 (1.83, 6.85)	<0.000*

COR: Crude odd ratio. AOR: Adjusted odds ratio. ref: reference category. *: p<0.05.

4.2 Qualitative Results

This section presents results of the qualitative study

4.2.1 Information on interviewees

Background information of the interviewees are presented in Table 4.6. Most of the participants were in the 25-35 years age bracket (50%), females (60%), and traders (70%)

Table 4.6 Socio-demographic characteristics of interviewees (n = 10)

Variables	Frequency	Percentage
Age		
25-35 years	5	50
36-45 years	2	20
46 years and above	3	30
Sex		
Females	6	60
Males	4	40
Occupation		
Trader	7	70
Government worker	3	30
NHIS membership		
Insured	5	50
Uninsured	5	50

4.2.2 Themes and sub-themes

From the analysis, three main themes and six sub-themes were generated. These are presented as follows

Theme	Sub-themes
Theme 1: Difference in perception on the quality of healthcare delivery	Sub-theme1: Empathy from healthcare personnel Sub-theme 2: Reliability of services
Theme 2: Patient factors and perception of quality of care	Sub-theme1: Income influence quality of healthcare Sub-theme 2: Religion influence quality of healthcare
Theme 3: Health facility factors and perception of quality of care	Sub-theme1: Attitude of healthcare personnel Sub-theme 2: Waiting time

Theme 1: Difference in perception on the quality of healthcare delivery

From the interviews conducted, the difference in perception among participants on the quality on healthcare they receive are presented.

Sub-theme 1: Empathy from healthcare personnel

One of the participants intimated that "there is no segregation for those of us with NHIS and those without NHIS. We all go through the same process but when it is your turn to see the doctor, the nurse will come and call." Another participant shared similar observations that "most of the nurses are friendly expect a few of them who are hash and rude but once you get to the doctor, there is good rapport".

Sub-theme 2: Reliability of services provided by the health facilities

Also, one of the participants explained why she has not enrolled onto the NHIS. She explained that "the scheme is not true because they say it covers some medicine but some friends of mine always buy medicine even though they are enrolled onto the NHIS" (Female, NHIS, non-cardholder).

A man who was previously registered with scheme also shared his experience on why he has not renewed his insurance. He said that "anytime I get to the hospital, the nurses tell me the system is down but they always advise me to either wait or pay and be attended to. I almost always pay, hence, decided against renewing my card." An interesting observation was made by one of the participants about an emergency that involved an elderly person and how the nurses reacted to the situation. She recalled that; "an elderly woman had brought her granddaughter to see the doctor. However, she collapsed when waiting for their turn. On seeing that the nurses quickly rushed to her and saved the child without requesting any form of payment."

Theme 2: Patients factors and perception on quality of healthcare

From the interviews conducted and the analysis thereof, the participants considered age and income/occupational status as key factors that influence the quality of healthcare delivery.

Sub-theme 1: Income and quality of healthcare delivery

From the interviews conducted, some of the participants expressed their opinions on the kind of services they get at the hospital. One of the participants explained that "she is able to pay for her medical expenses because she works and her company pays her well. I feel the nurses and doctors treat every patient equally. Though I pay for everything when I visit the hospital, sometimes I am shouted at but on a whole I like the services I get". Another participant praised the services she gets anytime she visits the hospital. She narrated that *"I have two elderly children but one of them keeps falling sick often and so I am always at the hospital. I can't remember a day we were treated harshly although we don't always pay for services"* (Female, NHIS cardholder)

Sub-theme 2: Religion and quality of healthcare delivery

A participant intimated that, "I have not registered for the NHIS simply because my faith and belief tell me that I will not fall sick and if I do my faith will heal me. I brought my friend to the hospital and this is my fourth time here and admittedly they treat patients nice".

Theme 3: Health facility factors and perception of quality of healthcare

From the interviews conducted and the analysis thereof, the participants considered the attitude of healthcare personnel and the waiting time as key factors that influence the quality of healthcare delivery.

Sub-theme 1: Attitude of healthcare personnel

Majority of the participants who agreed to be interviewed were impressed with the attitude and behaviour of the health personnel in the hospital. One of the participants recalled the hearty conversation he had with the doctor. He explained that, "*when I got to the consultation room, the doctor smiled at me and asked how I was faring. He asked as many questions as possible and after all his questions and nice behaviour, he gave me money to help me buy some of my drugs*". Another participant shared how thorough the doctor she met was. She explained that *"after the doctor had listen to her problem, he suggested labs for her to test. It was only after the labs results that he prescribed medication"* (Female, NHIS cardholder).

Sub-theme 2: Waiting time

However, one of the participants did not like the number of hours he spent at the waiting area. He explained that "Because I wanted to see the doctor early and return back to the house in time to watch football, I got here as early as 8 am. However, after going through the normal OPD process, I realized that some of the patients could not join the queue but were allowed to see the doctor. I spent three hours before I was called to see the doctor. He was a nice doctor. He even apologized when I told him this story."

4.3 Chapter summary

The objectives that guided the study has been answered. The next chapter presents a discussion of the findings.

CHAPTER FIVE

DISCUSSION

5.0 Introduction

This chapter presents the discussion of the findings in relation to existing literature. The chapter is presented on the key themes/sub-themes relating to the suggested objectives of the study as:

1. Difference in perception of quality of healthcare by health insurance status
2. Patient (socio-demographic characteristics) factors and perception of quality healthcare
3. Health facility factors and perception of quality healthcare

5.1 Difference in perception on the quality of healthcare by health insurance status

The results from the mean difference on the "perception of quality healthcare between insured and uninsured revealed no difference between quality of healthcare." The indifference in the quality of healthcare was explained by Curry and Sinclair (2002) who "indicated that the services were highly appreciated by customers even though it was realized that the perception gaps were slightly negative and services could be improved. However, a study which compared the quality of healthcare in private and public hospitals found a significant difference between private and public hospitals in terms of overall service quality in the United Arab Emirates (Jabnoun & Chaker, 2003). That is, public hospitals are perceived to be better than private hospitals on service quality. This contradicts findings of the current study. Similarly, findings from the study run contrary to a study that compared the quality of healthcare between public and private hospitals in Northern Cyprus which found out that both private and public hospitals failed to offer the expected service quality but public hospitals provided a lower quality of care than the private hospitals (Yesilada & Direktor 2010).

The study also established that the quality of healthcare delivery was better though the contribution of NHIS to this was not established. This result was supported by a study which evaluated service quality of healthcare providers in Bahrain, who revealed that empathy, responsiveness and tangible dimensions had the largest influence on the overall service quality (Ramez, 2012). Essiam (2013) observed that patients' satisfaction was best explained by perceived responsiveness, followed by perceived empathy, perceived assurance, perceived tangibility, and perceived reliability. This was consistent with findings from the current study. This is because the health services to residents of Sefwi Wiawso were same irrespective of being a NHIS cardholder or not.

5.2 'Patient (socio-demographic characteristics) factors and perception of quality healthcare

There was no statistically significant association between religion and quality healthcare delivery among the insured and uninsured. This finding is in disagreement with a study that examined different elements that influence maternal health services which concluded that a mother's age and religion influenced access to quality healthcare delivery (Adamu, 2011). The difference in the finding could be attributed to the healing power of a Supreme Being. That is, the belief that there is a power that heals; hence, most believers could bother less to enrol onto the NHIS with the belief that their faith will heal them. Again, there were possible complications for the insignificant association between religion and quality healthcare as a study that investigated the elements that influenced quality of healthcare established that those who considered religion as highly essential had their total health and psychological health improved than those who considered it not as essential (Chiswick, & Mirtcheva, 2010). This suggests that residents of Sefwi Wiaso believe that there was a healing power in religion

than hospitals therefore the delay to access health care services unless in emergency situations.

In addition, there was a statistically significant association between educational level and quality of healthcare delivery. The results are contrary to a study which revealed that in terms of rising education and perception of quality, service under the NHIS was rated as worse (Amo-Adjei, et al., 2016). The result implies that being formally educated helps in decision making towards enrolling onto the NHIS in order to access healthcare services is easier as compared to those who do not have formal education. Additionally, the result contradicts a study by in a tertiary center in Ethiopia which revealed that quality of healthcare delivery by nurses was perceived as low among patients who had high education (Gishu et al. 2019). The implication of the result is that being educated broadens one's understanding of the health system, hence, careful analysis of the benefits of quality service delivery are done before and after insuring with NHIS.

Furthermore, there was a statistically significant association between employment status and quality of healthcare delivery. The result was consistent with "a study that provided an alternative explanation for the low enrolment in health insurance in Ghana by analysing differences in perceptions between the insured and uninsured of the non-technical quality of healthcare and found a significant association between employment and quality of healthcare (Duku et al., 2018). This implies that being employed or being in a paying profession is a precursor to being able to afford the registration fees of NHIS so as to access healthcare. Similarly, findings from the present study is consistent with a study which established a firm correlation among being employed and being financially and significant differences in perceptions about service quality (Amo-Adjei, et al., 2016). The plausible explanation for this observation is that being gainfully employed provide a good leverage to enjoy quality

healthcare delivery in that excess payment that are not 'covered' by an insurance are easily catered for.

There was a statistically significant association between average income and quality of healthcare delivery. This was in agreement with a study done to compare perceptions of quality of care between insured and uninsured out-patients in selected hospitals in Ghana which revealed that there is a significant difference between insured and uninsured patients in respect of financial access to care (Abuosi et al. 2016). The result further implied that having money or being paid on monthly basis encourages enrolment onto the NHIS which in turn increases perception on the quality of healthcare delivery because of the ability to pay for services that are not paid for by the NHIS policy. The results indicated that financial accessibility (income) is a very vital determinant for the utilization of health service and healthcare quality (Baltussen et al., 2002). This implied that being economically sound or being on monthly salary enhances access to quality healthcare because it is easier to register onto the NHIS and renew membership as and when it expires. Also, there was the likelihood of being able to afford other health seeking related expenses when one has money.

5.3 Health facility factors and perception of quality healthcare

Anderson (2014) explained that health insurance had become one panacea to access to quality healthcare, yet, the burden of workload on the healthcare practitioners and other ancillary staff had increased tremendously and this has caused the waiting times at health centres to be extremely high and this affected perception of the quality of healthcare delivery. This was consistent with results from the present study which found a significant relationship between waiting time and quality healthcare. This implies that waiting for longer time in order to access healthcare services was as a result of the daily influx of patients coupled with inadequate health professionals and this affects patients' perception the quality of healthcare

delivery. Furthermore, the result resonates with a study which reported that increased utilization of health services had led to an increased workload for hospital staff (Swami et al., 2012). Thus, patients who visited public healthcare facilities were made to wait for a considerably longer time before they were attended to by a doctor and this affected their perception of quality of health care received. Furthermore, a study on the influence of the NHIS on the behavior of health care providers in their treatment of insured and uninsured clients in Bolgatanga (urban) and Builsa (rural) revealed that most of the insured perceived and experienced long waiting times, verbal abuse and discrimination in favor of the affluent and uninsured (Dalinjong & Laar 2012).

Consistent with this finding, a study evaluated patient satisfaction with the quality of health care provided at the Modilon General Hospital, Madang, Papua New Guinea (PNG) and revealed that majority of participants were satisfied with the staff attitude (Kuzma & Kolodziejczyk, 2018). The result was explained by other researchers who envisaged that patients' satisfaction and quality of care might be improved through paying more attention to the perspectives of the patient, improving the competencies and skills of providers and improving the working environment by better management and motivation of staff (Turkson 2009; Fekadu, 2011).

5.5 Summary of the chapter

The quality of healthcare delivery was perceived differently by the study respondents which corresponded with literature. Also, age, religion, income (patients) and queues at the hospital, attitude of health personnel and waiting time (health facility) factors influence the perception of respondents on quality of healthcare delivery.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.0. Introduction

This chapter presents the summary, conclusion, contribution to knowledge, recommendations, limitations to the study and future research.

6.1 Summary of the study

The general objective of the study was to assess the perception of quality of healthcare among NHIS insured and uninsured patients in the Sefwi Wiawso Municipality. Mixed methods, quantitative and qualitative approaches, were applied to collect empirical data for subsequent analysis. Generally, the study concludes that there is no significant difference in perception among the respondents on quality healthcare delivery in the Sefwi Wiawso Municipality. In addition, it concludes that age, religion, income (collectively considered as patient factors) influence the perception of quality healthcare delivery. In addition, queues at the hospital, attitude of health personnel and waiting time (collectively considered as health facility) influence the perception of respondents on quality of healthcare delivery. The conclusions of the study based on the specific objectives have been presented below.

6.2 Conclusion

This section presents the conclusions in relation to the specific objectives of the study. The specific objectives were and presented below

6.2.1 Difference in perception of quality of healthcare by health insurance status

The study concludes that there was no difference between the quality of healthcare among insured and uninsured NHIS users. That, the services rendered to patients were same

irrespective of whether a patient was enrolled onto the NHIS or not. This was similar to findings documented in literature (Curry & Sinclair 2002; Jabnoun & Chaker, 2003).

6.2.2 Patient (socio-demographic characteristics) factors and perception of quality healthcare

The study also concluded that patients' socio-demographic characteristics such as educational level, employment status, monthly income and marital status influence quality of healthcare. Similar conclusions had been established in literature (Asante & Aikins, 2008; Jehu-appiah et al., 2011; Sarpong et al., 2010).

6.2.3 Health facility factors and perception of quality health care

Again, the study concluded that health facility factors such as thoroughness during consultation, adequate physical examination, show of empathy and short waiting time enhanced quality healthcare. This was consistent with conclusions reported in previous studies (Kumari et al. 2009; Al-Hawary et al., 2011).

6.3 Contribution to knowledge

This section presents the contribution of this study to knowledge in the areas of policy and practice, theory, and methodology as presented below.

6.3.1 Contribution to policy and practice

Considering the fact that the NHIS was introduced to replace the 'cash and carry' system and improve healthcare delivery, it is imperative for the National Health Insurance Authority to ensure a more convenient way for patients to process their 'claims' in order to reduce the long waiting time and long queues which cumulates into stressing healthcare personnel to react rudely towards patients. This could improve healthcare delivery, thus, supporting and realizing the objective of the policy. This will further enhance the implementation of the policy.

6.3.2 Contribution to theory

The SERVAL theory have been applied in studies conducted elsewhere, but this is one of few studies that have applied it in a study of quality of healthcare among the insured and uninsured in the Sefwi Wiawso Municipality. The reason is that the use of a theory helps to explain the behaviour of people (insured and uninsured NHIS patients) towards an intervention.

6.3.3 Contribution to methodology

Qualitative methods or quantitative methods or both have been applied in the conduct of similar studies. This was one of few studies that have applied both quantitative and qualitative methods to collect data in the Sefwi Wiawso Municipality. The application of quantitative and qualitative research method enabled the researcher to quantify the responses obtained from the research objects. Thus, the findings of this study could be generalised to the population of interest. Strict observance of the validity and reliability criteria means that the researcher was able to minimise biases in this study.

6.4 Recommendations

This section presents the recommendations based on the objectives and findings from this study. The recommendations are presented under the following sections as follows.

6.4.1 Ministry of Health / Ghana Health Service

It is recommended that the Ministry of Health/ Ghana Health Service to increase the recruitment of doctors, nurses and other health care providers especially in the government hospitals in the Municipality. This will ensure that the ratio of patient to doctor / nurses and other health care provider is minimized such that health workers are not overburdened with too many patients to attend in order to improve and maintain the quality of healthcare provided to patients.

6.4.2 National Health Insurance Authority / Municipal Health Insurance Scheme

It is also recommended for the National Health Insurance Authority (NHIA) to reconsider expanding the range of service coverage to cater for expensive medications and other complex surgeries to reduce the cost borne by patients. Aside, there should be mass education to the public on the need to access health care promptly to avoid complication and cost to health care due to delay in accessing health care. However, it is recommended for the National Health Insurance Authourity to reconsider other forms of payment by subscribers such as cost- sharing in the form of co-payment and co- instalment to ease the financial burden on the scheme.

6.4.3 Management of Hospitals / Municipal Health Directorate

Besides, in other to increase membership enrolment, it is also recommended that instead of individuals being present at the Municipal Heath Insurance Scheme district offices to register, the registration officers should rather go on outreach services to get members registered at the community level. It is also important that management of government hospitals in the Municipality ensures that nurses, doctors and other health care providers are monitored from time to time to ensure they relate cordially with their patients to help patients be at ease to tell them what their health needs are to get the needed attention and also enjoy quality health care.

6.4.4 Insured and Uninsured NHIS members

In order to ensure that nurses, doctors and other health care providers are not overwhelmed with patients' attendance, it is recommended for the NHIA to cap the number of times registered NHIS cardholders can visit the various hospital or redistribute patients among accredited health facility as their primary provider point to ensure that there are less number of patients to attend to on daily basis to ensure quality health care.

6.5 Limitations of the study

A limitation was that the study did not compare equal numbers of patients who were insured against parents who were not insured with the NHIS. Another limitation was that the study covered patients who were available at the time of the research. This makes the results indicative but not applicable to the entire Municipality. This means that the sample size was also restricted to a cross section of the population as the chosen methods indicated. It would be realised that only the Sefwai Wiaso Municipality was selected out of the over 170 metropolitan, municipal, sub-metropolitan and district Assemblies in the country. This means that comparison beyond the Municipality was somehow restricted. Nonetheless, the methods applied were robust and ensured the realisation of the objectives of the study. Another limitation was the emergency of the Covid 19 pandemic. This made data collection daunting which nearly resulted in missing stipulated timelines for the research.

6.6. Future research

Considering the limitations to this study, it is recommended that similar studies be undertaken to describe the contribution of NHIS in service delivery quality by increasing the sample size and using more than one health facility in Sefwi Wiawso Municipality considering the fact there are over 170 municipal, metropolitan and district Assemblies in the country.

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APPENDICES

Appendix I: Research questionnaire

ASSESSMENT OF QUALITY HEALTH CARE AMONG THE INSURED AND UNINSURED PATIENTS IN THE SEFWI WIAWSO MUNICIPALITY OF THE WESTERN NORTH REGION, GHANA			
PARTICIPANT CONSENT I am a student of the School of Public Health, University of Ghana. "The administration of this questionnaire is to solicit your response on the above topic. All information to be provided will be used strictly for academic purposes and will be treated with the greatest level of confidentiality." Thank you.			
Questionnaire ID	QID	Interview code	ICODE

	SECTION A: Socio-demographic factors	
QID	**QUESTIONS**	Coding categories
1	Age at last birthday	.....years
2	"Educational level of respondents"	"No formal education.....1 Primary.....2 JHS.....3 SHS/Tech/Voc.....4 Tertiary.....5"
3	"Marital status"	Single.....1 Married.....2 Divorced 3
4	Employment	Private sector employee.....1 Government employee.....2 Student.....3 Unemployed.....4
5	Religion	Christian.....1 Muslim.....2 Traditionalist.....3 Others (specify).....4
6	How much do you earn on monthly basis (GHS)	
7	Average income	"GH¢100 -500.....1 GH¢ 600- 1000.....2 Above GH¢ 1000.....3"
8	What is national insurance scheme (NHIS) status?	Enrolled.....1 Not enrolled.....2 Previously enrolled.....3

SECTION B. Healthcare facility factors **What is your view on the general health practices by health personnel in the last 12 months concerning**		
9	"Long queues at all times"	"Very dissatisfied……..1 Dissatisfied……. ……..2 Not sure……3 Satisfied……...4 Very satisfied……...5"
10	The helpfulness of staff (other than the doctor) [Attitude of health personnel]	Very dissatisfied……..1 Dissatisfied……. ……..2 Not sure……3 Satisfied……...4 Very satisfied……...5"
11	"Waiting time in the waiting room"	Very dissatisfied……..1 Dissatisfied……. ……..2 Not sure……3 Satisfied……...4 Very satisfied……...5"
12	"Availability of medicines	Very dissatisfied……..1 Dissatisfied……. ……..2 Not sure……3 Satisfied……...4 Very satisfied……...5"

SECTION C. Quality healthcare delivery **Which of these experiences did you experience at the health facility?**		
Tangibility		
13	The hospital has up to date facilities.	Strongly disagree……...1 Disagree…. ……...2 Neutral……...3 Agree……...4 Strongly agree……5
14	The physical environment of the hospital is appealing.	Strongly disagree……...1 Disagree…. ……...2 Neutral……...3 Agree……...4 Strongly agree……5
15	There is availability of adequate seating at the hospital.	Strongly disagree……...1 Disagree…. ……...2 Neutral……...3 Agree……...4 Strongly agree……5
Reliability		
16	The staff provides service on scheduled time	Strongly disagree……...1 Disagree…. ……...2 Neutral……...3

		Agree.....4 Strongly agree.....5
16	Doctors/staff are professional and competent.	Strongly disagree.....1 Disagree.... .....2 Neutral.....3 Agree.....4 Strongly agree.....5
17	Medical procedures were performed correctly the first time.	Strongly disagree.....1 Disagree.... .....2 Neutral.....3 Agree.....4 Strongly agree.....5
18	There is consistency in duty performance by staff at the hospital.	Strongly disagree.....1 Disagree.... .....2 Neutral.....3 Agree.....4 Strongly agree.....5
Responsiveness		
19	Hospital staff was helpful to the patients.	Strongly disagree.....1 Disagree.... .....2 Neutral.....3 Agree.....4 Strongly agree.....5
20	The staff was responsive to patient needs	Strongly disagree.....1 Disagree.... .....2 Neutral.....3 Agree.....4 Strongly agree.....5
21	The staff responded immediately when called by the patients.	Strongly disagree.....1 Disagree.... .....2 Neutral.....3 Agree.....4 Strongly agree.....5
22	Prompt service delivery without wasting time.	Strongly disagree.....1 Disagree.... .....2 Neutral.....3 Agree.....4 Strongly agree.....5
Assurance		
23	The hospital had skilled staff to provide healthcare delivery.	Strongly disagree.....1 Disagree.... .....2 Neutral.....3 Agree.....4 Strongly agree.....5
24	The hospital staff treats patients with dignity and respect.	Strongly disagree.....1 Disagree.... .....2 Neutral.....3 Agree.....4 Strongly agree.....5

25	The staff at the hospital possesses a wide spectrum of knowledge.	Strongly disagree……...1 Disagree…. ……...2 Neutral……...3 Agree……..4 Strongly agree……5
26	The staff at the hospital was courteous	Strongly disagree……...1 Disagree…. ……...2 Neutral……...3 Agree……..4 Strongly agree……5
Empathy		
27	The staff has my best interests at heart.	Strongly disagree……...1 Disagree…. ……...2 Neutral……...3 Agree……..4 Strongly agree……5
28	The staff understands my specific needs at the hospital.	Strongly disagree……...1 Disagree…. ……...2 Neutral……...3 Agree……..4 Strongly agree……5
29	The personnel give me special attention at the hospital.	Strongly disagree……...1 Disagree…. ……...2 Neutral……...3 Agree……..4 Strongly agree……5
30	The staff at the hospital was caring to patients.	Strongly disagree……...1 Disagree…. ……...2 Neutral……...3 Agree……..4 Strongly agree……5
Communication		
31	I received adequate explanation of any tests I had to undergo	Strongly disagree……...1 Disagree…. ……...2 Neutral……...3 Agree……..4 Strongly agree……5
32	The doctors were willing to answer any questions relating to illness	Strongly disagree……...1 Disagree…. ……...2 Neutral……...3 Agree……..4 Strongly agree……5
33	I was given adequate information on my health condition.	Strongly disagree……...1 Disagree…. ……...2 Neutral……...3 Agree……..4 Strongly agree……5
34	I was given adequate information on my treatment.	Strongly disagree……...1 Disagree…. ……...2

		Neutral.....3 Agree.....4 Strongly agree.....5
Culture		
35	The hospital Staff do not discriminate based ethnic backgrounds	Strongly disagree.....1 Disagree.... .....2 Neutral.....3 Agree.....4 Strongly agree.....5
36	The Staff use language patients understand.	Strongly disagree.....1 Disagree.... .....2 Neutral.....3 Agree.....4 Strongly agree.....5
37	The staff at the hospital does not discriminate based on your religion.	Strongly disagree.....1 Disagree.... .....2 Neutral.....3 Agree.....4 Strongly agree.....5
Accessibility and Affordability		
38	The location of the hospital is accessible	Strongly disagree.....1 Disagree.... .....2 Neutral.....3 Agree.....4 Strongly agree.....5
39	The charge for services at the hospital is affordable	Strongly disagree.....1 Disagree.... .....2 Neutral.....3 Agree.....4 Strongly agree.....5
Patient Satisfaction		
40	I am satisfied with healthcare service delivered in this hospital.	Strongly disagree.....1 Disagree.... .....2 Neutral.....3 Agree.....4 Strongly agree.....5

Thank you very much for responding to this survey!!!!!!

Appendix II: Interview Guide

A. Background Information

1. Sex: (.....) Male (.....) Female

2. Are you enrolled onto the NHIS.....

Probe:

If not enrolled, why.....

I. Health care facility factors

I am going to ask you a few questions to find out about factor/s that impede/s from accessing quality health care in a health facility.

1. What is your view on the general health practices by health personnel in the health facility you visited in the last 12 months concerning?

Probe:

a. Did the physicians and nurses made you feel you had time during consultations?
b. Were you thoroughly and physically examined by the physicians and nurses?

2. Please tell me in detail, factors that impede quality health care delivery in the hospital?

Probes:

a. Did the physicians and nurses help in dealing with emotional problems related to your health status?
b. Did you wait for a long time in the waiting room?

II. Quality healthcare delivery

3. How would you appraise the responsiveness of the staff of the hospital? Give reasons

PROBE:

a. Are Hospital staff helpful to the patients? Give reasons
b. Are services provided to patients without wasting time? Give reasons

APPENDIX III: ETHICAL APPROVAL LETTER

GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

In case of reply the number and date of this Letter should be quoted.

Research & Development Division
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P. O. Box MB 190
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MyRef. GHS/RDD/ERC/Admin/App/19/702
Your Ref. No.

13th December, 2019

Mabel Elorm Ameade
Nursing Training College
P. O. Box 37
Sefwi Wiaso

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol.

GHS-ERC Number	**GHS-ERC023/12/19**
Project Title	Assessing Quality Health Care among the Insured and Uninsured in the Sefwi Wiawso Municipality
Approval Date	13th December, 2019
Expiry Date	12th December, 2020
GHS-ERC Decision	**Approved**

This approval requires the following from the Principal Investigator

- Submission of yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval if the study lasts for more than 12 months,
- Reporting of all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report **after completion** of the study
- Informing ERC if study cannot be implemented or is discontinued and reasons why
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.

Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED.....
Dr. Cynthia Bannerman
(GHS-ERC Chairperson)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra