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ASSESSMENT OF QUALITY OF CARE AMONG PREGNANT WOMEN IN THE ACHIMOTA HOSPITAL

BY

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THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER IN PUBLIC HEALTH DEGREE IN POPULATION, FAMILY AND REPRODUCTIVE HEALTH

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DECLARATION

I, Gifty Asabea Mensah do hereby declare that apart from references to other people's work which have been duly acknowledged, this proposal is as a result of my own independent work and has not been submitted for the award of any degree in any institution.

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DEDICATION

This work is dedicated to the Lord God Almighty who granted me favour, grace wisdom, protection and understanding throughout the course of this programme.

I also dedicate this study to my husband, mother and my four children namely Sena Adwoa Kwasitse, Dela Kwaku Kwasitse, Eugene Selase Dzube and Enam Nana Yaw Kwasitse.

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ABSTRACT

Background: The provision and uptake of quality and timely antenatal care (ANC) is an essential element of efforts to improve health outcomes for women and newborn babies since Antenatal consultations assist in early identification and treatment of complications during pregnancy. Good quality ANC improves maternal health, decreases the chances of suffering from anaemia, pregnancy induced hypertension and preterm labour and promotes positive pregnancy outcomes, including a reduced risk of low birth weight and preterm babies. In the Greater Accra region, little is known about quality of antenatal care.

Objective: The aim of the study was to assess the quality of antenatal care among pregnant women at the Achimota Hospital.

Methods: The study employed descriptive cross- sectional design. Data were collected from 403 pregnant women during exit interviews using structured questionnaire. Observational checklist was used to assess infrastructure and health care procedures used to render the ANC services. Systematic sampling was used to select pregnant women attending ANC at the Achimota Hospital while convenient sampling was used to select health workers in the ANC department to participate in the study. Descriptive and inferential statistics were performed to describe the data and to find associations. Quantitative data was entered using SPSS version 20 and Stata version 15 for analysis.

Findings: The results indicated that almost all (91.81%) respondents were satisfied with ANC services. Drugs, infection prevention and control and some guidelines were available at the facility. History taking, laboratory and clinical investigations, health education and physical examination from head to toe were performed on almost all the respondents. (Hep B laboratory investigation was the least performed test). After controlling for other variables, provider examination to satisfaction ($p = 0.000$), client treated with respect by the health

worker (p = 0.000) and communication with providers in privacy (p = 0.021) were significantly associated with satisfaction with quality ANC services.

Conclusion: Quality of ANC services was good at Achimota Hospital. Socio-demographic factors have no effect on the quality of care. Pregnant women were satisfied with the care they are receiving at the Achimota Hospital. The facility was very clean with a comfortable waiting area. Nonetheless, there is the need to provide ANC guidelines at the ANC department.

Key words: satisfaction, pregnant women, quality, perception, low utilization.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Therapy
FANC	Focused Antenatal Care
GDHS	Ghana Demographic and Health Survey
GHS	Ghana Health Service
GSS	Ghana Statistical Service
HIV	Human Immunodeficiency Virus
HMIS	Health management information system
IPT	Intermittent Presumptive Treatment
MOH	Ministry of Health
PMTCT	Prevention of Mother to Child Transmission of HIV
SP	Sulfadoxine Pyrimethamine
STI	Sexually transmitted infection
TTV	Tetanus Toxoid Vaccine
WHO	World Health Organization

DEFINITION OF TERMS

Antenatal care	Care provided to pregnant women throughout pregnancy either by a Professional or a non-professional.
Focused antenatal care	Comprehensive care provided to pregnant women with minimum number of four (4) visits.
Parity	Classification of women with regards to the number of Children borne to her.
Privacy	A state of not being seen or heard by a person not expected to do so.
Process	Actual performance of an activity or set of activities.
Quality antenatal care	Care provided to pregnant women throughout pregnancy. This should be compatible with the required standards.
Organization process	Actual performance of an activity or set of activities
Satisfaction	The extent to which a service meets the needs the expectation of a Client.
Hep B	An infection of the liver caused by a Hep B virus and can lead to Liver cirrhosis.
Quality	The degree to which a service meets the expectation of an Individual or a group.
Quality health care	Providing health services to individuals and communities to improve health outcomes which should be compatible with the required standards.

CHAPTER ONE

BACKGROUND

1.1 Introduction

Globally, pregnancy, child birth and postnatal care are the leading causes of death and disability among women in the reproductive age (Joshi et al., 2014). Maternal mortality is high in many countries to the point that in every minute a woman dies due to pregnancy related complications with developing countries accounting for 99% of the global maternal deaths and sub-Sahara African alone accounting for 62% (Gitonga, 2017).

Studies done in Tanzania to determine the quality of antenatal care (ANC) reported that there was poor adherence to focused antenatal care guidelines and insufficient coverage of routine practices in the area of health seeking behaviours and counselling (Nyamtema, A, S., et al., 2016). Also similar studies indicated that taking appropriate history, attention for danger signs, screening for anemia, hypertension, malaria and syphilis were insufficient (Der et al., 2011).

In Ghana, maternal mortality ratio remains high at 350 deaths per 100,000 live births compared to Sustainable Development Goals (SDG) target of 70 per 100,000 live births (WHO, 2013). In the same way, neonatal death is estimated at 82 deaths per 1000 live births as against 12 per 1000 live births (Speizer et al., 2014). Global evidence suggests that, there is a strong correlation between benefiting from ANC services and pregnancy outcomes (Aboriga RA et al., 2013).

Good quality antenatal care (ANC) improves maternal health, decreases the chances of complications from anemia, pregnancy induced hypertension and preterm labour (Dhakal N et al., 2013). It also reduces the risk of having low birth babies less than 2.5kg and preterm babies (Joshi et al; 2014).

The benefits of ANC mostly depend on its policy formulation and implementation (Arthur E et al., 2013). It also depends on functional and operational continuum of care with less expensive, easy to reach high quality during and after pregnancy and child birth (Ajayi OI et al.,2013). For ANC to be effective and efficient, there must be themes that must be available (Ajayi OI et al.,2013). Insufficient ANC both in coverage and quality have been linked with different pregnancy outcomes (Dibley MJ et al.,2010). Even as maternal mortality ratio is affected by many causes including obstetric, social, cultural and economic factors, adequate use of ANC can add to the decrease in maternal and neonatal mortality (Ajayi OI et al.,2013).

Poor ANC coverage which leads to high maternal and neonatal mortality in the world especially in the developing countries compelled the WHO to come out with a strategy to define a new model of ANC known as the FOCUS ANTENATAL (FANC) based on the Sustainable Development Goal 4 (WHO,2002). FANC was initiated particularly in locations in sub-Saharan Africa assuming that could be an advantage, meanwhile the model was not tested in settings with decreased coverage in ANC visits and high mortality ratios (Andrea Solnes Miltenburg et al., 2017). Not long ago, concerns have been raised that a reduced number of visits is associated with an increase in perinatal mortality, particularly in low-and middle-income settings (Dowswell et al., 2010). Since the FANC was introduced, studies done in Tanzania have examined the quality of ANC and reported that there were poor compliance to FANC guidelines and inadequate coverage of routine practices in particular, for health information and counselling (Nyamtema et al., 2012).

However, unlike other (FANC) developing country, Ghana has adopted the model of FANC. The FANC indicates that a pregnant woman should visit the antenatal care at least four times before delivery if the pregnancy is without complications (Arthur E et al.,2012). A study done at the Mamobi General Hospital reveals that focus antenatal has decreased maternal and neonatal mortality (Gondwe, 2016). Empirical studies conducted in Argentina, Cuba, Saudi

Arabia and Thailand have proved that FANC was safe, highly sustainable, comprehensive and safe (WHO, 2002). Additionally, the World Health Organization has updated their ANC guidelines in 2016. WHO has recommended that ANC visits is to be increased from four to eight visits because:

- Between 2007–2014, only 64% of pregnant women attended the WHO-recommended minimum four contacts for ANC worldwide
- The four-visit model has significantly increased still birth rate
- Existing WHO guidance on ANC is fragmented, with related recommendations published in different WHO guidelines and practical manuals.

The aim of the New ANC guidelines in 2016 is to:

- Provide respectful individualized, person-centredcare at every contact.
- Implement effective clinical practices (interventions and tests).
- Provide relevant and timely information.
- Provide psychosocial and emotional support by health workers with good clinical and interpersonal skills in a well-functioning health system (WHO, 2016).

Quality of care assessment as defined by (Donabedian, 1988) is complicated and deserves the attention of health system attributes such as (structure, process and outcome). Structure involves the availability of human resources, supplies and infrastructure. Process is the provision of routine health services and timely action in case of complications which is based on evidence-based practice and outcome is the coverage of key practices, health outcomes and satisfaction of both provider and client (Tunc et al., 2015). Additional considerations for assessing quality include the extent to which care provision is people-centered with a focus on respect for patient's dignity, while minimizing unnecessary interventions and harmful

practices as well as efficiency in minimizing wastage and maximizing resources used (Tunc et al., 2015).

According to National Reproductive Health Service Delivery Guidelines, quality is "doing the best with the resources available for the mutual satisfaction of the provider, the client and the community at large" (MOH, 2007).

Some researchers have brought to light the provision of quality of services in low and middle income countries (Pell et al., 2013). The researchers revealed that the services being provided by these countries come along with some challenges. The challenges include lack of quality services due to inadequate resources, logistics, and skilled personnel amongst others (Pell et al., 2013).

In Ghana, 76% of women were able to visit the ANC as against the target of 80% to reduce maternal mortality (GHS; 2016). Pregnant women were supposed to visit the ANC in their first trimester to enjoy all the benefits that comes with antenatal care visits but Ghana recorded 45% as against 80% targets that the countries was to achieve (GHS;2016).

In 2013, United Nations reports in Ghana estimated that out of a population of over 25.9 million, 3,100 women died due to pregnancy and childbirth. Maternal mortality decreased from 760 to 380 maternal deaths per 100,000 live births between 1990 and 2013.This figure was further projected to fall to 358 per 100,000 live births by 2015. However, this is still considerably higher than the MDG 5 target of 190 maternal deaths per 100,000 live births.

Most maternal deaths in Ghana are preventable and about 65% of them are attributable to four causes which are postpartum hemorrhage, hypertensive disorders, abortion and sepsis (United nations Maternal and Child Health, 2013).

The 2014 annual report from the Builsa district brought to light an appreciable 72% of pregnant women who received ANC services once during pregnancy, 91% made at least four

follow up visits before delivery while only 46% delivered in a health facility (Awoonor-Williams J, 2014). The above findings on ANC utilization and health facility delivery when joined together demonstrate that a gap exists between receiving ANC services from health facilities and delivery in health facilities.

Studies conducted in Ghana have identified factors such as maternal age, religion, household income and maternal occupation to predict health facility delivery (Akpakli DE et al., 2017).

Benefits of timely visit to the ANC include early detection of syphilis and HIV status to prevent still birth and prevention of mother to child transmission (PMTCT) respectively. There is also an iron supplementation meant to reduce anemia and fersolate tablets to prevent babies from being smaller than the gestational age or preterm delivering or severe language delay. Complications are also detected earlier and prompt action taken.

The WHO recommends that during antenatal care, women should receive tetanus immunization at least 2 shots depending on her tetanus immunization status. They should also be given iron and fersolate to prevent anemia, intermittent preventive treatment to prevent malaria during pregnancy, deworming tablets in the second trimester to prevent worm infestation which can cause anemia and to receive insecticide treated bed nets (Gupta et al., 2014). Ghana's FANC or quality ANC is tailored towards these eight (8) parameters stipulated by the WHO.

The Achimota Hospital has consistently recorded irregular ANC attendance over the past 3 years with high still birth and maternal mortality rate. (DHIMS, 2016).

This study therefore sought to assess the quality of antenatal care among pregnant women at the Achimota Hospital.

1.2 Problem Statement

In Ghana, maternal mortality ratio remains high at 350 maternal deaths per 100,000 live births compared to the SDG target of 70 per 100,000 live births while neonatal mortality is estimated at 82 deaths per 1000 live births compared to the global target of 12 per 1000 live births that the country was to achieve (Speizer et al., 2014).

Most of these deaths were attributed to late or no antenatal care which has been reported to be associated with poor outcomes for mother and fetus such as premature birth, still birth and maternal mortality (Paudel et al., 2017). Studies brought to light the provision of quality of service in low and middle income countries. The researchers revealed that the services being provided by these countries come along with some challenges (Pell et al., 2013).

A study done in the KassenaNankana district on quality of ANC revealed that there was poor technical performance, poor laboratory examination, poor counselling, management and treatment (Duysburg et al., 2014). History taking was also very weak making assessment of clients a difficult task. Counselling was poorly done leaving the client with little or no information. Laboratory examinations were poor making treatment and diagnosis very difficult. (Duysburg et al., 2014). All these omitted practice leads to morbidity and mortality in pregnant women.The Ministry of Health (MOH) and Ghana Health Service (GHS) also noted that although the number of women using FANC is increasing, not all facilities were providing quality reproductive health services including FANC (MOH and GHS, 2007). To monitor and improve efficiency in delivering ANC services, Ghana Health Service (GHS) recommends that members of health management team conducts monitoring and evaluation exercise at least twice a year in each facility. However, available data from a study Conducted in Nkwanta South district showed that the monitoring and evaluation exercise was not conducted as expected (Degley, 2012).

Ghanaian estimated population in 2013 was over 25.9 million. The number of women who died due to pregnancy and childbirth were 3,100 (United nations Maternal and Child Health, 2013). Maternal mortality managed to decrease from 760 to 380 maternal deaths per 100,000 live births between 1990 and 2013.This figure was further projected to fall to 358 per 100,000 live births by 2015. However, the figure is still considerably higher than the MDG 5 target of 190 maternal deaths per 100,000 live births (United nations Maternal and Child Health, 2013)

Most maternal deaths in Ghana are preventable and about 65% of them are attributed to four causes which are postpartum hemorrhage, hypertensive disorders, abortion and sepsis (United nations Maternal and Child Health, 2013).

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Studies conducted in Ghana have identified factors such as maternal age, religion, household income and maternal occupation to predict health facility delivery (Akpakli DE et al .,2017).

1.3 Justification of the study

The study is justified because:

1. Results from the study will inform policy makers and add to existing literature by assessing the quality of care pregnant women receive at the Achimota hospital

2. There is the need to monitor the performance of health care providers on the actual service being rendered at the facility to pregnant women to curtail maternal and neonatal mortality rate in the country. This is because maternal death is preventable. When quality service delivery is omitted in pregnancy, the outcome is always detrimental to the country. (Duysburg et al., 2014).

Achimota hospital is a district hospital and there is the need to identify performance delivery to protect the public.

1.4 General Objective

To assess the quality of Antenatal Care services offered to pregnant women at Achimota Hospital in the Greater Accra region.

1.5 Specific Objects

1. To determine the level of satisfaction of quality of care among the pregnant women.
2. To assess antenatal care process performed by the health care providers.
3. To identify structural components used in the provision of quality antenatal care to the pregnant women.
4. To examine the relationship between socio-demographic characteristics and quality of ANC.

1.6 Research Question

1.6.1 Main Research Question

What is the quality of care offered to pregnant women at the Achimota Hospital?

1.6.2 Specific Research Questions

1. What is the satisfaction level of pregnant women who access care at the Achimota hospital?

2. What are the antenatal care process performed by the health care providers?

3. What are the structures components used in the provision for quality of service delivery?

4. Is there a relationship between socio-demographic characteristics and quality?

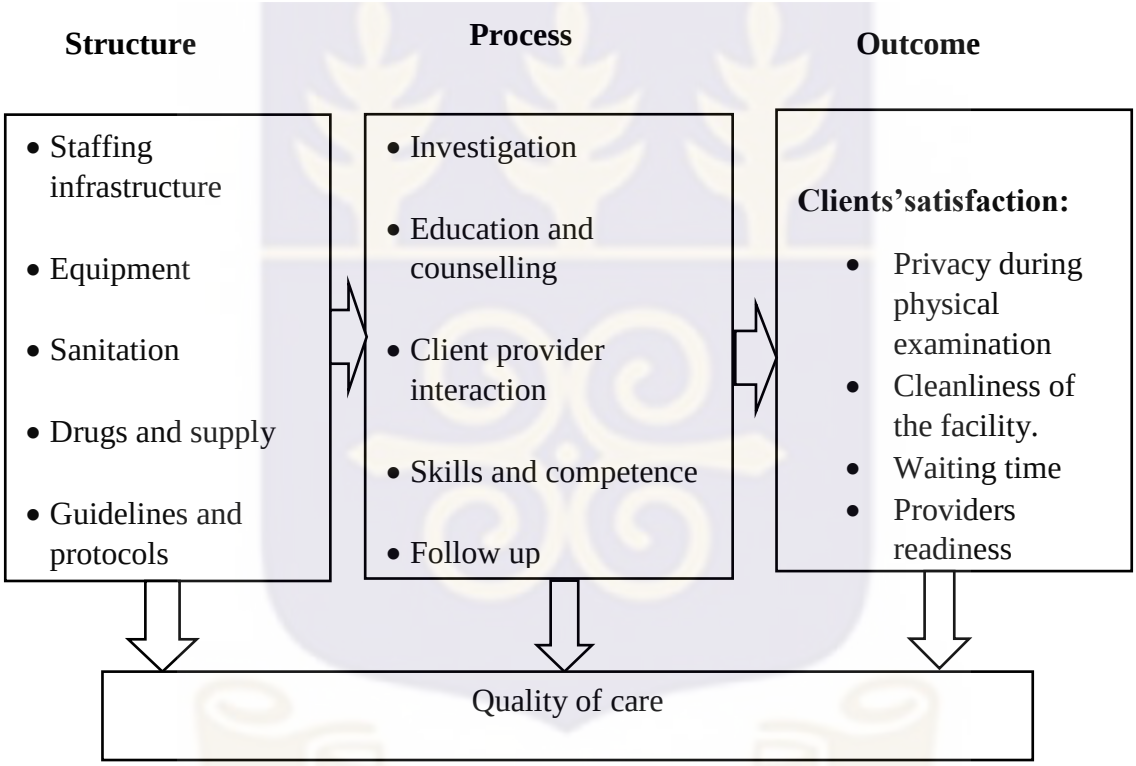

Figure 1.1 Conceptual framework of quality of care and its attributes adopted from Donabedian (1988) with modifications.

As shown above, figure 1.1 shows the three main categories informed by Donabedian (1988) model of quality health care. These include structure of care, clinical care processes, and interpersonal care processes. Structural components include access, the vehicles, BP apparatus, sanitation, supply of drugs, standard guidelines and protocols setting, staff and

care provider characteristics. The Quality Health Care model is the standard performance based on guidelines and protocols that are known to be safe, very affordable to the society and impacts positively on them to reduce the rate of morbidity, mortality and disability. Structures were assessed using a checklist.

Subjects under clinical care processes were health promotion and illness prevention, screening and assessment, client -provider interaction, skills and competence, follow-up and referral. Process was assessed using questionnaire. The investigation entails physical examination from head to toe, history taking and laboratory tests that the client does to help in diagnosis. Recommended investigation for pregnant women include HIV test, syphilis test, urine for protein and albumin, blood for hemoglobin, sickling, grouping, rhesus factor, Hepatitis B test and stool for routine examination. An ultra sound is also done to know the presentation of the lie, number of fetus and any other thing in the uterus. Education must be given to the women to educate them what to do during pregnancy, labour, delivery and postnatal. The process also shows how information is made available to clients and for purposes of this study, health education is the right option. The women should be educated on topics like preparation for confinement, exclusive breast feeding, and family planning including all other topics relevant to them. There must be a cordial relationship between the client and the personnel. Follow up visits must be done occasionally to check on the well-being of the client. Referral system must also be in place to avoid complications and delays. Waiting time for the client, administering of drugs and ensuring of confidentiality are all attributes of process.

Outcome components are the respectful attitude, emotional support, approachable interaction style, and taking time that clients experience**.** Outcome is the actual service the client received whether satisfied (good quality) or not satisfied (poor quality).

The structure, the process and the outcome seeks to provide quality of service delivery to the client, family and the community at large which directly and indirectly helps to reduce maternal and neonatal mortality, morbidity and disability (Donabedian,2005).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of literature on assessment of quality among pregnant women in the Achimota hospital.

The chapter further discusses the clients level of perception and satisfaction, the role of process in ANC, structural components used in the provision of quality ANC and socio-demographic factors affecting ANC.

2.2 Client perception and Satisfaction

2.2.1 Clients perception of quality antenatal care

Antenatal care (ANC) offers critical safe motherhood interventions that may lessen maternal and prenatal morbidity and mortality significantly (Jallow et al., 2012). The antenatal period presents opportunities to connect with pregnant women with interventions that may be essential to women and their newly born babies. A better understanding of users' experiences, including their perceptions, preferences and satisfaction levels, can substantially improve the degree to which women accept such intervention and continue to use the services provided. Sustained utilization and increased compliance can ultimately lead to better outcomes (Jallow et al.,2012). Recent ANC recommendations have strongly emphasized both the mental and medical needs of pregnant women.

Evaluation of client perception of quality of care and satisfaction with services is predetermined by how the expectations of the customer are met. Client satisfaction is directly connected to clients' needs. The degree to which these needs are fulfilled determines the

enjoyment in the case of conformity or disappointment from discrepancy. Service quality is a measure of the level of error between client's perception and expectations. Client disappointment happens when the desires are more prominent than the real execution of service conveyed by the association (Kotler et al.,2013).

Reviews in Lagos have demonstrated that just like in many parts of the world, 60%-70% of populace make utilization of private health facilities for their health needs. One reason for the lower level of usage of public health facilities contrasted with private ones is the poor perception of the nature of quality of service in public facilities (Yesilada et al., 2010). Periodic assessment of client perception of service quality is crucial to identify areas of critical need for improvement as well as to provide a baseline to assess the effect of interventions to improve quality of care.

Hospitals exist to provide services to clients and as such providing high quality of care should be of topmost priority as clients are major stakeholders in health care delivery. The Randle general hospital Surulere is a secondary level facility in Lagos. It provides outpatient and inpatient services to residents of Lagos. It has a mission to provide immediate and moderate health care services to all patients in a spotless environment. There is a need to decide how well the hospital has been able to achieve its mission statement. The outpatient clinic is the gateway to almost all of hospital service and globally 80% of clients in the hospital are attending the outpatient department (Olufunlayo, 2015). It therefore implies that the findings from surveys on quality of care at outpatient clinics will be a reflection of the quality of care in the entire hospital.

2.2.2 Health workers' perception on quality antenatal care

Hudges and Services were also of the view that the perception of health workers of being supported by their work and altitudes towards service provision through supportive

supervision and provision of adequate resources play a crucial role in influencing pregnant women utilization of quality ANC services (Hudges et al., 2008). In the Upper East region, quality of ANC was marginally high with a score of 72% to 80% (Duysburgh et al., 2014). On this note, it can be concluded that perceived quality of ANC services can affect the choice of the facility where women access their ANC services.

Nevertheless, Fagbamigbe and Idemudia were of the view that health care providers perceive ANC services as one that will benefit the pregnant woman and her unborn baby. But in reality that is not the case. The problem is that there are inadequate staff strength and shortage of material resources that restricts the successful implementation of ANC services (Fagbamigbe and Idemudia Fagbamigbe and Idemudia.,2015).

2.3 The role of process in Antenatal Care

Process refers to the investigation, education and counselling, client-provider interaction, skills and competence of the provider, follow-up visits to the clients and referral systems.

2.3.1 Investigation

Investigations are services given to clients such as taking their history to have the woman's demographic and medical records to rule out any complications during and after the pregnancy. Examination from head to toe is done to rule out any scars, sores, rashes that can harm the baby. Counselling is given as a way to interact and establish good rapport with the pregnant women. Health education is also given to inform pregnant women on how to cater for themselves and their babies. Laboratory tests is also recommended to help in diagnosis, management and treatment of any ailment that may arise during pregnancy. A study done in the northern Ghana indicates that history taking was low and laboratory examination was weak ((Duysburgh et al., 2014).This means that there will be no accurate diagnosis, management or even treatment of diseases. Recommended tests for pregnant women includes HIV tests to prevent mother to child transmission (PMTCT), syphilis test, urine to test for

protein and albumin, blood to test for hemoglobin, sickling, grouping and rhesus to know the kind of medications to give. Hepatitis B and stool tests are also done to detect Hepatitis infection of the liver and presence of intestinal worms respectively. An ultra sound test is also done to know what is going on in the uterus. The reasons of the ultra sound include confirmation of an early pregnancy, ruling out ectopic pregnancy, determine expected date of delivery, determine foetal position, identify location of the placenta, verify the diagnosis of twins/multiple pregnancy, evaluate foetal growth, determine the amount of amniotic fluid around the baby, assess fetal well-being and growth.

2.3.2 Education and counselling

Education is given to women to educate them on what to do during pregnancy, labour, delivery and postnatal. Educational topics includes preparation for confinement, danger signs in pregnancy, signs of labour, diet in pregnancy, exclusive breast feeding, and family planning including all other topics relevant to them. A study done in Nigeria indicated that respondents confirmed receiving health education from health care providers as this empowers them to take good care of themselves and their unborn babies ((Akanbiemu et al., 2013) . A study done in Gambia revealed that majority of the pregnant women both in the public facility and the government facility did not receive adequate information and education (Jallow et al., 2012). A visit to the antenatal care is an opening used to educate pregnant women on warning signs to look out for during pregnancy, labour, postpartum and family planning (WHO, 2016). Studies have shown that education given to pregnant women contributes to maternal satisfaction which in turn helps to reduce morbidity and mortality. In Ghana, health providers are able to give adequate information to pregnant women on continuity of services (Duysburgh et al., 2014).

2.3.4 Client-provider interaction

Client-provider relationship is very important when it comes to provision of care. Studies have proved that good client-provider relationship in ANC session will result in favourable pregnancy outcome for the women. Clients experience is one of the significant ways health care providers can be judged. Clients experience with the health care provider will shape the comments made in public and this will affect the reputation of the provider (Dahlem et al., 2014).

(Delicour, S., et al ;2015) found out that poor quality of care and negative attitudes of service providers were barriers to utilization health services in Western Kenya. They highlighted that poor relationships between patients and healthcare providers, rude and unfriendly attitudes of nurses, were major reasons women preferred not to be referred to some hospitals. A group of researchers who reviewed client-provider relationship were of the view that women who were treated poorly by health workers during ANC session resorted to deliver at home instead of the health facility (Kibosia et al.,2014).

Next appointment is given as a follow up visit to check on the well-being of the pregnant women. Information on referral are given to assure women of early and prompt treatment in case of any emergency to avoid complications and delays.

2.3.5 Providers skills and competence

Provider's training in ANC did not improve client's satisfaction. Also provider's knowledge and technical skills may not be enough to ensure quality service. Pregnant women give more trust and respect to providers with experience, whiles professional providers are given more support (Ametepi et al., 2017). Health professionals' personal altitudes such as respect and politeness towards clients affects quality of care and their perception rather than providing technical quality alone to satisfy the client (Anette C. Ekstrom et al.,2015).

Health care providers with much knowledge, skills and competency to provide quality ANC services to pregnant women protect the life of the mother and the unborn baby. Mothers are likely to miss complications that may arise as the pregnancy advances (Banda, 2013).

On the other hand, studies in Southern Nigeria revealed that majority of pregnant women who took part in the study responded being satisfied with the basic competency levels of their care providers (Oladapo et al., 2008).

2.3.6 Waiting time

Waiting time for the client is a progression in ensuring quality of service to prevent clients from wasting time unnecessarily. Waiting time in outpatient facilities has been recorded to be a reason of disappointment among patients (Uehira and Kay; 2009). A study reported that there is a predictable component of disappointment that has been communicated in outpatient services and care. Efficiency and effectiveness of outpatient services are exceptional when it comes to service provision, and for that matter excessive waiting time is a major complaint of patients. Studies done in Namibia has uncovered that long waiting time have proven to be one of the variables reliably influencing customer's satisfaction (Paul Ametepi et al.,2017). Also a study has discovered that there is a negative association between waiting time and client satisfaction (Do et al.,2018).

2.4 Quality Antenatal Care

Quality care' with no definite universally accepted definition includes multiple levels, from patient to health system, and multiple dimensions, such as: safety, effectiveness, efficiency and equitability (Yanden and Graham, 2009).

In Malawi, quality of care focuses on mutual satisfaction of both the users and providers. A report from the National Reproductive Health Service Delivery guidelines, defines quality as "doing the best with the resources available for the mutual satisfaction of the provider, the

recipient (that is the client or the patient) and the community at large" (MOH, 2007) and (Kumbani et al., 2012).

Quality of care in this study focuses on both the provision of care as well as how clients also perceives the care. This premise was built based on Hulton et al (2000) who looked at quality not only as provision of services, but also on women's actual experiences of that care (Kumbani et al., 2012).

Antenatal care is one of the recommended interventions to reduce maternal and neonatal mortality. Yet in most Sub-Saharan African countries, high rates of antenatal care coverage coexist with high maternal and neonatal mortality. This disconnect is very alarming and it is not a very good statement for any developing country. This phenomenon developed the focus antenatal care (FANC). The standard of antenatal care is assessed using the overall number of visits, time of the very first visit to the antenatal care and the recommended components from WHO (WHO, 2006).

Timing of first ANC visit has been appeared to anticipate the arrangement of intercessions suggested by WHO. An ongoing report in Pakistan detailed that women whose first ANC visit happened in the initial 12 weeks of pregnancy got the full scope of WHO-prescribed substance of care. (Andrew et al., 2014). An ongoing report in Northwest Ethiopia detailed that 52% of the pregnant women booked their first ANC visit following 4 months of pregnancy (Yaya et al., 2017).

Likewise, another study discovered that women who are under 30 years of age and have formal training, with past positive experience of early ANC administrations, will probably use ANC benefits from the very first day of their pregnancy. In any case, different reports exhibited that a background marked by early ANC visit isn't a pointer of early usage of ANC benefits in current pregnancy, and that past encounters with ANC specialists and pregnancy expectation decides early visit to ANC (Yaya et al., 2017).

Good quality ANC enhances maternal wellbeing, diminishes the odds of anguish from anaemia, pregnancy related hypertension and preterm labour (Joshi et al., 2014). Good ANC and advances positive pregnancy results, including a decreased danger of low birth weight under 2.5kg and preterm babies (Tuladhar et al., 2011). Antenatal care increases the utilization of a Skilled Birth Attendant during delivery and postnatal care

ANC visits give a phenomenal chance to convey instruction with respect to the threatening signs and symptoms in relation to pregnancy, labour, delivery, postpartum period and to take decision on birth spacing and family planning (WHO, 2006). An examination from Bangladesh discovered that women who had at most one ANC visit were twice as liable to endure a perinatal passing contrasted with women who had at least three ANC visits (Pervin et al; 2012). Early commencement of ANC participation at least four visits are related with higher baby birth weights and lower newborn mortality rates (Joshi et al., 2014). The timing of the first ANC visit, and additionally the aggregate number of ANC visits likewise influence the nature of ANC that a pregnant lady gets (Ochako et al., 2011).

2.5 WHO recommended components for ANC in Ghana?

The segments of ANC prescribed in Ghana include: providing folic acid and fersolate to supplement iron, blood and urine tests, no less than two tetanus toxoid injections, checking of pulse, intestinal parasite drugs, issuing of insecticide treated bed net, giving 5 doses of intermittent preventive treatment of malaria fever and health education with respect to their pregnancy. The distinctive parts of ANC enhance maternal and child wellbeing in various ways (Joshi et al; 2014), Iron supplementation decreases the extent of women becoming anemic by expanding haemoglobin level up to 0.7gram every week.

Checking for blood pressure against hypertension and urine against proteinuria is meant to detect a common complication in pregnancy known as pre-eclampsia. Additionally, HIV and

syphilis screening are done to identify any present infection. This early identification will decrease fetal misfortune and maternal and newborn mortality, preterm and low birth weight babies. Administering of antenatal tetanus immunization likewise eliminates neonatal tetanus (Dowswell et al., 2010).

Consequently, the World Health Organization (WHO) have updated their ANC guideline in 2016 aiming to provide women with a positive pregnancy experience and included that the new recommendation of antenatal visits should be increased from a minimum of four visits to a minimum of eight visits (WHO, 2016). The World Health Organization came out with six areas as a guide to complement health care to meet client's expectation. Health care that provides quality of care in terms of improvements includes:

- Effective- delivering health services that results in improved health outcomes at individual as well as community level based on the needs.
- Efficient- delivering health services while maximizing the use of available resources in order to avoid waste.
- Accessible-health services to be provided in a timely, geographically reachable setting where skills and resources are available to meet the needs of the people.
- Acceptable/patient centered- offering health services that takes into account the preferences of the users and the culture of a particular setting.
- Equitable- involves delivering health services in a fair manner despite the characteristics of individual patients/clients i.e. gender, race, socio-economic status, etc.
- Safe- the services being provided should minimize risks to the users.

2.6 Structural components in Quality Antenatal care

Structural components are the equipment, infrastructure, sanitation, supply of drugs, standard guidelines and protocols setting, staff and care provider characteristics.

2.6.1 Policies, guidelines and protocols

The Quality Health Care model is the standard performance based on guidelines and protocols that are known to be safe, very affordable to the society and impacts positively on lives to reduce the rate morbidity, mortality and disability

In Ghana, ANC services are being provided by the public and the private institution.

"Quality health care means providing health care for clients such that they can receive it when they need it". This means that the facility should be accessible during the day and the night, less time should be spent for service to be rendered and the next appointment date must be given for continuity of care. The results from a study shows that ANC was affected by poor implementation of ANC guidelines by the health workers. All services and protocols were not based on ANC guidelines. 38 recommendations endorsed by WHO meant to be delivered to pregnant women in the area of taking history, doing physical examination, conducting laboratory tests, giving drugs, immunization and health education to improve their pregnancy outcome. The results from the study proved that out of the 38 recommendations from WHO, 12 were not rendered to any pregnant woman, 18 services were provided to 3%-58% of the pregnant women and 8 services were given to over 80% of the pregnant women (Gross et al., 2011).

2.6.2 Drugs and supplies

Constant supply of all antenatal drugs are very necessary for pregnant women. Iron supplementation reduces the proportion of women becoming anemic by increasing haemoglobin up to 0.7gram per week. A study done reported that quality of ANC was affected by shortage of drugs and inadequate stationary (Gondwe, 2015). A study conducted in the Nkwanta South district also reported that clients were not satisfied with the inconsistent supply of drugs (Degley, 2012).

However, studies done in selected primary health care facilities in Ghana, Burkina Faso and Tanzania reported that 81% of the respondents were satisfied with the availability of essential equipment, drugs and medical supplies (Williams et al., 2014).

2.6.3 Staffing Levels

The number of staff present at ANC department is necessary in the provision of quality ANC (Hughes, 2008). Overcrowding at ANC sessions where staffs' strength cannot control all the clients present, quality of service is compromised. (Rudrum, S. E. E. (2014). When providers become overburdened with work, people with special needs such as victims of rape, adolescent mothers, single mothers and newly diagnosed HIV mothers are not given the required services they need (Rudrum, S. E. E. (2014). This is because these people are at risk of giving birth to low birth weight babies and still births. The children of these mothers also suffer abandonment and neglect.

Zimbabwean health workers reported of shortage of staff and other factors which contributed to low provision of quality ANC services (Rudrum, S. E. E. (2014). Inadequate staff training and /or absence of refresher courses to equip staff skills can affect the provision of quality of care. In addition to that lack of orientation on FANC of new staff allocated to the ANC department, poor staff supervision, underpayment and over working can affect the standard of care provision (Conrad et al., 2012; Mgawadere, 2009).

2.6.4 Infrastructure

According to Donabedian's frame work, infrastructure consists of constellation of services, space where ANC services are provided including waiting area and client flow, sanitation issues and the display of IEC materials. A study reported that health workers expressed their concern about the condition of a facility which was in a bad state and this contributed to the provision of quality of ANC services (Gondwe,2015).

Pregnant women are very particular about the sanitation of the facility they visit. The cleanliness of the facility determines their level of motivation to either repeat her visit or to visit another health care facility (Esmaily et al., 2013).

A study done in Nkwanta South reported that buildings of the mission and the district hospital were rated as good by the respondents whiles the CHPS and the Health Centers were rated as poor. In the same study, sanitation and cleanliness were rated as very good for both the district and the mission hospital (Degley, 2012).

Integration of services also improves in quality of service delivery. Studies have proven that pregnant women are lost to follow up especially when asked to seek other service outside the ANC department. He went on to say that it will be more reasonable if all services that pertains to pregnant women will be located in the ANC department (Mary Kakamission Paul,2018). In Nigeria, the study reported that, women were unhappy with the sanitary conditions where toilet facilities were not readily available in the ANC department. Women have to walk to other departments to be able to use the wash room.

2.7 Socio-demographic factors affecting ANC

A pregnant woman's socio-cultural characteristics includes her values, beliefs and her attitude that affects her ability to use antenatal services. An example is using unfamiliar medical language in giving health education. At this point the client becomes confused and will not benefit from the kind of information being given to her. Pregnant woman's cultural background, her position as woman in the society do affect the kind of health service she seeks.

A study done in Cameroon reported that although women were generally worried about their health, their cultural background of gender roles prevented them from recalling their right to maintaining good health (Lowe, M., et al., 2016). The women considered the right to good health as a duty in satisfying their purpose of taking care of and meeting the demands of

family members especially spouses and children at the cost of their own physical health and well-being.

In the Northern Nigeria, it was revealed that important factors leading to maternal mortality includes moslem culture that undermines females, a noticed social needs for males to be in strict control of women's reproductive health control and the practice of purdah (which is the restriction of women's medical care) (Azuh et al., 2015).

In the same study women who were found to be illiterate, had early marriage and pregnancy often occurs before maternal pelvic becomes complete. (Azuh et al., 2015). Similar study in Mali reported of women's own perceptions of their effectiveness and their worth as women in society determines their preventive and health seeking behaviors (Lowe et al.,2016).

Another study in Benin Republic also brought to light factors such as husbands' approval and money for treatment had undesirable impacts on maternal health seeking behavior (Se et al., 2013). This study reveals cultural values affecting women decision-making autonomy and economic independence.

In the Rwandan culture, it is said that a woman can start going to prenatal appointments around eight or nine months, three months seems too early to go for prenatal visits. (Health Facility Professional 12, Rwanda). Formerly, women did not attend antenatal visits, and when they did, they would visit whenever they wanted. (Health Facility Professional 12; Rwanda).

Female education has proven to be linked with lower fertility and improvements, earning potential income, being productivity, ensuring good health, and longevity of life as well as to offer benefits to her family and community (Babalola, 2014). Education has consistently been linked with pregnancy and maternal outcomes for women. Several studies suggest that, compared with women having more education, women with less education may be at an increased risk for preterm birth, small-for-gestational-age birth, still-birth, neonatal and post-

neonatal death, and maternal death (Babalola, 2014). Another study also has found out that better educated women were more likely to use skilled antenatal facility than their peers with little or no education.

A study done in Zimbabwe found out that their quality of care was poor due to negative attitudes of service providers and this created a barrier in utilizing the facility in Zimbabwe. The relationship between patients and healthcare providers was very poor, rude with unfriendly attitudes, and these were the major reasons why women preferred not to be referred to some hospitals (Gondwe,2015).

CHAPTER THREE

METHODS

3.1 Introduction

This section explains the research methodology and the areas covered including study area, type of study, study population, inclusion criteria, exclusion criteria, study variables, sample size, sample procedure, description of variables, description of created outcome variable, data collection tools, data collection technique, data collection procedure, quality control measures, data process and analysis, pretest for data collection tool, training of field workers and ethical consideration.

3.2 Study Area

The Achimota health zone forms part of the Okaikoi Sub-Metro within the Accra Metropolitan Health Area. The Hospital was established in 1927 was largely to serve the health care needs of the Achimota School and other sister schools until when it was taken over by the Ministry of Health in 1973. Achimota has combined communities with a projected population of 107,559 (MOH, 2015) (being 30% of the total population for Okaikoi Sub-Metro 368,973) and a growth rate of 4.4%. In 1973 the hospital was handed over to the Ministry of Health and was declared a public facility. The hospital now caters for most of the educational facilities within and outside the catchment area. Achimota hospital was declared District Hospital in 1985. The facility has not seen any additional structures until 2011. Figure 3.1 shows a map of Okaikoi Sub-Metro.

The hospital has since served beyond its immediate environment and expanded the range of services to include comprehensive obstetric care, family health, and lately Orthopedics and accident and trauma care services. It has 88 beds. The In-Patient Department consists of Seven (7) General Wards including one modern maternity block with labour ward, as well as emergency room. The Hospital provides services in: general OPD, maternal health services

including theatre services, emergency recovery/ casualty services, dental clinic, ENT care, diabetic clinic, eye care (refraction), dermatology, tuberculosis, reproductive and child health, nutritional rehabilitation, laboratory, medical imaging/x-ray/ ultra sound, pharmacy, orthopedics and accident and trauma services, voluntary counseling and testing, clinical psychology.

Source: Achimota Government Hospital

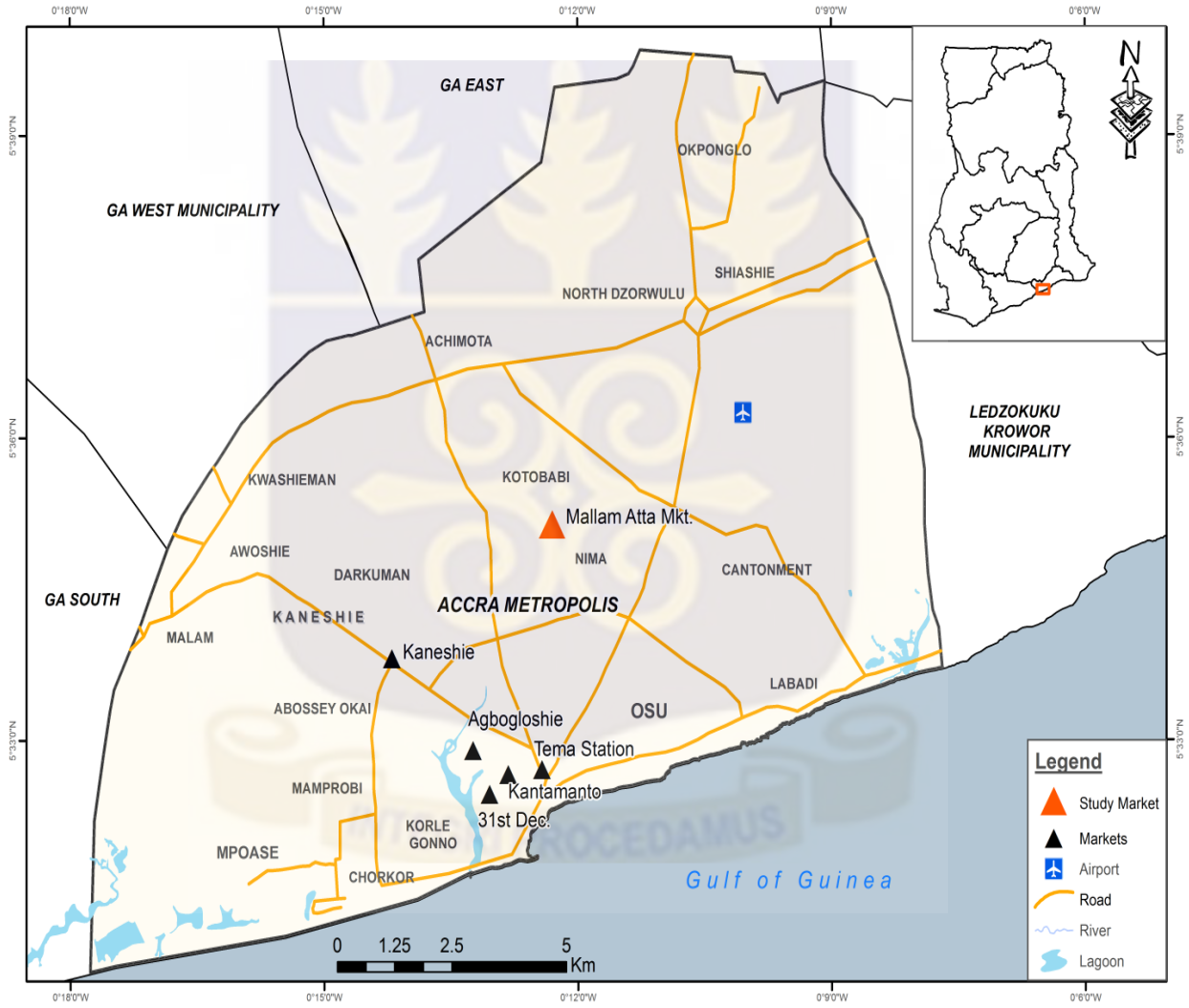

Figure 3.1 Map of Okaikoi Sub – Metro

3.3 Study design

The study employed a cross-sectional design with mixed methods of data collection consisting of quantitative and observational approach.

3.4 Study population

The study population was all pregnant women between the ages of 15-44 years who were randomly selected. The recruited expectant mothers were consented before participating in the study and interview as done using a semi-structured questionnaire.

3.5 Inclusion Criteria

Pregnant women who were attending Achimota hospital for antenatal care during period of data collection and are between the ages of 15 – 49 years.

3.6 Exclusion Criteria

- Pregnant women who were referred to the facility for continuity of care.
- Pregnant women who were attending the hospital for the first time who are known as registrants.
- Pregnant women who were found to be less than 15 years or more than 49 years.

3.7 Study Variables

The study variables comprised of dependent and independent variables. The dependent variable is the quality of antenatal care services (ANC) whereas the independent variables consists of social demographic characteristics, laboratory tests done, drugs and supplies, provider's competence, infrastructural factors, client's perception, provider-client interaction, following of standards and procedures and the overall satisfaction level.

3.8 Sample Size

A sample of 403 pregnant women was selected for the study. The estimated sample size N was computed using the formula (Naing et al., 2006). Supposing 50% of women in their fertility age attending Achimota hospital delivered(p), a Z-value of 1.96(z), a standard error of 5% (e), 5% compensating for incompleteness and unwillingness to participate, the sample size was calculated to be 403:

$$n = \left(\frac{Z}{e}\right)^2 p(1-p)$$

$$n = \left(\frac{1.96}{0.05}\right)^2 (0.5 * 0.5) = \frac{3.8416 * 0.25}{0.0025} = 384$$

Adjusting for 5% non-response rate,

$$n = 384 * 1.05 \quad = 403$$

3.9 Sampling procedure

Pregnant women were selected using the systematic random sampling technique until a total of 403 women was obtained for the study. This technique was used because of the layout of the study site, the duration of the data collection and the sample size. Each of the four consulting rooms were visited for the observation component of the study.

3.2 Description of variables

The dependent variable quality of care among pregnant women was a combination of various measures of factors that was put together to measure the level of satisfaction reported by the pregnant women. The overall rating of quality of care was categorized as poor (not satisfied) and good (satisfied). The predictor variable included the socio-demographic characteristics like the age, parity, marital status, educational status, occupation number of visits and religion. These variables were measured directly on the questionnaire. Other variables assessed through observation includes client-provider interaction, sanitary condition, drugs

and supply, infection control measures and availability of protocols, policies and guidelines. The data collection tool has the values for the responses on each of the independent variables.

3.2.1 Description of created dependent variable

Quality of care was measured using a binary outcome known as "satisfaction". The binary outcome was coded as 0=Not satisfied and 1= satisfied.

Ten variables were used to create the outcome variable satisfaction. The ten variables include providers' readiness to listen to clients' problems, provision of quality of care by staff, cleanliness of the facility, comfort of the waiting area, waiting time before being attended to, privacy during physical examination, ability to ask questions, partaking in decision making, confidentiality of personal information and quality of care received on a particular day.

The ten variables were rated on a 4-point Likert scale with 1=Not satisfied, 2 =somewhat satisfied, 3 = satisfied and 4 = very satisfied. A minimum score of ten (10) could be attained for each respondent and a maximum score of 40 could also be attained for each respondent. A median score of 25 was used to dichotomize the composite score into a binary variable where those who scored 25 and below were categorized as poor satisfaction and those who scored 25 and above were categorized as good satisfaction.

3.2.2 Data collection tools

The questionnaire used for the interview was a pre-coded structured questionnaire and an observational check list. The tool had 41 items under 8 sub-titles which are the socio-demographic factors, provider's competence, lab investigations, client perception, drugs and supply, infrastructural factors, provider-client interaction and satisfaction. The tool sought the background of the client's age, parity, educational background, occupation, type of history taken among others. In addition, type of health education given, type of investigations done, physical examinations done, readiness of the staff to listen to their problems and how the

clients rated the care they received was included to measure respondents' perception and satisfaction with ANC services.

Less than half of the responses in the tool required yes and no answers. The minority required respondents to rate satisfaction on a 4 –point Likert scale from "not satisfied" to "very satisfied". Scale 1 = not satisfied, 2 = somewhat satisfied, 3 = satisfied and 4 = very satisfied. Few questions sought to measure dimensions of quality and was ranked from "poor" to "very good" with 1 = poor, 2 = fair, 3 = good and 4 = very good.

Data was collected on structural facilities using an observational checklist which was adopted from the Ghana Health Service Reproductive Health Standards. The first part of the checklist covered areas like sanitation, lighting, space availability of coaches and chairs. Infection prevention control, sterilization process and waste disposal standards among others.

The second part covered standards, protocols and guidelines in relation to quality of ANC. Observation of the providers rendering service to pregnant women was also assesses using the second part of the checklist.

3.5.3 Data collection technique

Face to face interview was the medium the trained research assistants used to collect the data. The questionnaire was coded using semi –structured presentation style. Health care practices and structural facilities were assessed using an observational checklist

3.5.4 Data collection procedure

Data collected perception, satisfaction, socio-demographic characteristics and quality of antenatal care was provided by the pregnant women through the interview. The tool used to collect the information was a pre-coded structured questionnaire. Before the clinic starts, the midwife in-charge of the antenatal clinic informs pregnant women about the presence of the

research team. The main objective of the announcement was to prevent unnecessary tension among the clients when being approached for the interview.

The research assistants approached pregnant women who were done with consultation, collection of drugs and were ready to exit the antenatal premises to seek their permission to collect data. The women were then engaged in conversation to determine whether they were within the inclusion criteria. When they do, the research assistants administer the questionnaire to interview them.

Research assistants used the empty pews at the back of the antenatal hall to conduct the interview because that was the only available place for the interview looking at the layout of the facility. Whiles the interview was on-going, the principal investigator went round the facility with the observational check list to do the observational aspect of the study. Health workers' practices and structures used for the provision of the quality of care were observed.

3.5.5 Quality control measures

Measures used to validate the reliability of the data includes

- The principal investigator monitored the data collectors from time to time to make sure the assistants are doing the right thing.
- All the data collected for the day were properly cross checked to ensure accuracy and completeness. Questionnaires that were not filled correctly were discarded. The area where the error occurred was explained to the assistants to avoid repetition the following day.
- Data was cleaned to eliminate any irregularities

3.1.3 Data processing and analysis

The entries were done by two independent data entry clerks. To prevent data entry errors, the completed questionnaires were coded, double entered and cleaned. Detected discrepancies were resolved by consulting the original completed questionnaires. The cleaned and well

coded questionnaires were then exported into Stata version 15 for analysis. Significance level was set at 0.05.

Results on socio-demographic variables such as age, occupation, marital status, education level, parity, religion, first time pregnancy and number of times of visiting facility were summarized and presented using percentages, frequencies and tables.

Chi-square tests and logistic regression reporting odds ratios were used to measure association between dependent (satisfaction and quality antenatal care) and independent variables (age, marital status, educational background, religion, occupation, first time pregnancy, parity and number of times of visiting facility).

Adjusted odds ratio (AOD) and a confident interval of 95% was used to test for the strength of association. A p-value of 0.05 was used to test for statistical significance in all the analysis.

The checklist which was used to observe the structure and the process was used to compliment the quantitative findings which contributes to the measurement of quality antenatal care.

3.1.4 Pre-testing of data collection tool

The data collection tool was pretested at the 37 military hospital by conveniently sampling women from the facility to ensure that the tool was well formatted and questions were clearly understood for accurate responses from the patients. Responses from the women was used to revise the tool. The five persons to be used for the actual data collection were recruited to do the pilot study.

3.1.5 Training of fieldworkers

Research Assistants were used for data collection. The team comprised of five assistants and the principal investigator was the supervisor. The training was centered on:

(1) Understanding the objectives of the study.

(2) Understanding on the survey tools and its interpretation.

3.1.6 Ethical considerations

- Before the study was carried out, the following ethical issues were considered.

- Ethical clearance was sought from the Ghana Health Service Ethical Review Committee. The protocol ID given to commence the study was (GHS-ERC 070/02/18).

- An introductory letter was obtained from the school of public health to the Achimota Hospital to introduce the researcher to the facility. The administrator upon receipt of the letter wrote a memo which was further given to the maternity in-charge to introduce the researcher to the nurses and the midwives rendering ANC services.

- Informed consent was obtained from the study participants prior to the data collection.

  The ANC in-charge after every health education informs the pregnant women the presence of the researcher and the team and encouraged the women to participate in the study because the outcome will be used to improve on the services they have been receiving. The researcher before taking the consent explained to participants the aim of the study, the processes involved, associated risks and benefits of participating in the study. Participants who agree to partake in the study were asked to sign or provide a thumb print before the interview began.

- If a participant was not able to read the consent form herself, a witness is made to sign on the same consent form to indicate that he or she was bearing witness that everything about the study was explained to the participant before having her consent to participate in the study.

CHAPTER FOUR

DATA ANALYSIS

4.1 Introduction

This chapter discusses the findings obtained from a study aiming at assessing the quality of ANC. Due to the nature of the study; data obtained were entered into SPSS version 20.0 and was further transported to STATA version 15.0 for analysis. Results obtained were presented in tables and chart. Furthermore, some of the analyses conducted in this chapter included frequency and descriptive analyses. The findings are presented as follows:

4.2 Demographic Data

This section investigated the demographic characteristics of the respondents in the study. The demographic data collected include age distribution, marital status, educational qualification, religious affiliation and occupation of the respondents.

Table 4.1 shows the summary of the age distribution of the respondents. As shown in the table, the average age of the respondents was 29.2 years with a standard deviation of 5.81. The table further showed that, the least age of the respondents was 16 years while the highest age was 44 years.

Further results also showed that, with regards to their marital status, majority of the respondents representing 70.2% were married,13.4% were cohabitating, while 16.2% said they were single or never married. Only 0.3% said they were divorced or separated.

The findings also revealed that, with regards to educational qualification, quite a number of the respondents representing 32.5% had attained secondary/SHS education as their highest educational qualification, 10.4% have primary or basic education, while another 37.5% said they had attained middle/JHS as their highest educational qualification. 16.4% as shown in the Table 4.1 had attained Tertiary education and 3.2% with no formal education.

It was again revealed that, most of these respondents included in this study were affiliated to the Christian religion with representation of 87.1% while their Muslim counterparts also represented 13.7% with only 0.5% professing to belong to the Traditional religion and 0.7% belonging to no form of religion as shown in Table 4.1.

Further interaction with the respondents revealed that, 31.5% of them were traders, 6.95% were self-employed and are engaged in occupations such as beautician, catering, hairdressing, wholesale and retailers in business and so on. It was also found that, some of them worked as farmers, audit associates, secretaries, teachers and government employees. 4.7% also said they were students.

Table 4.1: Summary of socio-demographic factor

	Frequency	Percent (%)
GIFTY ASABEA MENSAH-(10332207)Age: Mean ± SD	29.19 ±5.81	
15-24	86	21.34
25-34	243	60.30
35-44	74	18.36
44 and above	0	0
Marital Status		
Married	285	70.15
Cohabitation	54	13.43
Single/Never married	63	16.17
Divorced/Separated	1	0.25
Educational Qualification		
No Formal education	13	3.22
Primary/Basic	42	10.42
Middle/JHS	151	37.47
Secondary/SHS	131	32.51
Tertiary	66	16.38
Religious affiliation		
Muslim	55	13.65
Christian	343	85.11
Traditionalist	2	0.50
Others	3	0.74
Occupation		
Student	19	4.71
Apprentice	14	3.47
Unemployed	55	13.65
Farmer	7	1.74
Trader	147	37.51
Self-Employed	128	30.73
Employed	33	8.19
Number of ANC visits		
Once	2	0.5
Twice	22	5.46
Thrice	69	17.12
Four times	53	13.15
More than four times	257	63.77
Parity		
Zero	123	30.52
One	77	19.11
Two	111	27.54
Three	59	14.64
Four and more	33	8.19
First Pregnancy		
Yes	125	31.02
No	278	68.98

The study also sought the views of the respondents with regards to whether this was their first pregnancy. From their responses almost 69% indicated that this was not their first pregnancy whiles 31% said it was their first pregnancy as shown in the table.

Figure 4.1 shows the number of times these respondents had visited the current clinic under study with their pregnancies. From the study, most of respondents representing 64% said they had visited the facility with their pregnancies more than five times, 13% visited four times, 17% said they had been there thrice, 5.5% said they have been there twice with 0.5% saying they had visited the facility once with their current pregnancy.

Figure 4.1 Number of visit to facility with current pregnancy

4.3 Process attributes of quality care

4.3.1 Health care worker practices

Results on history taking during antenatal care services indicated that majority of the respondents had their personal, social, family, medical, surgical, obstetric, current history and breast feeding taken by the health care provider. Table 4.2 shows the proportion of pregnant women reporting specific history by health care provider

Table 4.2 Percentage of women reporting specific history taken by health care provider

History type	Minority response NO (%)	Majority response YES (%)
Personal history	62(15.38)	341(84.62)
Social history	62(16.13)	341(83.87)
Family history	47(11.66)	356(88.34)
Medical history	49(12.19)	354(87.81)
Surgical history	76(18.91)	327(81.09)
Obstetric history	194(48.26)	208(51.74)
Current pregnancy history	76(18.91)	326(81.09)
Breastfeeding history	163(40.55)	239(59.45)

Table 4.3 Results on women who reported specific physical examination done by the health care provider.

Examination type	Minority response NO (%)	Majority response YES (%)
Blood pressure	14 (3.48)	389 (96.52)
Weight	16 (3.73)	387 (96.27)
Pallor	93 (20.11)	310 (79.89)
Oedema	130 (32.5)	273 (67.5)
Breast	200 (49.75)	203 (50.25)
Fundal height	33 (8.21)	370 (91.79)
Foetal presentation	45 (11.19)	358 (88.81)
Foetal heart sound	31 (7.71)	372 (92.29)

Table 4.3 presents proportion of women who confirmed that they were physically examined by the health worker. Blood pressure (96.5%), weight (96.3%), fundal height (91.8%) and foetal heart sound (92.3%) were most of the examinations done by the health care provider.

About two-thirds of the respondents reported that they were examined for pallor (paleness), a little more than sixty percent were checked for oedema of the legs, fifty percent responded that their breast were examined for breastfeeding and more than two-thirds confirmed that their foetal presentation was checked.

All the health workers checked the weight and the blood pressure of the clients. Conversely, not all the examinations were performed by the midwife. For instance, the conjunctiva or even the tongue was not checked for pallor, the leg for varicose veins or any painless swelling. The breast was also not inspected for nipple abnormality such as inverted nipple, flat or big nipples. All these are conditions can affect breastfeeding. All midwives' examinations performed on the pregnant women focused on their blood pressure, weight, foetal heart sound, fundal height and foetal presentation. The checklist confirmed infection

prevention measures practiced by the health providers. The midwives washed their hands regularly, rub their hands with alcohol or the hand sanitizer after examining the clients.

4.3.2 Provision of information and provider-client interaction

This section presents the results of respondents on perception of women on information provided to them in relation to their pregnancy. The various health education topics the respondents reported of having heard includes process of pregnancy and its related complications (93.6%), diet in pregnancy (97.3%), personal hygiene (92.1%), danger signs in pregnancy (92.3%), exclusive breastfeeding (91.8%), harmful habits (96 %), preparation for delivery (95.5%), schedule for next visit (96 %). Observation from the checklist also revealed that health care providers' before starting the clinic educate the pregnant women on the various health topics. This relevant information has given the women more knowledge that guides them throughout the pregnancy.

The facility also organizes a Saturday pregnancy school at the end of every month where the health education is intensified and more counseling time given to women with peculiar problems.

Table 4.4: Proportion of women reporting health education topics discussed

Health education topic	Minority response NO (%)	Majority response YES (%)
Processes in pregnancy	26 (6.45)	377 (93.55)
Diet		392 (97.27)
Personal hygiene	32 (7.94)	371 (92.06)
Danger signs in pregnancy	23 (5.71)	380 (94.29)
Breast feeding	23 (5.71)	380 (94.29)
Harmful habits	33 (8.19)	370 (96.03)
Preparation for confinement	16 (3.97)	387 (95.53)
Schedule for next visit	33 (7.74)	370 (92.26)
Effects of HIV	24 (6.72)	379 (93.28)
Effects of STI	31 (8.05)	372 (91.95)

Table 4.5: Women perception of health workers and interpersonal aspect of antenatal care received

Inter-personal Relation	Minority response NO (%)	Majority response YES (%)
Treated with respect	19 (4.71)	384 (95.29)
Protected your privacy	27(6.70)	376(93.30)
Explanation of findings	27 (6.70)	376 (93.30)
Examination to your satisfaction	23 (5.71)	380 (94.29)
Enough time to ask questions	21(5.21)	382(94.79)
Involved in decision making	42(9.45)	361(90.55)

Table 4.5 shows women's perception of health worker skills and interpersonal aspects between providers and clients' during ANC. In the overall score of women's perception of health worker skills and interpersonal relationship was very good. Majority of the respondents (94%) explained that they were examined to their satisfaction, (95%) revealed they were treated with respect, (93%) also confessed of been given privacy during examination, more than (90%) were involved in decision making and (95%) were able to ask questions bothering them without any fear. Privacy was ensured by placing screens in front of every coach to prevent staffs and clients who might enter the consulting room without knocking. Providers who occasionally come out of the consulting room were seen establishing rapport with women waiting in the queue for their turn to be examined.

4.4 Structural Factors

4.4.1 Laboratory tests done on responses

About 9 in 10 respondents reported their haemoglobin (94.3%), grouping and matching (91.3%), rhesus factor (99.5%), urine and protein (96.3%), urine for glucose (95.3%) and HIV testing (95.3%). However almost 100% did not have their hepatitis status checked,

(20.4%) did not have their VDRL/Syphilis checked, (8.7%) do not know have their grouping and (5.7%) have no knowledge about the haemoglobin level.

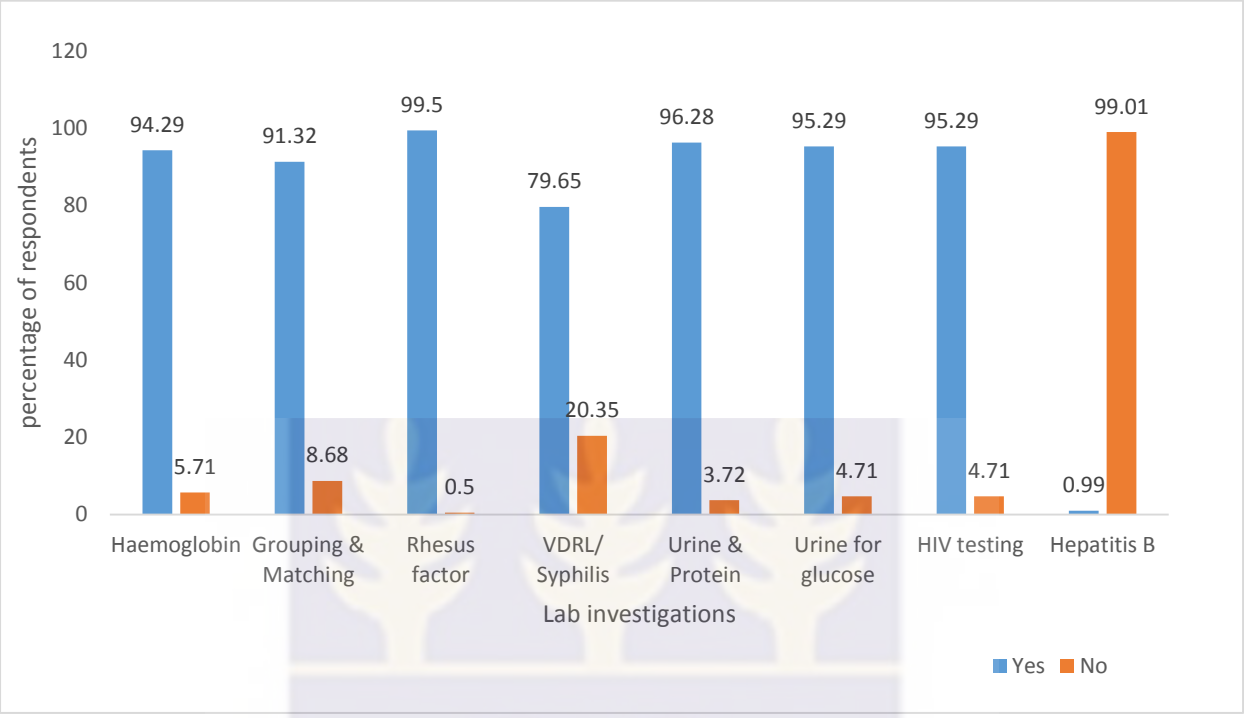

Fig 4.2 Proportion of respondents reporting laboratory tests done

4.4.2 Provision of drugs and immunization by health workers

On drugs and immunization, 94.29% of respondents reported having received fersolate and folic acid tablets. Almost (100%) responded that the healthcare provider makes sure that they the pregnant women takes the SP tablets before leaving the consulting room. From observation at the ANC, women were seen coming out to purchase sachets of water to take their medicine. More than three quarter (79.65%) of the respondents were given tetanus immunization against neonatal tetanus.

From observations made at the facility, all drugs and supplies like the syringes, IV fluids and other medications needed for treatment are provided at a pharmacy within the building of the antenatal care. Labour ward is at the upstairs of the building whiles antenatal care is downstairs. This layout of the clinic makes movement of the clients very easy and timely.

4.4.3 Findings on infrastructure at antenatal care department

The observational check list buttressed the responses from the pregnant women who indicated that the environment of the antenatal care was clean. Every consulting room was well equipped with examination couch, a working table and four chairs, a bin for dry and infectious waste, sharp containers and hand washing materials. The waiting area for the pregnant women was very spacious, well ventilated with enough metal chairs on which pregnant women can sit comfortably and lean their backs. There is also a large flat-screen television to entertain and educate the pregnant women whiles waiting to be called upon.

The toilets were tidy at the time of my study. The flushing systems were working and there was a waste bin to take care of used tissues. Measures required in infection control, decontamination, sterilization and waste management were done appropriately. Each protocol was keenly followed.

4.4.4 Availability of guidelines and policies

Information, Education and Communication (IEC) materials were not displayed at the antenatal clinic. All information regarding health education were done using pre-loaded pen-drive slotted into a flat-screen television mounted on a wall. Policies, guidelines and protocol as revealed through observation indicated that hand washing, HIV testing and breast feeding guidelines were displayed in each of the four consulting rooms. However, guidelines on FANC, PMTCT and management of pre/eclampsia, reproductive health and infection (apart from hand washing) were neither displayed nor present at the clinic.

4.4.5 Results on perception of quality attributed variables

Majority of the respondents reported that they were satisfied with ANC based on the selected criteria as stated in (section 3.1.1). Almost 7 out of every 10 also reported that they were very satisfied with the ANC based on the selected quality attributable variables (Table 4.6).

However, nearly all respondents reported of dissatisfaction with the waiting time at the ANC. Clients complained that one could spend more than 3 to 4 hours especially on visits when asked to take a scan.

Table 4.6: Results of respondents' quality attributed variables on satisfaction with ANC services

Variable	Not satisfied	Somehow satisfied	Satisfied	Very Satisfied
	No. (%)	No. (%)	No. (%)	No. (%)
Readiness of staff to listen to clients Problems.	16(3.97)	18(4.47)	220(54.59)	149(36.97)
Clients satisfaction with quality of care provided by staff.	12(2.98)	18(4.47)	272(67.49)	101(25.06)
Clients satisfaction with comfort of waiting area.	25(6.20)	79(19.60)	266(66.01)	33(8.19)
Clients satisfaction with waiting time	331(82.13)	41(10.17)	31(7.7)	0
Clients satisfaction with respect to privacy during physical examination.	10(2.48)	17.(4.22)	232(57.57)	144(35.73)
Clients satisfaction with having enough time to ask question.	3(0.74)	18(4.47)	254(63.03)	128(31.76)
Clients satisfaction with involvement in decision making.	1(0.25)	41(10.20)	227(58.56)	134(30.99)
Clients satisfaction on how information were kept confidentially.	1(0.25)	12(2.98)	236(58.56)	154(38.21)
Clients satisfaction with level of care on a visit.	1(0.25)	29(7.21)	271(67.41)	102(25.13)

4.5 Determinants of pregnant women's satisfaction with quality of Antenatal care.

Quality of care was categorized into poor and good using satisfaction variable as discussed in the methodology in (section 3.1.1). Quality of care was rated as been poor and good as seen in the generated variable "satisfaction". The satisfaction variable was then cross-tabulated with the respondents socio-demographic characteristics variables and the results are tabulated in table 4 7.

All the Seven (7) socio-demographic characteristics of the respondents had no effects on quality of ANC services looking at the p-values from the table. From the cross tabulation results, after three quarters of the respondents reported that they were satisfied with quality antenatal services. For example, 90.4%of married women responded being satisfied with the quality of care whiles 98.2% unmarried women reported that they were satisfied with antenatal care services. Chi-square analysis showed that religion had no significant effect on quality of ANC [χ^2 (3) = 3.7065; p = 0.222]

Also, level of education had no significant effect on ANC services. Majority of the respondents had basic education (98%), junior secondary education being (95%), senior secondary constituted (91%) whiles tertiary education (85%) responded that they were satisfied with the quality of care they received at the ANC. However, few respondents had no formal education. Some respondents with and without any form of education expressed their dissatisfaction with the health care services [χ^2 (3) = 8.8786; p= 0.0.53].

Conversely, unlike socio-demographic characteristics, other selected perception predictor variables were significantly associated with satisfaction of care using chi-square test. The variables include provider examination to satisfaction ($p < 0.001$), adequacy of space at the ANC ($P < 0.001$), client being treated with respect by health care providers ($p < 0.001$), provider examination to satisfaction ($p < 0.001$), communication with providers in privacy ($p = 0.017$), client to visit facility again for ANC ($p = 0.001$) and clients to deliver current pregnancy at the facility ($p = 0.028$) were all significantly associated with satisfaction of quality of care. These variables were therefore run in the binary logistic regression model, reporting of the crude and adjusted odds ratio to test for the strength of the association.

Table 4.7: Determinants of pregnant women satisfaction with quality of care services (overall rating)

Socio-demographic variables	Not satisfied	Satisfied	p-value
	No. (%)	No. (%)	No. (%)
Age Category			
15-24	6 (6.98)	80 (93.02)	0.483
25-34	23 (9.47)	220 (90.53)	
35-44	4 (5.41)	70 (94.59)	
Marital Status			
Married	27 (9.57)	225 (90.43)	
Single	1 (1.85)	53 (98.15)	0.222
Divorced/Separate	5 (7.69)	60 (92.31)	
Widowed	0	1 (100)	
Level of Education			
No formal education	2(15.38)	11(84.62)	
Primary education	1(2.38)	41(97.62)	
Middle/JSS	8(5.30)	143(94.70)	0.053
Secondary education	12(9.16)	119(90.84)	
Tertiary education	10(15.15.)	56(84.85)	
Religion			
Muslim	5(9.09)	50(90.91)	
Christian	28(8.16)	315(91.84)	0.865
Others	0	5(100)	
Occupation			
Student	1 (5.26)	12(94.74)	
Apprentice	1 (7.14)	13 (92.86)	
Unemployed	5 (9.09)	50 (90.91)	
Trader	1 (14.29)	6 (85.71)	0.767
Self-employed	11 (8.66)	116 (91.94)	
Employed	7 (5.83)	113 (94.17)	
Farmer	3(9.09)	30 (90.91)	
Others (specify)	4 (14.29)	24 (85.71)	
****Number of ANC visit**			
Once	1	1	
Twice	9	13	
Thrice	25	44	0.554
Four Times	25	28	
More than four times	121	136	
Parity			
Zero	12 (9.76)	111 (90.24)	
One	8(10.39)	69 (89.69)	
Two	8(7.21)	103 (92.79)	0.729
Three	4(6.78)	55 (93.22)	
Four and more	1(3.03)	32 (96.97	
***Fishers exact was used to analyse number of ANC visit**			
Total	**33 (8.91)**	**370 (91.8**	

Variable	Satisfied No. (%)	Odds ratio (CI)	p-value	Adjusted CI	p-value
Explanation of physical findings by health worker	348 (92.55)	0.35 (0.12-1.00)	0.051	0. 32(0.02-60.67)	0.669
Yes	22 (81.48)				
No					
Provider examination to satisfaction	357 (93.95)	0.08(0.03-0.21)	0.000	0.09 (0.031-0.03)	0.000
Yes	13 (56.52)				
No					
Adequacy of space at ANC	296 (94.57)	0.27(0.13-0.55)	0.000	0.41(0.16-1.06)	0.068
Yes	74 (82.22)				
No					
Clients treated with respect by health worker	361 (94.01)	0.06(0.21-0.15)	0.000	0.54(0.02 - 0.18)	0.000
Yes	9 (47.37)				
No					
Communication with providers in privacy	346 (93.26)	7.39(3.18-23.84)	0.017	0.24(0.07-0.81)	0.021
Yes	24 (75.00)				
No					
Clients to visit facility again for ANC	362 (94.01)	0.22(0.089 - 0.53	0.001	0.36(0.46 - 2.86)	0.336
Yes	46 (86.79)				
No					
Clients to deliver current pregnancy at facility	324 (92.84)	0.21 (0.53 - 0.85)	0.028	0.64(0.19 - 2.23)	0.488
Yes	46 (86.79)				
No					

4.6. Logistic regression analysis of predictor of variables of client satisfaction with quality of care.

After controlling for all the other variables, three of the variables were significantly associated with quality of antenatal care in the binary logistic regression model: provider examination to satisfaction ($p < 0.001$), clients treated with respect by health worker ($p < 0.001$) and communication with providers in privacy ($p = 0.021$).

Clients who were of the view that provider examined them to their satisfaction were ten times likely to report satisfaction with quality of ANC compared to those who reported to the contrary (AOR = 0.09; CL 95% (0.031 – 0.03).

Also, client treated with respect increased the odds of reporting satisfaction with quality. That is to say that pregnant women who reported that they were treated with respect were ten times more likely to be satisfied with ANC services than those who reported that they were not treated with respect (AOR 0.54; CL 95% (0.02 – 0.18).

In addition, pregnant women expressed a good satisfaction level in relation to quality ANC when the provider communicated with them in privacy. (AOR 0.24; CL95% (0.07 - 0.81).

CHAPTER FIVE

DISCUSSIONS

5.1 Introduction

This chapter discusses the findings based on the objectives of the study.

5.2 Relationship between socio-demographic characteristics and quality ANC

Providing quality ANC services to pregnant women helps reduce maternal and neonatal morbidity and mortality. The survival of every pregnant woman mostly depends on the quality of care she receives at the ANC. Women's perception and satisfaction or dissatisfaction with ANC services reveals their perceptions about the strengths and weaknesses of the services they receive. This study therefore seeks to assess the quality of ANC services through the assessment of clients' perception and their level of satisfaction with the ANC services.

The study revealed that a little more than half of the respondents (222 out of the 403) were between the ages of 25-34 years. This reveals the ideal age that women gave birth. Again from the study, few women had no formal education. Majority of the women had some form of education rising from the basic level, junior secondary, senior secondary and in the tertiary level. Education is very essential in the life of every woman because it empowers, informs, educates and improves the wellbeing of that woman (Joshi, 2014).

The study was consistent with a similar study done by some researchers who were of the view that socio-demographic factors have no impact on the perception and satisfaction with ANC (Oladapo & Osiberu; 2009).

This finding shows the importance of education among pregnant women as this will reduce maternal and neonatal morbidity and mortality and improve maternal and neonatal health through the utilization of ANC services.

5.3 Health care worker practices

Findings in this study shows the various steps health workers use to render ANC to the pregnant women at the facility. The results showed that health workers took the following histories from the pregnant women at the ANC; personal, social, family, medical, surgical, obstetric, current pregnancy and breast feeding. This shows the following of protocols and standards initiated by the WHO on the type of history that must be taken during ANC services.

Also blood pressure and weight were checked. This is consistent with a study done in Malawi (Mgawadere, 2009). A health facility that has been equipped with apparatus, guidelines and protocols compels health workers to check on vital signs.

From the study it was observed that some of the health care providers from time to time wash their hands frequently after 5-6 times of examinations and this good practice prevents cross-infections from client to client or from client to health care provider or vice versa. However, a study done shows that there is an association between caseload, infection and transmission of micro-organisms that occurred as a result of poor hand hygiene practices (Hughes, 2008). Mahmoud and his friends also through their study reported that pregnant women's assessment and satisfaction with ANC services is linked to proper hand washing. As providers deliberatory wash their hands, clients see it and they are likely to come back to the facility. In their study, hand washing scored very low marks (Mahmoud, Ghani & Berggren; 2011).

Health care providers were observed conducting physical examination, conjunctiva and palms for pallor, oedema and varicosities of the legs and breast abnormalities which usually results in breastfeeding difficulties were also checked.

However, some of the providers did not check for pallor, oedema and breast feeding difficulties. This is very detrimental to the health of the mother and the baby because oedema and anaemia is the only clinical sign of pre-eclampsia. This condition causes morbidity and mortality among pregnant women in most of the developing and the under developed countries.

This is consistent with a study which reported that non-performance of services causes undiagnosed and untreated hypertensive disorders, anaemia and poor maternal outcome (Salam et al., 2015). To address this situation, measures should be put in place to enable health workers follow procedures during examination. Facilities can also adapt evidence based checklists with a list of all necessary steps to follow and use as a guide (Hohenfellner, 2009).

5.4 Infrastructural factors

The checklist used for the observational study showed that the ANC clinic was very clean, had enough space with tables and chairs, waste bins for dry and infectious wastes, sharp containers and hand washing materials. This revelation supports findings of a research which reported that there were availability of chairs, tables and toilets in the waiting area (Lamadar & Elsadah; 2012).

In contrast, another study reported that women had to queue for the services outside examination room due to lack of proper structure with absence of toilet facility for pregnant women. A

general one that the women were allowed to use was also situated at the far end from the facility. Women will have to trek for close to 100 meters before using the place (Mgawadere, 2009).

However, results from the findings indicates that the toilets were clean with water to flush after use.

5.4.1 Availability of guidelines and policies

The results from the checklist indicates that there were availability of guidelines on FANC, malaria in pregnancy and other useful educational topics in pregnancy. However, there were no guidelines on PMTCT and management of pre/eclampsia displayed at the clinic. This absence could lead to non-compliance on the part of the provider.

5.5 Client perception about quality of ANC.

Respondents were of the view that interpersonal relationship with health care providers were good. Table 4.5 also confirms this statement. More than (90%) of the respondents reported that they were treated with respect, their privacy were protected, findings were explained to them, they were examined to their satisfaction, had time to ask any question bothering them and were involved in decision making.

Good client-provider relationship strongly relates to satisfaction in relation to quality of ANC (Assefa et al., 2010). Other authors were also of the view that more than three quarter of the respondents were very satisfied with provider-client interaction (Ladamah & Elsadah; 2012).

Even though majority were of the view that the relationship between client-provider was good, there were few people who were not satisfied with the relationship. This agrees with a study done in Istanbul where there were frequent communication problems in public facilities between

clients, their families and the health care providers (Bulut et al., 2010). In another study in Malawi, health care providers at a district hospital were reported to be unfriendly and unwelcoming (Mgawadere, 2009). Good client-provider interaction ensures utilization of services by the clients.

5.6 Level of satisfaction among pregnant women

Overall level of satisfaction with quality of care in this study is 92%. This is similar to a study done at the Mamobi General Hospital which reported on an overall level of satisfaction in quality FANC to be 96.1% (Gondwe, 2015). It is also similar to a study a study findings conducted in the Volta region which reports of an overall satisfaction of 94% (Degley, 2012). However, in Ethiopia, satisfaction level was rated at 82.9% with similar findings in the Northern Ghana rated at 75% (Duysburgh et al, 2015). This brings to light the differences in quality of care in the rural setting to be lower whiles the provision in the city or urban setting is much higher. The differences can be associated with the availability of staff, equipment, materials and infrastructure available in the urban facilities.

Findings from the study revealed that pregnant women were satisfied with the quality of service given to them and this is consistent with a study done in Nigeria where it confirms the reports that over 95% of pregnant women were satisfied with the care they received at the ANC and would like to use the same facility for future pregnancies and even recommend it to their friends (Adekunle et al, 2008). The high level of satisfaction with quality of ANC in this study can be related to the ability to examine clients' to their satisfaction, clients' being treated with respect and clients' communication with providers in privacy.

Majority of the respondents from the study confirmed having received health education and this is consistent with a study done in Canada (Sword et al., 2012) where women appreciate being given information by clinicians to empower them.

Even though an increased number of people expressed satisfaction with ANC services, there were some discrepancies between the service rendered and client perception and this is in agreement with a study done by Oladapo et al, (2008). It could be of the view that pregnant women expressed satisfaction due to lack of knowledge or do not even have an idea about the kind of study they should expect. Some clients also due to cultural reasons or of fear of not being treated nicely next time she visits the facility or be reprimanded by health workers would not reveal the actual type of service rendered to them as stated by some researchers (Chaboyer et al., 2017).

From the study, almost all the respondents in this study were not satisfied with the time spent at the facility before being attended to especially on days when one has to take a scan. Long waiting time has proven to be one of the factors which consistently is associated with client satisfaction (Do et al, 2018). Waiting time was strikingly long in this study.

This situation is consistent with a similar study done at Woreda and another in Ethiopia where studies have identified that low staff levels in most government facilities where provision of services was inadequate due to poor infrastructure to provide ANC services as compared standards and protocols (Niguse Mekonnen et al., 2017). In this study, women confessed that there was only one provider at the scan room and this makes the service very slow.

A study done in Kenya showed that more than half of the respondents in intervention facilities were dissatisfied with waiting time for all recommended FANC visits (Birungi, 2006). This is an

implication on the quality of services due to lack of required skilled professionals at the facility causing increased waiting time of the clients leading to further decrease in access to service (Niguse Mekonnen et al.,2017).

5.7 Association between selected perception variables and satisfaction with quality of care.

Provider's examination to satisfaction, client treated with respect by health worker and communication with provider in privacy were significant determinants of satisfaction with quality ANC in this study. There are a number of similar studies that agrees or disagrees with this study.

From the study, majority of the women were of the view that any time the health care provider checks on them, they feel so good and satisfied because they get to know that they themselves and their babies were doing well. The women go home feeling very satisfied with the service rendered to them. This is consistent with a study which reported that both health care providers and clients need to discuss the importance of screening and examination as part of quality ANC (Sword et al, 2012).

From the study, findings showed that satisfaction was associated quality of ANC. Provision of privacy of privacy during examination was significantly associated with good care (Kumbani et al., 2012). Their study explains that women were quietly spoken to by the health workers in order to maintain privacy. This is similar to the study where 92.1% of respondents were satisfied with privacy. In another study, it was revealed that 91.6% of married women expressed a significant relationship between health worker's communication in privacy and satisfaction with quality of ANC services (Degleg, 2012). This shows the strength in maintaining privacy during examination and communication with clients to maintain their dignity.

5.8 Study Limitations

- Unmeasured factors may influence clients' satisfaction. This is because clients' expectation and experience with ANC services may vary by social and cultural beliefs and other influences.
- Interviews conducted right in the ANC department might cause the chastisement from providers. On the other hand, interviewers gave the assurance on anonymity, confidentiality of the responses and the information provided that what they have said will not affect future care to minimize the mentioned limitation.

The time and resources was limited to ascertain the reason why almost all the respondents reported of not having done the Hepatitis B text.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter discusses the overall conclusion for the study based of the study objectives.

The recommendations are what the researcher recommended for the facility based on the findings of the study.

6.2 Conclusion

Findings from the study reported that quality of antenatal care in the Achimota Hospital was good.

- The overall of satisfaction is 92% which shows that majority of the pregnant women who accessed the hospital were satisfied with the care they receive. Provider examination to satisfaction, client treated with respect by health worker and communication with provider in privacy were significant determinants of satisfaction with quality ANC in this study.
- The process of ANC was good. Laboratory investigations were being performed by the clients'. Clients were educated, counselled and examined. Good interpersonal relationship exists between providers and clients.

  However, the study showed that long waiting time contributed to dissatisfaction with ANC services.
- Resources available at the facility to provide the quality of care includes staff, material infrastructure and guidelines to contribute to the provision of quality ANC. In addition, about two thirds of the respondents appreciates the cleanliness of the facility.

However, non-availability of important guidelines on PMTCT and management of pre-eclampsia can affect the provision of quality ANC services.

- Socio demographic factors have no effect on perception and satisfaction in qualityANC.

6.3 Recommendations

Results from this study suggested the following recommendations:

- Guidelines on PMTCT and prevention of pre/eclampsia should be added to the already existing guidelines.
- In-service training can from time to time be organized to equip staff with more skills and knowledge.
- One or two personnel should be trained in addition to the personnel responsible for the scan taking. Task sharing becomes very necessary at this point. This mainly was the reported reason behind the unnecessary long waiting hours.
- The in charge of the ANC and the labour ward can intentionally involve the women in depth interview or focus group discussion to know their perception and satisfaction in the care that they are receiving.

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APPENDICES

Appendix A: Consent form for Pregnant Women

RESEARCH TITLE: An assessment of quality of antenatal care at the Achimota Hospital in Greater Accra region, Ghana.

Principal Investigator: Gifty Asabea Mensah, Department of Population, family and Reproductive Health, School of Public Health, College of Health Sciences, University of Ghana, P. O. Box LG 13, Legon.

Contact: Mobile; 0243573174

Email: giftkwas@hotmail.com

General Information About The Study

This is a research study being undertaken by graduate students of the School of Public Health, University of Ghana, as part of the requirements for the Master of Public Health degree. The study seeks to assess the quality of care pregnant women receive at the antenatal care, structural factors, health care workers' the process of antenatal care services in Achimota Hospital. Quality of antenatal care is important because it has effects on health status of both the mother and the baby. Studies have revealed that several factors contribute to poor quality of ANC services including inadequate resources, medical supplies and drugs and poor provider client relationship. In the Greater Accra region, little is known about the quality of ANC services provided to pregnant women. The aim of the study is to assess the quality services given at the ANC in Achimota Hospital in Accra.

Procedures:

Pregnant women aged 15- 49 years who are attending ANC services at this facility will be included in the study. The study will involve answering questions from a questionnaire about perception of quality of service delivery at antenatal care provided at the Achimota Hospital. If you are eligible and agree to participate, you will be required to respond to some questions. We will ask you questions about your background and a set of questions on how you perceive quality service delivery. The interview is expected to last 30 minutes.

It will be appreciated if you could participate in this study. This is purely academic research which forms part of my work for the award of a Master's Degree in Public Health.

Risks and Discomforts

The procedures involved in this study are non-invasive but may psychologically cause minimal discomfort to the participants. This is because participants may share some personal or confidential information or they may feel uncomfortable talking about some of the issues outlined.

Possible benefits

There are no direct benefits to the participant of the study. However, the information provided, will contribute to overall knowledge about quality of ANC offered at the facility. Results of the study will be used to improve antenatal care at the Achimota Hospital.

Voluntary participation and right to refuse

Your participation in this study is voluntary. During the interview you can choose not to answer any individual question or all the questions. Additionally, you are at liberty to withdraw from the study at any time. However, I will encourage you to fully participate in the study since your opinions are important in helping us to assess the quality of ANC provided at this Hospital.

Anonymity and Confidentiality

You are assured that whatever information is provided on the questionnaire will be handled with strict confidentiality. Your name or personal identification information will not be published in any report. Information submitted would not be shared with anybody who is not part of the study. Some staff of the research team may sometimes review the research records, but no unauthorized individual(s) will be able to access your information.

Compensation

There is no compensation for participating in this study. However, we will give you light refreshments to commend you for the participation in the study and also helping us with information on perception of quality of service delivery at this Hospital.

Contact for additional Information

If you have questions later, you may contact: Gifty Asabea Mensah, Department of Population, family and Reproductive Health, University of Ghana School of Public Health College of Health Sciences P. O. Box LG 13, Legon Mobile: 0243573174 Email: giftkwas@hotmail.com.

Your rights as a participant if you have any questions about your rights as a research participant, you can contact the Administrator of the Ghana Health Service Ethical Review Committee at the following address:

Hannah Frimpong

GHS-Ethical Review Committee Research and Development

Division Ghana Health Service

P. O. Box MB 190, Accra

Office: 0302 681 109 Mobile: 024 451 6482

Email: Hannah.Frimpong@ghsmail.org

Voluntary Consent

I _____, declare that the above document describing the purpose, procedures as well as risks and benefits of the research titled "AN ASSESSMENT OF QUALITY OF ANTENATAL CARE AT THE ACHIMOTA HOSPITAL" has been thoroughly explained to me in English/Twi/ Ga language. I have been given the opportunity to have any questions about the research answered to my satisfaction. I hereby voluntarily agree to participate as a subject in this study.

_____ _____/_____/_____

Signature or Mark of Participant Date

If participant cannot read the form themselves, a witness must sign here.

I, _____ was present while the purpose, procedures as well as risks and benefits were read to the participant. All questions were answered and the participant has voluntarily agreed to participate as a subject in this research study.

…….. _____/_____/_____

Signature of witness Date

Interviewer's Statement:

I, _____, certify that the nature and purpose, the potential benefits and possible risks associated with participating in the study have being explained to the above individual in the English/Twi/Ga language. The participant has freely agreed to participate in the study.

…… _____/_____/_____

Signature of person who obtained consent. Date

Appendix B: Consent form for Health Workers in the ANC department

RESEARCH TITLE: An assessment of the quality of antenatal care Achimota Hospital in Greater Accra region, Ghana.

Principal Investigator: Gifty Asabea Mensah, Department of Population, family and Reproductive Health School of Public Health, College of Health Sciences, University of Ghana, P. O. Box LG 13, Legon.

Contact: Mobile; 0243573174

Email: giftkwas@hotmail.com

General Information about the Study

This is a research study being undertaken by graduate student of the School of Public Health, University of Ghana, as part of the requirements for the Master of Public Health degree. The study seeks to assess the quality of care pregnant women receive at the antenatal care, structural factors, health care workers' the process of antenatal care services in Achimota Hospital. Quality of antenatal care is important because it has effects on health status of both the mother and the baby. Studies have revealed that several factors contribute to poor quality of ANC services including inadequate resources, medical supplies and drugs and poor provider client relationship. In the Greater Accra region, little is known about the quality of ANC services provided to pregnant women. The aim of the study is to assess the quality services given at the ANC in Achimota Hospital in Accra.

Procedures:

Health workers rendering ANC services at the facility will be asked to participate in the study. The study will involve answering questions from an interview guide about quality of antenatal care rendered at the Achimota Hospital. An observational checklist will be used to collect data on structural factors that hinders the quality of the ANC service. If you are eligible and agree to participate, you will be required to respond to some questions. We will ask you questions about your background and a set of questions on how factors affect quality service delivery. The interview is expected to last 30 minutes.

It will be appreciated if you could participate in this study. This is purely academic research which forms part of my work for the award of a Master's Degree in Public Health.

Risks and Discomforts

The procedures involved in this study are non-invasive but may psychologically cause minimal discomfort to the participants. This is because participants may share some confidential information about the facility which will seem as if one is exposing the facility to the public. We will ask questions about your background and facility factors that affect provision of quality ANC. Should you feel uncomfortable to respond to some of the questions, are free to skip and not answer them.

Possible benefits

There are no direct benefits to the participant of the study. However, the information provided, will contribute to overall knowledge about quality of ANC offered at the facility. Results of the study will be used to improve antenatal care at the Achimota Hospital.

Voluntary participation and right to refuse

Your participation in this study is voluntary. During the interview you can choose not to answer any individual question or all the questions. Additionally, you are at liberty to withdraw from the study at any time. However, I will encourage you to fully participate in the study since your opinions are important in helping us to assess the quality of ANC provided at this Hospital.

Anonymity and Confidentiality

You are assured that whatever information is provided on the questionnaire will be handled with strict confidentiality. Your name or personal identification information will not be published in any report. Information submitted would not be shared with anybody who is not part of the study. Some staff of the research team may sometimes review the research records, but no unauthorized individual(s) will be able to access your information.

Compensation

There is no compensation for participating in this study. However, we will give you light refreshments to commend you for the participation in the study and also helping us with information on perception of quality of service delivery at this Hospital.

Contact for additional Information

If you have questions later, you may contact: Gifty Asabea Mensah, Department of Population, family and Reproductive Health. University of Ghana School of Public Health College of Health Sciences P. O. Box LG 13, Legon Mobile: 0243573174 Email: giftkwas@hotmail.com.

Contact for Additional Information

If you have questions later, you can contact:

Gifty Asabea Mensah

Department of Population, Family and Reproductive Health

University of Ghana School OF Public Health

College of Health Sciences

P.O.BOX LG 13, Legon

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Your rights as a participant if you have any questions about your rights as a research participant, you can contact the Administrator of the Ghana Health Service Ethical Review Committee at the following address:

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Email: Hannah.Frimpong@ghsmail.org.

Voluntary Consent

I _____, declare that the above document describing the purpose, procedures as well as risks and benefits of the research titled "AN ASSESSMENT OF QUALITY ANTENATAL CARE AT ACHIMOTA HOSPITAL" has been thoroughly explained to me in English/Twi/ Ga language. I have been given the opportunity to have any questions about the research answered to my satisfaction. I hereby voluntarily agree to participate as a subject in this study.

_____ _____/_____/_____

Signature or Mark of Participant Date

Interviewer's statement:

I, _____, certify that the nature and purpose, the potential benefits and possible risks associated with participating in the study have being explained to the above individual in the English/Twi/Ga language. The participant has freely agreed to participate in the study.

……. _____/_____/_____

Signature of person who obtained consent. Date……

Appendix C: Structured questionnaire Respondent ID…….

SCHOOL OF PUBLIC HEALTH

COLLEGE OF HEALTH SCIENCES.

UNIVERSITY OF GHANA

Questionnaire on Assessment of Quality Antenatal Care among pregnant women in the Achimota Hospital.

Name of Interviewer: _____ Date: __________\

Questionnaire on interview

Questions

NO	**Demographic Data**	**Responses**
1	What is your age? (In completed years)	
2	What is your marital status? (Circle one)	1.Married 2. Cohabitation 3. Single\Never married

		4. Divorced\Separated 5. Widowed
3	What is your highest educational level? (Circle one)	1.Formal Education 2.Primary\Basic 3.Middle\JHS 4.Secondary\\SHS 5.Tertiary
4	What is your religious affiliation? (Circle one)	1.Moslim 2.Christian 3.Traditionalist 4.Other specify
5	What is your occupation? (Circle one)	1.Student 2.Apprentice 3.Unemployed 4.Farmer

		5.Trader 6.Self employed 7.Government employee 8.Other Specify
6	Is this your first pregnancy? (circle one)	1.Yes 2.No
7	About how many times have you visited this facility with this pregnancy? (circle one only)	1.Once 2.Twice 3.Thrice 4.Four times 5.More than four times
8	How many births (Parity) have you given to before? (Circle one only).	1.One 2.Two 3.Three 4.Four

	Provider's Competence	
9	a) Did you start ANC clinic (initial visit) at this facility.	1.Yes 2.No
10	If yes, what history did the care provider take from you when you came from the clinic during initial visit?(probe end circle as many as you can)	1.Personal history (Yes \No) 2.Social history (Yes \No 3.Family history (Yes \No) 4.Medical history (Yes\No) 5.Surgical history (Yes\No) 6.Obstetric history (Yea\No 7.History for current pregnancies (Yes\No 8. Breast feeding history(Yes\No

11	What examinations does the health care provider perform on you during your stay with her in the room? (Probe and circle as many as possible).	. 1, Blood pressure (Yes\No) 2. Weigh (Yes\No) 3. Pallor (Yes\No) 4. Oedema (Yes\No) 5. Breast (Yes\No) 6. Fundal height(Yes\No) 7 Foetal presentation (Yes\No) 8 Listen to foetal heart sound (Yes\NO)
12	Were the laboratory tests done when you last visited this facility? (circle one)	1.Yes 2..No 3..N\A

Investigations		
13	If yes, were the following tests done on you? (circle all that apply	1.Heamoglobin 2. Grouping and cross matching 3. Rhesus Factor 4. VDRL /Syphilis 5. .urine and protein 6. Urine for glucose 7. HIV testing 8. Hepatitis B
Client perception		
14	How will you rate the readiness of the staff to listen to your problems? (Circle one only).	1.Not at all 2,Fairly ready 3.. Ready 4. Very ready
15	Did the health care provider explain the findings or tell you what was wrong with you? (Circle one).	1.Yes 2..No

16	Did the health worker explain findings to you in an easy to understand language? (Circle one)	1.No 2. Yes
17	In your opinion, did the health care provider examine you to your satisfaction? (Circle one.)	1.Yes 2.No
18	How will you rate quality of care provided by staff at this facility? (Circle one only.	1.Poor 2.Fair 3.Good 4.Very good
19	In your opinion, was the health care provider's skills and knowledge adequate to provide care? (Circle one).	1.Yes 2.No
Drugs and suppliers		
20	Were you given some medications (SP/Fansidar) to take under the	1.Yes

	observation of the health care provider? (circle one)	2.No
21	Apart from SP/Fansidar, were you given or prescribed other medications? (circle one)	1.Yes 2.No
22	Were the instructions clear about the drugs you were given or prescribed? (Circle one).	1.Yes 2.No

Infrastructural factors		
23	How would you rate the cleanliness of this facility? (Circle one only).	1.Not clean 2.Fairly clean 3.Clean 4.Very clean
24	In your opinion, was the health care provider's equipment adequate for your antenatal care services? (circle one)	1.No 2.Yes
25	In your opinion, is the space adequate for offering of ANC services (circle one)	1.Yes 2.No
26	How would you rate the comfort of the waiting area? (circle one only)	1.Not comfortable 2.Fairly comfortable 3.Comfortable 4.Very comfortable

Provider-Client interaction		
27	How would you rate the amount of time you waited before being attended to? (Circle one only).	1. Very long waiting time (more than one hour). 2. Long waiting time (30min-one hour). 3. Not long waiting time (20-30min. 4. No waiting time(less tha 20 min).
28	Normally, have you been treated with respect by members of staff? (circle one only)	1.Yes 2.No
29	How would you rate the way your privacy was respected during physical examination? (Circle one only).	1.Poor 2.Fair 3.Good 4.Very Good

30	How would you rate your experience of getting enough time to ask questions about your care/problems if any? (circle one only)	1.Poor 2.Fair 3.Good 4.Very good
31	To what extent have you been involved in making decisions about your antenatal care? (circle one only)	1.Not involved at all 2.Somewhat involved 3.Involved 4Very involved
32	Were you able to communicate with providers in privacy (circle one only	1.Yes 2.No
33	How would you rate the way your personal information was kept confidential? (circle one only) i.e. client folders, laboratory results etc.	1.Poor 2.Fair

		3.Good 4.Very good
If the answer to question 23-31 is poor/no/not involved, ask the following question In your own opinion, you think you were NOT treated well by health workers because of you? (circle one for Q34 - 38)		
34	Age	1.Yes 2.No
35	Parity (Number of births)	1.Yes 2. No
36	Social class	1.Yes 2.No
37	Type of problem or illness	1.Yes 2.No

38	Missing appointment	1.Yes 2.No
Satisfaction		
	In general, how would you rate the quality of care you have received during today's visit? (circle one only)	1.Poor 2.Fair 3.Good 4.Very good
40	Would you want to come to this facility again before you deliver? (circle one)	1.Yes 2.No
41	Would you like to deliver your baby at this facility? (circle one only)	1.Yes 2.No

I would like to thank you for your time

Appendix D

An assessment of quality antenatal care at Achimota Hospital in the Greater Accra Region.

Interview\ Observation date ……..\.....\.....

Name of observer\Interviewer…….

NO.	ITEM	NO	YES	REMARKS
	PART A :FACILITIES AND SUPPLIES			
1	**General Infrastructure**	1	2	
	Cleanliness of the building	1	2	
	Space availability of the building	1	2	
	Cleanliness of the examination area	1	2	
2	**Facilities sanitation**	1	2	
	Cleanliness of the - bathrooms	1	2	
	- toilets	1	2	
	-Slice rooms	1	2	
3	Privacy	1	2	
4	Adequate light	1	2	

5	Availability of tables and chairs for daily activities	1	2	
6	Adequacy of examination coaches	1	2	
7	**Infection prevention measures taken**	1	2	
	Hand washing	1	2	
	Decontamination	1	2	
	Cleaning	1	2	
	High level disinfection sterilization	1	2	
	Sterilization	1	2	
	Alcohol spirit swabs present	1	2	
	Antiseptic hand rub present	1	2	
	Gloving	1	2	
	Waste disposal according to standards	1	2	
	-sharps	1	2	
	-wet waste in a bin with liner	1	2	
	- dry waste disposal separately	1	2	
8	**Availability of drugs and supplies**	1	2	

	Anticonvulsants I. e Diazepam	1	2	
	Magnesium Sulphate	1	2	
	Anti-malaria drugs	1	2	
	Ferrous Sulphate	1	2	
	Folic acid	1	2	
	Albendazole	1	2	
	I.V fluids	1	2	
	Needles and syringes	1	2	
	Availability of cleaning materials	1	2	
	Stationery	1	2	
	Disinfectants	1	2	
	Sterile gloves	1	2	
	Disposable gloves	1	2	
	Heavy duty gloves	1	2	
	Soap for hand washing	1	2	
9	**Availability of policies, guidelines and protocols**	1	2	
	FANC guidelines	1	2	

	PMTCT guidelines	1	2	
	Management of malaria in pregnancy	1	2	
	Management of pre/eclampsia in pregnancy	1	2	
	Reproductive health standards	1	2	
	Infection prevention guidelines	1	2	
	HIV testing in pregnancy	1	2	
10	**IEC materials displayed**	1	2	
	PART B: OBSERVATION OF ANTENATAL CARE PROCESS			
	List/number of health workers allocated to ANC clinic by cadre/post			
	Designation of Antenatal service provider			
	Does the start the clinic according to displayed schedule	1	2	

11.	Does the midwife greet client respectfully	1	2	
	Client registered using HMIS	1	2	
	Comprehensive history taking	1	2	
	Social history	1	2	
	Family history	1	2	
	Past medical / surgical history	1	2	
	Past obstetric history	1	2	
	Past breastfeeding history	1	2	
	Information of present pregnancy	1	2	
12	**Observation and clinical investigation**	1	2	
	checks blood pressure	1	2	
	checks weight	1	2	
	observes gait	1	2	
	prepares materials necessary for examination process	1	2	
	Ensures privacy	1	2	
	Prepares materials necessary for examination process	1	2	

	and explains procedure to clients	**CIRCLE THE APPROPRAITE OBSERVATION**		
	Washes hands before examination	1	2	
13	**Conducts head to toe examination**	**CIRCLE THE APPROPRAITE OBSERVATION**		
	Head	1	2	
	Conjunctiva for pallor	1	2	
	Neck	1	2	
	Hands	1	2	
	legs for varicosities and pedal oedema	1	2	
	Vulva inspection for soft tissue	1	2	
	Genital ulcers	1	2	

	Vaginal discharge	**CIRCLE THE APPROPRAITE OBSERVATION**		
	Bleeding	1	2	
14	**Abdominal Examination**	**CIRCLE THE APPROPRAITE OBSERVATION**		
	Inspects abdomen for any abnormalities	1	2	
	Estimates for fundal height	1	2	
	Checks Foetal presentation	1	2	
	Listens and counts Foetal heart sounds	1	2	
	Conducts pelvic assessment (cephalo pelvic relationship)	1	2	
	Communication with client throughout the procedure and gives her feedback on the findings of physical, obstetric and any other procedures done	1	2	

15	**Laboratory Investigation**	**CIRCLE THE APPROPRAITE OBSERVATION**		
	Blood -for heamoglobin	1	2	
	-Grouping and cross matching	1	2	
	-Rhesus factor	1	2	
	-VDRL (Syphilis)	1	2	
	-Urine for protein	1	2	
	-Urine for sugar	1	2	
	Urine for Acetone	1	2	
16	**Breast examination inspection**	1	2	
	Palpation preparation for breast feeding	1	2	
17	**Drug and vaccine administration**	**CIRCLE THE APPROPRAITE OBSERVATION**		
	SP (Ipt P)	1	2	
	folic acid	1	2	
	Iron Sulphate	1	2	

	Tetanus Toxoid Vaccine	**CIRCLE THE APPROPRAITE OBSERVATION**		
	Sterile procedure followed	1	2	
18	**Information and counselling given to client before being examined on any of the following**	**CIRCLE THE APPROPRAITE OBSERVATION**		
19	Process of pregnancy and its complications	1	2	
	Diet / nutrition	1	2	
	Minor disorders	1	2	
	Personal hygiene	1	2	
	Danger signs in pregnancy	1	2	
	Exclusive breastfeeding	1	2	
	Harmful habits	1	2	
	Smoking	1	2	
	Drug abuse	1	2	
	Alcoholism	1	2	
	Traditional herbs to induce labour	1	2	
	Plans for place for delivery	1	2	

	Postnatal care	1	2	
	Schedule for next visit	1	2	
	Effects of STI/HIV/AIDS	1	2	
	Does the midwife refer at risk clients with abnormal findings to the next level of care	1	2	
	Does the midwife schedule and communicate to client date of next visit?	1	2	