ENSIGN COLLEGE OF PUBLIC HEALTH, KPONG, EASTERN REGION, GHANA

FACTORS INFLUENCING UPTAKE OF SKILLED DELIVERY IN SOUTH SENCHI IN THE ASUOGYAMAN DISTRICT OF THE EASTERN REGION OF GHANA

By

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A Thesis submitted to the Department of Community Health in the Faculty of Public Health in partial fulfilment of the requirements for the degree

MASTER OF PUBLIC HEALTH

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DECLARATION

I hereby declare that except for reference to other people's work, which I have dully cited, this project submitted to the School of Graduate Studies, Kwame Nkrumah University of Science and Technology, Kumasi is the results of my own investigation and has not been presented for any other degree elsewhere.

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DEDICATION

I dedicate this work to my Paddy and Dr. /Mrs. Inam Mfon Jackson Ibanga, it is indeed a great privilege.

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DEFINITION OF TERMS

Antenatal care: Care (preventive and curative) that is given to the pregnant woman and the fetus, up to the onset of labor.

Health facility: A physical dwelling structure with equipment and medications for the successful rendering of both curative and preventive health care services.

Maternal morbidity: This refers to any health condition that is attributed to and/or aggravated by pregnancy and childbirth with a negative impact on the woman's wellbeing.

Maternal mortality: The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes. Tenth International Classification of Diseases

Maternal mortality ratio: This refers to the number of maternal deaths per 100,000 live births.

Parity: The number of children previously born alive to a woman.

Safe Motherhood Initiative: Ensuring that all women receive the care they need to be safe and healthy throughout pregnancy and childbirth.

Skilled birth attendance: This involves the supervision of delivery by a skilled health worker in an enabling environment which is defined as including adequate supplies, equipment, transport and effective communication systems.

Skilled birth attendant: A medically qualified provider (midwife, nurse, doctor) who has been trained to proficiency in the skills necessary to manage normal deliveries, diagnose and manage, or refer obstetric complications.

Skilled delivery: Deliveries handled by trained service providers which include trained midwives, nurses and doctors both in the public and private sectors.

Traditional birth attendant (TBA): Referred to as a community-based provider of care to a woman during pregnancy and childbirth.

Women in Reproductive age (WIRA): Women in the years of life between menarche and menopause, usually between15-49

ABBREVIATIONS/ACRONYMS

ANC	Antenatal Care
CHAG	Christian Health Association of Ghana
CHPS	Community based Health Planning Services
GDHS	Ghana Demographic and Health Survey
GHS	Ghana Health Service
IEC	Information Education and Communication
MDG	Millennium Development Goals
TBA	Traditional Birth Attendance
UN	United Nations
UNFPA	United Nations Population Fund
VRA	Volta River Authority
WIRA	Women in Reproductive Age
WHO	World Health Organization

ABSTRACT

Introduction

Skilled attendance during delivery is a key strategy for the reduction of maternal morbidity and mortality. However, more than 40% of births in rural areas in Ghana still occur outside of health facilities without skilled attendants, with these births supported by family members or traditional birth attendants (TBAs)

Method

A cross sectional survey was carried out from February to March 2016 to identify the factors that influence the uptake of skilled delivery in South Senchi and to recommend possible ways to improve women's uptake of skilled delivery.

A purposive sampling technique was used to select the sample size of 200 (two hundred) women of reproductive age 15-49 who delivered within the period January 2012-December 2015 and semi-structured questionnaires were used for the interview by trained field staff.

Results

About 75% of respondents had used skilled delivery, indicating a high knowledge of the importance of using skilled delivery. The significant factors that influenced the uptake of skilled delivery were: maternal age, antenatal care attendance, knowledge of importance of skilled delivery and possession of valid health insurance policy.

Conclusion

The study recommended information, education and communication programs to increase awareness of importance of skilled delivery in rural areas. Also collaborative efforts from all sectors could be made to ensure all women have access to skilled attendance during pregnancy and delivery.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Pregnancy and childbirth are events that should bring joy to families and the society, but sometimes it turns out to be a source of sorrow, particularly for women in developing countries, the reality of motherhood is often grim and most times marred by unforeseen complications or even a loss.

"Every minute, everyday a women dies from pregnancy and childbirth related causes and at least for every woman who dies, 20 more women each minute suffer injury or disease as a result of childbirth, often with long-term consequences". UNICEF 2008.

The loss of a mother usually shatters a family and threatens the well-being of other surviving children. What is more unfortunate is that the vast majority of deaths need not occur and can often be prevented. The term maternal mortality is defined by the World Health Organization as the death of any woman while pregnant or within forty two completed days of termination of pregnancy irrespective of duration or site of pregnancy, from any cause related to or aggravated by pregnancy but not from accidental or incidental causes. Skilled attendance at childbirth is crucial for decreasing maternal mortality, still many women in low- and middle-income countries deliver outside of health facilities without skilled attendance during delivery(WHO, 2008).

The World Health Organization defines skilled attendance at birth or skilled delivery as the care provided to a woman and her newborn during pregnancy, childbirth and after

birth by a competent and accredited health care provider who has at her/ his disposal the necessary equipment, the support of a functioning health system, with transport and referral facilities for emergency obstetric care. A "skilled health worker" is an accredited health personnel example a midwife, nurse or a doctor that has been educated and trained to proficiency in the skills for the management of normal or uncomplicated pregnancies, childbirth and care during the immediate postnatal period, and in the management and referral in the case of complications" (World Health Organization, 2004).

Traditional birth attendants (TBA) whether trained or not, are not regarded as skilled health workers, they are non-formally trained and are community based providers of care during pregnancy and the postpartum period.(Pfeiffer & Mwaipopo, 2013)

The term skilled birth attendance involves the supervision of delivery by a skilled health worker in an enabling environment which is defined as including adequate supplies, equipment, transport and effective communication systems. It was also suggested that an enabling environment should include broad factors like political will and sociocultural influences, the education and continuous training of skilled attendants at all levels, and efficient supervision and deployment of skilled staff. (Adegoke et al 2009)

It is recognized that in addition to a range of interventions before, during and after pregnancy, ensuring that all births are attended by a skilled health worker is a key strategy to reduce maternal deaths on the basis of historical data and observational evidence on the association between having a skilled worker at delivery and reduced maternal mortality (Graham et al 2001).

It is also recognized that access to skilled care of good quality will contribute to reducing maternal, prenatal and postnatal mortality(Pearson et al 2007). The term skilled delivery is synonymous to skilled birth attendance which means the woman giving birth is observed and assisted by a skilled health personnel (Adegoke et al 2009).

Despite widespread gains in access to antenatal care and skilled delivery attendance, contributing to a 45% global reduction in Maternal Mortality Ratio over the past quarter century, still annually nearly 300,000 women die globally from pregnancy and childbirth-related causes with an alarming 99 percent of these deaths occurring in low income countries.(Alkenbrack et al 2015)

As the Millennium Development Goals (MDGs) era just ended, there is evidence that the least progress has been made toward the maternal health goal (MDG 5) which was aimed at reducing the maternal mortality ratio (MMR) by three quarters between 1990 and 2015 and to achieve universal access to reproductive health by 2015.(Alkenbrack et al., 2015)

In Ghana, the maternal mortality ratio is estimated to range from 214 to 700 per 100,000 live births with existing disparities between the urban and rural areas. These figures have persisted, despite various policies and initiatives including the introduction of a free Maternal and Child care policy and Safe Motherhood initiative. Ghana also has growing social inequalities for this indicator, with rates of skilled attendance either stagnant or declining for poorer women and women in rural areas.(Witter et al., 2007)

From the Ghana Health Service Family Health report 2014, some of the contributory factors to maternal deaths were as listed below;

- Personal/ Family/ Community Factors: delay in mother seeking care, inability to identify danger signs, poverty, lack of transportation especially in the rural community, client declining treatment on socio-cultural grounds.
- Transport and communication challenges: non-motorable roads, poor communication system, inadequate number of ambulances in the regions, delayed response from ambulance service, client paying for ambulance services.
- Logistics and facility related issues: inadequate logistics and supplies for the provision of essential obstetric care services (both basic and comprehensive).
- Health personnel related problems; these include poor assessment of clients during antenatal visits coupled with poor documentation of ANC records of clients, poor management of labor, poor skilled staff strengths in terms of numbers, and the unacceptable attitudes of staff. (Ghana Health Service, 2014).

In most of the developed countries, the proportion of women accessing skilled attendance is about 99.5percent, on the other hand, 46.5 percent and 65.4 percent of women gave birth with skilled assistance in Africa and Asia respectively (2008 Updates Proportion of births attended by skilled attendant – WHO).

The reasons for women's low utilization of skilled attendance or skilled delivery during pregnancy and childbirth are many layered. Aside the logistic causes are, failure in health care systems due to lack of resources or personnel, lack of transportation to facilities and behind these are social, cultural and political factors which together determine the status of women, their health, fertility and health seeking behavior.(Fekadu et al 2014)

Several studies from developing countries have recognized that socioeconomic factors and the service delivery environment are important determinants of skilled delivery uptake, examples include the quality of care, distance to health facility, lack of transport, women's social status, age, caste, religion, educational levels, financial status of the household, lack of autonomy, the ability to make decisions and cultural norms are some of the factors that were found to be associated with the utilization of maternal healthcare services in different settings. (Singh et al 2014)

1.2 Problem Statement

Improving maternal and reproductive health remains a major challenge in most low-income countries especially in sub-Saharan Africa. The most recent figures from the Ghana Demographic and Health Survey (GDHS 2014) indicates the number of women dying due to pregnancy related complications has stagnated at 214-700 per 100,000 live births with rural communities showing higher rates. In Ghana one in 35 women has a risk of dying from pregnancy-related causes in her lifetime as compared with that of a woman in northern Europe whose risk is one in 4000 (WHO, UNICEF and World Bank, 2008).

According to WHO (2004), by the year 2015, 90.00% of pregnant women globally should be supervised by skilled attendants during delivery, The Ghana 2014 Demographic and Health Survey Report shows that ninety-one percent of births to urban mothers were assisted by a skilled health provider and 91 percent were delivered in a health facility, as compared with 59 percent and 58 percent, respectively, of births to rural women. Although Ghana has met the target of 90 percent of births in urban areas, rural areas are still lagging behind with only 59 percent of births being attended by a skilled provider.

Inspite of the free maternal and child health policy initiatives to reduce cost of care and the creation of CHPS compounds to increase access to maternal health services in rural areas, the disparities still exist (Witter et al., 2007). There is therefore the need to research into the problem to gain insightful knowledge for effective solutions.

1.3 Rationale of the study

Evidence has shown skilled birth attendance to be the most simple and effective intervention that can contribute to reduction in maternal and neonatal death in developing countries where resources are scarce (UN, 2013; WHO & Black 2011).

It is also recognized that having access to skilled delivery care of good quality will contribute to reducing maternal mortality and morbidity, but the lack of access to health facilities especially for those in the rural areas is a major barrier to the uptake of skilled delivery care. (Esena et al 2013)

The utilization of maternal healthcare is a complex phenomenon influenced by several factors**.** Although distance and transportation certainly play a part, socio-cultural and economic factors play an equally large role, a combination of cultural beliefs and practices, male-dominance, low status of women and high fertility are significant contributing factors, especially in sub-Saharan Africa (Nwokocha, 2007). So far, there have been a few population (community) based studies carried out in Ghana regarding factors that influence maternal health service utilization; most of these studies have been institution based and without an understanding of the social determinants of reproductive and maternal health care utilization from the perspective of the target population, effective policy interventions will prove to be very difficult.

This study therefore aims at looking at the factors that influence the uptake of skilled delivery in South Senchi. The outcome of the study will also provide information which will be a guide to help increase the coverage on skilled attendance during child birth.

1.4 Conceptual framework

This study will be guided by The Three Delays Model, a pioneering framework by Thaddeus & Maine that outlines the three delays that lead to maternal mortality.

According to the "three delays" model, the three main inhibitors to health care service utilization include;

i) The delay in deciding to seek care,

ii) The delay in reaching an adequate health care facility,

iii) The delay in receiving adequate care at the facility (Thaddeus & Maine, 1994).

1.4.1 The First Delay - deciding to seek care

The first delay may be due to a range of socioeconomic and cultural characteristics which could include, the absence of the decision maker from the household, the low status of the woman which prevents her from making any decisions about her health and that of her child, cost of health care and previous non-satisfactory experiences with the health care system and perceived low quality of care (Kesterton et al 2010).

1.4.2 The Second Delay - identifying and reaching a health facility

The second delays may be due to the distance from facility, the lack of transportation, difficult terrains and the high cost of transportation. 'The accessibility of services plays a dual role in seeking healthcare process. On the one hand it influences people's decision

to seek care and on the other hand, it also determines time spent in reaching a health facility after the decision to seek care has been made'(Zone & Jackson, 2008). In rural areas delays due to distance and the unavailability of transportation are common. People may have to travel long distances over difficult terrain to reach the few medical facilities that exist.

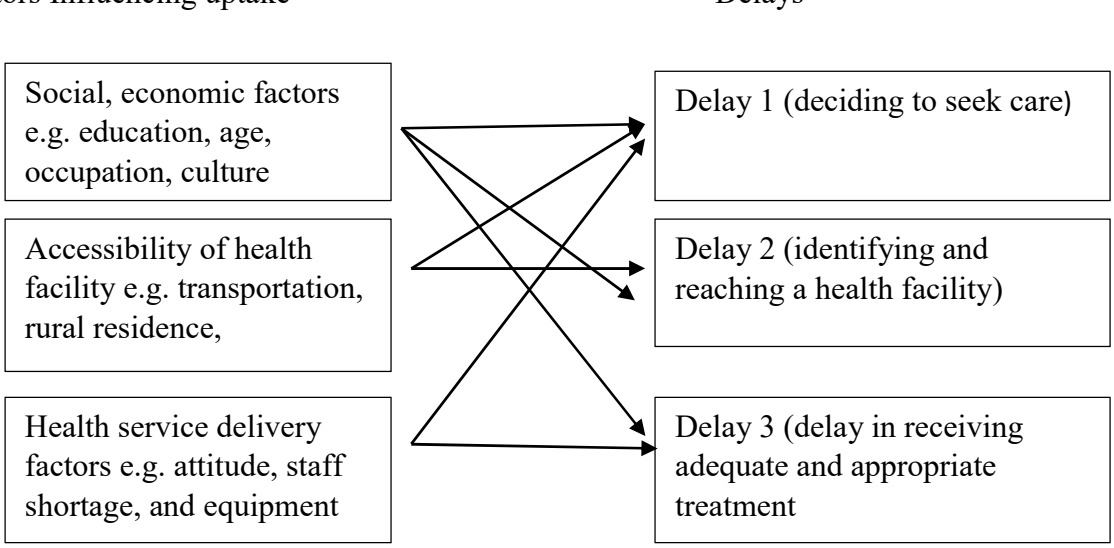
Secondly, the scarcity of transportation means that rural people often have to walk or improvise transportation to reach a medical facility. During this time the patient's condition can deteriorate making the condition more difficult to treat on arrival. In addition, reaching a health facility does not mean the end of the journey as the nearest health facility may not be equipped to treat the condition or even administer essential first aid so patients are referred to another facility that is better equipped.

1.4.3 The Third Delay - delay in receiving adequate and appropriate treatment

The Third delay delineates delays in receiving appropriate treatment in a health facility. This is mainly related to the quality of care and shortages of trained qualified personnel, supplies and equipment at the facility.

Each of these delays are influenced by underlying individual, societal, social, economic and cultural factors as outlined below.

Figure 1.1 Conceptual Framework on factors influencing uptake of skilled delivery.



Adapted from (Thaddeus & Maine, 1994)

1.5 Research Question

The study based on established objectives will ask the following questions;

1. What proportion of women in the community access skilled delivery?
2. What are the individual, familial, social, cultural and healthcare factors that influence the uptake of skilled delivery?
3. How do these factors influence the uptake of skilled delivery?

1.6 Study Objectives

The general objective of the study is to identify the factors that influence the uptake of skilled delivery in South Senchi community with specific objectives listed below

1. To describe the proportion of mothers who access skilled delivery in the community.
2. To identify socio-demographic characteristics associated with the uptake of skilled delivery.

3. To assess whether antenatal care attendance influences the uptake of skilled delivery services.
4. To determine whether knowledge on the importance of skilled delivery influences its uptake by mothers
5. To identify health care delivery factors that affect skilled delivery uptake in the community.

1.7 Profile of the Study Area

The study area is a community located in the Senchi sub-district of the Asuogyaman district. Asuogyaman district is one of the 26 districts in the Eastern of Ghana. It covers a total estimated surface area of 1,507 square kilometres and constitutes 5.7% of the total area of Eastern Region and ranking the 10^{th} largest district in the region with its capital, Atimpoku.

The District is bordered to the North by the Afram Plains District to the South by North Tongu District, West by Manya Krobo District and to the East by South Dai District.

The Asuogyaman District, with about 122 communities is divided into six sub-districts namely: Akosombo, Atimpoku, Senchi, Akwamufie-Apeguso, Anum-Boso and Adjena-Gyakiti.

1.7.1 Physical Characteristics

The district topography is generally undulating, with few highlands. The main water bodies include the Volta River and Lake.

The mean annual rainfall is about 1130mm with annual temperature of about 28^0C.

The vegetation of the District is a mixture of Forest, Semi-Forest/Re-growth and Savanna.

1.7.2 Economic Activities

Farming constitutes the main economic activity of the majority of the people, with maize, cassava, and plantain being the major crops. Fishing is also done mostly by the Battors. Manufacturing, commercial and service activities are also carried out mostly in Akosombo, with the Akosombo Textiles Limited, Volta Hotel, and Volta River Authority and Volta Lake Transport Company Limited are the main operatives.

1.7.3 Ethnicity

The people are mostly the Akwamus which are of Akan stock, the Anums and Bosos which are of the Guan stock. The presence of significant Krobo and Ewe settler groups makes the District greatly heterogeneous

1.7.4 Population

The district has an estimated population of 106,545 per the Districts 2010 Housing and Census Report, with WIFA(women in fertility age) of 25,999, children under five years of 21,309 and expected pregnancies of 3,090

1.7.5 Health Facilities

The district has a total of twenty seven (27) health facilities. The breakdown of the health facilities is as follows; 7 Health Centres, 1 quasi-government hospital (VRA), 1 CHAG (Christian health association Ghana), 16 CHPS zones and 2 private facilities. These facilities offer range of health services including maternal and child health services.

1.7.6 South Senchi

The South Senchi community which is located in the Senchi Sub-district has an estimated population of 3895, WIFA of 1092 and children under five of 590 per the community

register 2014, and covers an area of 362 sq. km of land. The people are mostly Ewes and the main source of income is trading and farming.

The community shares boarders with the New Akrade community and the Lower Manya district. There is one clinic which is owned by Ghana Health Service which renders maternal and child health services (antenatal, deliveries and postnatal) to the members of the community.

The maternal mortality ratio at the district stands at 1:270, antenatal attendance is 80 percent while skilled attendance at birth is 70 percent (The Asuogyaman District Health Report 2014)

1.8 Scope of Study

The study which was carried out to assess the factors influencing the uptake of skilled delivery in the South Senchi community interviewed women of reproductive age 15-49 who had delivered in the period January 2012 to December 2015 using semi structured questionnaires.

A conceptual framework by Maine and Thaddeus on the "three delays model" was adopted for this study.

1.9 Organization of the Report

The report is organized into six chapters.

Chapter one addresses the background of the study, the statement of the problem, rationale, research questions, the study objectives, hypothesis/conceptual framework, profile of study area, scope of the study and the organization of the report.

In chapter two, relevant literature is reviewed in relation to the research work. The literature review has been organized and presented according to the specific objectives.

Chapter three has the study methods and design, data collection techniques and tools, the study population, variables explored in the study, sampling techniques and sample size, data handling and analysis, ethical consideration, limitations and assumptions of the study.

Chapter four has the results and interpretations of the study which are presented according to the specific objectives. Chapter five discusses the findings of the research conducted

Chapter six has the conclusions and recommendations emanating from the study. The References and appendices follows these chapters.

CHAPTER TWO

LITERATURE REVIEW

There are lots of historical and observational evidence which shows positive association between skilled birth attendance and reduced maternal mortality. (WHO, 2014) Consequently, alongside a range of interventions before, during and after pregnancy, one of the key strategies to reducing maternal deaths is to ensure that all births are supervised by skilled health workers.

2.1 Evidence of The Proportion of Women Who Utilize Skilled Care in Various Countries, Regions And Globally.

During the UN General Assembly session in 1999, which was held for the five-year follow-up to the International Conference on Population and Development (ICPD). The session agreed that globally 80 percent, 85 percent and 90 percent of all births should be supervised by skilled attendants by the years 2005, 2010, 2015 respectively. (UNFPA, 1999)

An assessment of the MDGs reports that globally more than 71 percent of births were supervised by skilled health staff in 2014, this is an increase from the 59 percent figures in 1990, percent 63 percent in 2005, and 68 percent in 2010.(United Nations, 2015)

In developing countries, the World Health Organization estimates that about 70 percent of deliveries occurs outside health care facilities and more than 30 percent of these births occur with the assistance of traditional birth attendants (TBAs), family members and at other times without help from anyone (WHO 1997).

In developing countries, women in urban areas are more likely to give birth using skilled attendance compared to their rural counterparts who are more likely to seek alternative care. UNICEF 2008

Table 2.1 Global, regional and sub-regional estimates of the proportion of births attended by a skilled health worker 2008

Region/subregion	% births with skilled attendant	Coverage of estimates*
World total	63.1	98.6
More developed regions	99.4	87.1
Less developed regions	59.1	99.8
Least developed countries	34.3	100.0
Africa	**46.5**	**99.9**
Eastern Africa	34.2	99.9
Middle Africa	54.7	100.0
Northern Africa	71.7	99.8
Southern Africa	89.6	100.0
Western Africa	39.6	100.0
Asia	**60.8**	**99.8**
Eastern Asia	84.6	100.0
South-Central Asia	44.4	100.0
South-Eastern Asia	70.8	100.0
Western Asia	75.0	97.5
Europe	**99.4**	**76.7**
Eastern Europe	99.5	100.0
Northern Europe	99.2	79.4
Southern Europe	98.9	54.9
Western Europe	99.9	56.4
Latin America & The Caribbean	**87.7**	**99.9**
Caribbean	73.8	98.5
Central America	82.6	100.0
South America	91.3	100.0
Northern America	**98.9**	**100.0**
Oceania	**80.1**	**97.5**
Australia/New Zealand	99.4	100.0
Melanesia	51.4	98.0
Micronesia	93.8	50.0
Polynesia	99.2	82.4

*Proportion of live births for which data on the presence of a skilled birth attendant were obtained.

Source: WHO Global updates of skilled attendance at delivery 2008

Table 2.1 above shows Global, regional and sub-regional estimates of the proportion of births attended by a skilled health worker 2008. In the more developed world 99 percent of births were attended by skilled health workers, 59 percent in the less developed regions and as low as 34 percent in least developed regions. In west and central Africa, only 46 percent of births were attended by a skilled health worker, compared to 70 percent and 80 percent in south and eastern parts of Asia.

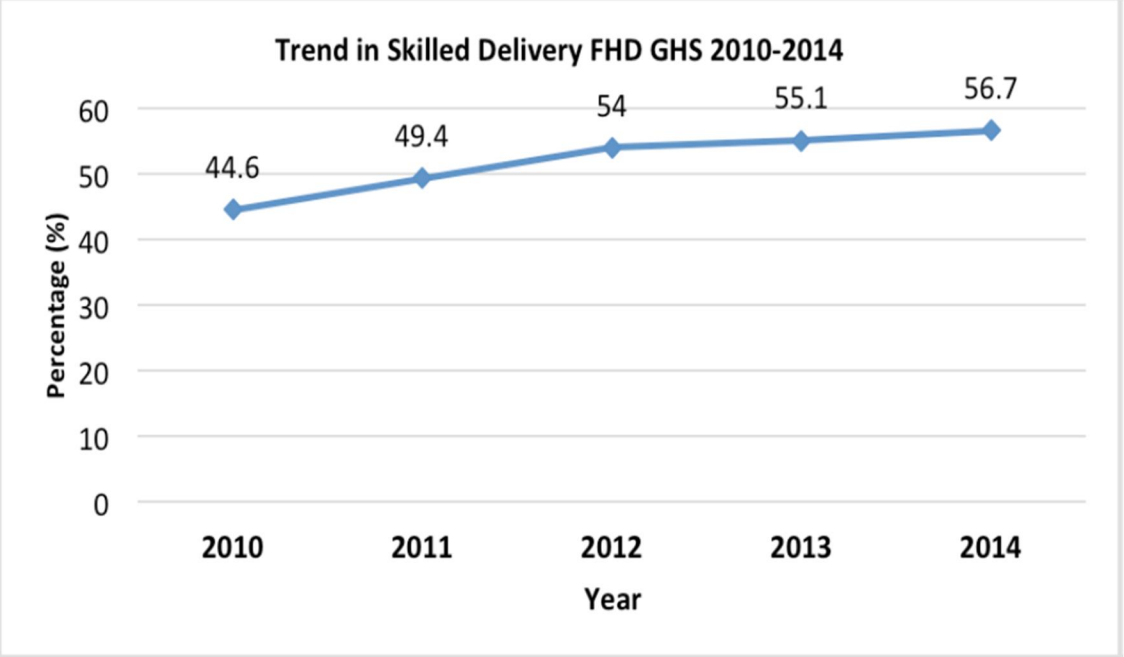
In Kenya and Nigeria the proportion of births attended by skilled health workers are 44% and 39% respectively while countries like Netherlands and Switzerland have 100% of births attended to by a skilled health worker showing disparities between the developed and less develop countries. (The World's Women and Girls 2011 Data Sheet)

2.2 Utilization of Skilled Delivery Care in Ghana

While skilled attendance during child birth is recognized as one of the most important factors in preventing maternal death, still more than 30 percent of births in rural areas in Ghana occur in non-institutional locations supported by family members and/or traditional birth attendants .(Ghana Health Service Report, 2014)

Figures from the Ghana Demographic and Health Survey 2014 indicates that urban areas in Ghana have 91% of births to women assisted by a skilled health worker while rural areas have only 58% of births assisted by skilled health worker showing disparities in access.

Figure 2.1 Trend in skilled delivery 2010-2014 in Ghana



Source: Ghana Health service (Family health division) Report 2014

Figure 2.1 above shows the Trend in skilled delivery 2010-2014 in Ghana.

Skilled delivery defined as deliveries attended by a skilled health worker has gradually increased from 44.6 percent of all deliveries to women aged 15-49 in 2010 to 56.7 percent in 2014 in Ghana showing progress. This progress has been attributed to the provision of well-known and cost effective interventions such as implementation of domiciliary midwifery, free maternal and child health care policy, training of midwives in focused antenatal care and lifesaving skills and the provision of basic equipment at health facilities. (GHS 2014)

The holistic assessment of the health sector performance in Ghana shows that the figures differ in the different regions in Ghana, with the Volta Region and Northern regions having poor coverage of 54% and 34% respectively and the Upper East Region having

the highest coverage making the probability for a woman in the Volta Region to utilize skilled care to be 45% in the Volta Region and 74% in Upper East Region.(MOH, 2014).

2.3 Factors Influencing the Uptake of Skilled Attendance at birth.

Some studies from developing countries have listed factors which include; socioeconomic, educational levels of women, maternal age, cultural norms, availability of transportation, the status of women in society, cost of health care, quality of health care, health service delivery, distance to facility, decision making power of women and women's autonomy as some of the factors that have been found to be associated with the utilization of maternal health care services. (Singh et al., 2014).

Similar observations have been made by (Patience Aseweh et al 2011) in Ghana who also found that the use of maternal health services are related to demographic, socio-economic and cultural factors; the age of women, parity, size of the household, mothers' education, ethnicity, place of residence, religion, woman's marital status, employment, income level and accessibility.

2.3.1 Education

In a study conducted in Ethiopia, it was stated that women in higher socioeconomic levels showed frequent use and access to maternal health services than women in the lower socioeconomic levels, the study also showed educated women were two times more likely to use skilled attendance during delivery. (Mekonnen & Mekonnen, 2002)

According to the (GDHS) Ghana Demographic and Health Survey 2014 report, mothers' educational status is highly correlated with whether their delivery is assisted by a skilled provider and if the woman will deliver in a health facility. For an instance, 52 percent of

births to mothers with no education were assisted by a skilled provider and 52 percent were delivered in a health facility, as compared with 96 percent and 95 percent, respectively, of births to mothers with more than a secondary education. Skilled provider assistance at delivery increases notably with mother's level of education and wealth quintile.

Abor et al (2001), observed that female autonomy and status is increased by education which helps women develop greater confidence and are more able to make decisions regarding their health.

Thus the mother's educational level has an important impact on the use of maternal health services. Therefore improving maternal educational status may have a large impact on improving the use of skilled delivery. (Patience Aseweh et al., 2011)

The low status of women due to poverty and female illiteracy were seen as important social risk factors and these factors are closely interlinked with maternal health utilization (Martínez & Fernández, 2010)

In a study conducted by in Malindi by (Carter, 2010) , it was found that social, economic and cultural factors play larger roles than access when it comes to health-seeking behaviors of women during pregnancy and childbirth. Also women's inability to prepare for birth due to lack of awareness of birth preparedness activities and the thinking that health facilities are only for the treatment of serious diseases only constituted yet another barrier to the uptake of skilled attendance at birth.

2.3.2 Maternal Age

The age of the woman at birth is very important as the younger mothers tend to be dependent on older members of the household to make decisions and this also relates to decisions concerning their health, older mothers tend to have more children and better experience with child birth and hence the low uptake of skilled attendance at birth(Atinga, Baku et al 2014)

2.3.3 Place of Residence

Where a woman lives (rural or urban residence) is also another factor that may affect the use of maternal health services. In some developing countries, the distance from home to a health facility may influence its use, urban dwellers may be closer in proximity to healthcare facilities than their rural counterparts' thus low use by rural dwellers. Previous studies have shown that especially in developing countries, physical proximity plays an important role in utilization of maternal services (Arthur, 2012)

Geographical distance was noted as one key factor that determined the use of maternal health care services in rural areas in Ghana, Nigeria and Kenya (Kitui et al 2013)

2.3.4 Culture/Religion/ Beliefs

Traditional and religious beliefs as well as the woman's perception of the importance of supervised delivery and that of traditional birth attendants may also contribute to the low use of supervised delivery services. As (Babalola & Fatusi, 2009) pointed out that modern and traditional maternal health care services coexist in some African settings, especially in rural areas, here women have to make decisions that are most favorable or where women have very little decision making power.

A combination of these cultural beliefs, practices, male dominated societies, the low status of women and high fertility affect maternal health service utilization in the continent, especially in sub-Saharan Africa. (Nwokocha, 2007)

With respect to attitudes and practices of women regarding pregnancy and childbirth, the data in Ekiti and Bauchi States of Nigeria revealed that cultural taboos, beliefs and socio-economic factors often place women at disadvantaged positions right from the start of pregnancy. (Joseph Sina et al 2014)

2.3.5 Employment/ Decision Making

A husband's occupation can also represent family income as well as social status, and it is well established that increased income has a positive effect on the use of maternal health care services for the woman. (Chakraborty et al 2003)

In countries like Nigeria, Ethiopia, Tunisia, India and Korea, studies have shown that women usually do not make decisions to seek care themselves. The decision belongs to a spouse or to a senior member of the family, women's mobility is also limited in some areas because they have to seek permission from heads of households or their spouses to travel. In most cases, this permission must be granted by the spouse or mother in-law.(Gbaden, 2014)

In Ghana many women have low social status and thus do not make decisions alone about reproductive health issues. Most especially, young women who have no experience and have no voice in households. Thus when decision regarding choice of use of supervised delivery cannot be agreed upon by the family decision maker in the event of active labor, the only option left for the woman is to deliver at home.(Atinga et al., 2014)

2.3.6 Parity

Women are more likely to seek maternal health care services for first child because of perceived risk associated with first pregnancy than subsequent children or birth orders. Having more children may put pressure on available family resources, which tends to have a negative effect on use of maternal health services, therefore women with more children may not utilize available maternal health services due to the fact that there have to care for the other children and may not have enough time to seek care.(Chakraborty et al., 2003)

2.4 Antenatal care attendance and the uptake of skilled delivery

Antenatal care (ANC) is the care a pregnant woman receives over the course of her pregnancy from a trained healthcare personnel. Antenatal care is basically used to detect early signs of complications during pregnancy. During ANC, the pregnant woman is educated on a range of topics that include, well-being, birth preparedness, birth complication readiness, and breastfeeding.

It is widely recommended by the World Health Organization that women have at least four antenatal care visits during pregnancy. In Sub-Saharan Africa and Asia, more than half of the women population receive this number of antenatal visits, with most women having at least one visit (Requejo et al., 2015)

Globally, data for the late 1990s and for 2000-2003 show that just over 70 percent of women worldwide have at least one antenatal visit during pregnancy while 2015 data shows that the figure has increased to 85 percent. (UNICEF 2016)

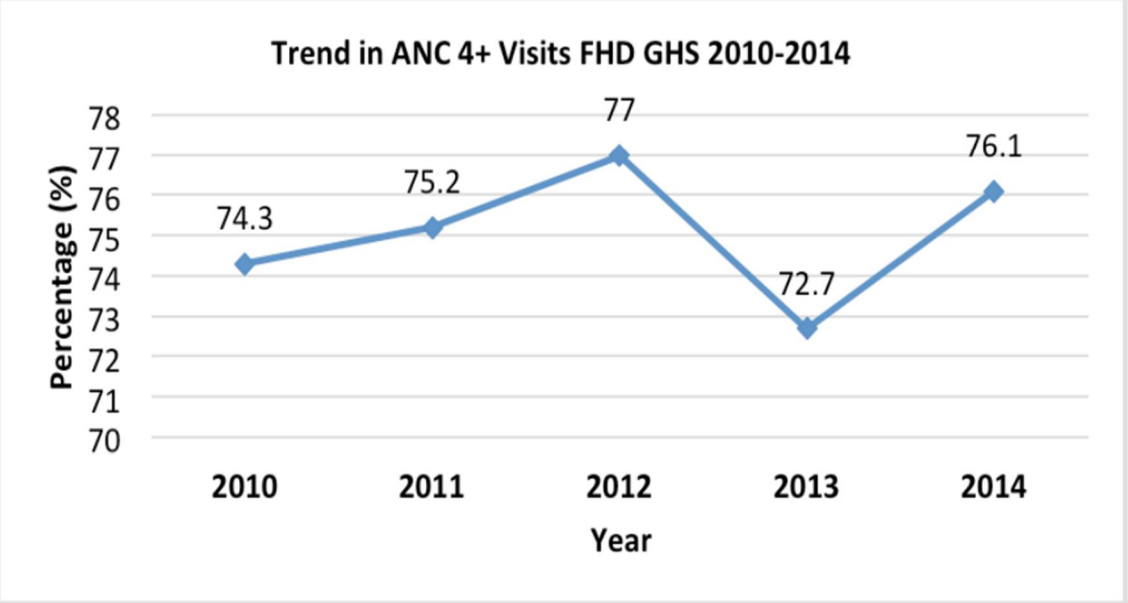
In developed countries antenatal visits coverage is very high, with about 98 percent of women who have had at least one visit. In the developing world, antenatal care use is around 68 percent. The region of the world with the lowest levels of antenatal care use is South Asia, where about only 54 percent of pregnant women have had at least one antenatal care visit. In the eastern and northern parts of Africa, the use of antenatal care is fairly high at 65 percent of pregnant women having at least one visit. In sub-Saharan Africa region, about 68 percent of women report at least one antenatal visit. The levels in the remaining regions of the world range from 82 percent to 86 percent (Abou-Zahr & Tessa, 2003)

There are existing differences in urban and rural areas when it comes to the use of antenatal care, with the differences being most pronounced for the number of antenatal visits. In urban areas women are twice more likely than those in rural areas to have four or more antenatal care visits. Overall, in sub Saharan Africa and Asia, about 68 percent of women in urban areas report at least one antenatal care visit, 65 percent of women report four or more antenatal visits. While the figures for women in rural areas are only 42percent and 39 percent, respectively. (UNICEF 2016)

In Ghana Antenatal care coverage remains around 90 percent, but adequate utilization of the service (that is having four or more visits) has stagnated around 75 percent for the past four years, with more than 95 percent of women in Ghana going for at least one antenatal care visit during pregnancy, and about 80 percent have had the recommended four or more antenatal care visits and only about two thirds of women having their deliveries attended by skilled health workers with wide disparities by place of residence and socioeconomic status. Ghana Health Service (Family Division) Report 2014

In a study to assess the level of maternal health service utilization in Ghana, (Patience Aseweh Abor et al., 2011) showed that most women in Ghana undertake the required number of antenatal visits. However, there was low use of prenatal care, skilled attendance at delivery and postnatal care and in some instances reduction in the use of such services over time.

Figure 2.2 Ghana's Trend of ANC4+ visits (2010-2014)



Source: Ghana Health Service (Family Division Report) 2014

Figure 2.2 above shows Ghana's Trend of ANC4+ visits (2010-2014), the numbers above show that antenatal care coverage in Ghana is high, with an increase from 74 percent in 2010 with a drop to 72.7 percent in 2013 and increasing to 76 percent in 2014. But there is still an existing gap in the continued use of maternal health care, especially the utilization of skilled attendance during delivery.

Many pregnant women seek care from different sources aside the formal health sector. This is due to negative perceptions resulting from poor service quality experiences in health facilities(Dako-Gyeke et al 2013)

In a study by (Chineke, 2015) it was found that the use of antenatal care services was higher than the use of skilled attendance at delivery, this was consistent with the results of a study conducted in Ghana (Patiene Aseweh et al 2011). One of the reasons that have often been advanced for the lower coverage of skilled delivery compared to antenatal care coverage is the unpredictable nature of the onset of labor , difficulties encountered in accessing health facilities in poor environments, however, the shortfall in skilled health staff (midwives and doctors) is also a major contributory factor(Babalola & Fatusi, 2009).

The role of traditional and religious beliefs as well as the perception of women with respect to comparative efficiency of the orthodox versus traditional birth attendants may also be contributory to low uptake of supervised delivery despite antennal care attendance (Muhammed et al 2015).

2.5 Knowledge on the Importance of using skilled delivery and the utilization

Although there is global acknowledgement on the importance of skilled attendance at birth in preventing Maternal mortality and morbidity, 42 percent of births in low income countries were delivered at home outside a health facility, about 35 percent were not attended by a skilled health personnel. Skilled health workers services were not used in more than 80 percent of births in a few less developed countries examples were Nepal, Bangladesh, Ethiopia, Afghanistan and Lao Peoples Democratic Republic.(UNICEF, 2013)

In a study by (Muhammed et al., 2015) in Nigeria , this study also found that the women's overall perceived need for supervised delivery services was low which suggests that the women felt no need for using skilled delivery services thus there was a low uptake of services.

(van Eijk et al., 2006) reported that 14 percent of women from their study did not think that the use of skilled attendance during delivery was not necessary as they had delivered previously at home safely and they arrangements with the Local TBAs was enough for them, this showed the lack of knowledge that complications could arise at any time during delivery.

2.6 Health Care Delivery Factors Influence On the Utilization of skilled Delivery

In a study conducted by (Melkamu Fanta, 2005) proximity to health facilities did not guarantee that there will be maximum utilization, and this was mostly due to the fact that some of the health facilities were understaffed or under equipped. They concluded that, "the low utilization of maternal Health services was due to the poor quality of services delivered at health facilities and not merely physical access or cultural barriers.

The shortage of staff at the health facilities, particularly the rural health care facilities, which makes it difficult to operate 24-hour services was also reported as one of the factors that discourages women use of skilled delivery services, even when they had received antenatal care services.(Donkor, 2008)

In rural areas, quality of health care is usually expected to be lower this is because most rural areas have less developed infrastructure, lower staff numbers, fewer skilled or well-trained health workers available to deliver services. Some qualitative studies carried out

in Ghana, Nigeria and Nepal also suggested that rural women were most likely to be treated poorly at facilities resulting in the low uptake of skilled attendance at birth by rural women. (Afulani, 2015)(Wilunda et al., 2014)

Health care providers not having enough patience and sufficient time to attend to mothers, long waiting periods at facilities, unfriendly attitude of health staff were noted as some of the key reasons why the low uptake of maternal health services and this could result in low use of skilled attendance at birth and lead women to seek care from a TBAs. (Dako-Gyeke et al., 2013)

Babalola et al had reported that many Nigerian women in rural areas, rated the services of the traditional birth attendants (TBAs) as being of better quality compared to that of Skilled healthcare personnel's, especially regarding attitudes, interpersonal relationships between staff and women. TBAs were reported to be more considerate in comparison with health staff and they provided more compassionate care. (Babalola & Fatusi, 2009).

Women in rural Guatemala were similarly reported by (Lindstrom & Muñoz-Franco, 2006) as being less likely to deliver in health facilities due to the lack of social support by health staff compared with traditional midwives who would provide some form of support to the women, The issue noted was that the women were mostly familiar with the TBAs because they were always mostly from the same community with the women, they were willing to attend to them at home with low and alternative cost of their delivery services. On the other hand, most of the skilled health personnel were posted from other towns; may have cultures and language that differ from those of the women. For these reasons skilled health workers services would only be sought if the TBAs encountered and unexpected event during delivery they could not handle.

Consequently, there could be failure of collaboration between TBAs and Health staff so that each category could act within their boundaries; assist each other in executing their roles; and advocate for the importance of the services they provided. (Muhammed et al., 2015)

(Atinga et al., 2014) found that uptake of supervised delivery services increased with decreasing distance to a health facility, corroborating findings of previous studies that physical distance to a health facility also influences utilization of skilled delivery services. Women who lived far away from health facilities were least likely to use maternal health services in the future.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Study Methods and Design

The study was a cross-sectional survey of women in reproductive ages 15-49 years living the South Senchi community who delivered within the period January 2012 to December 2015. The study was conducted from 9th of February 2016 to 1st of March 2016 using a semi structured questionnaire for data collection, which was developed prior to the inception of the study.

The questionnaire was pre-tested prior to data collection for this study, whilst data collection was on-going, data entry and validation was also ongoing. After data collection and entry into a computer, the data was analyzed using STATA Software version 13

3.2 Study Data Collection Techniques and Tools

Data was collected using semi-structured questionnaires for women in reproductive age 15-49 years who delivered within the period January 2012 to December 2015 and who live in the South Senchi community. Two research assistants were trained in the administration of questionnaires by the Principal Investigator. The training involved detailed interpretation of the questions into the local languages, ethical issues and the prevention of information bias was carefully considered. The women were asked to answer questions with regards to the most recent pregnancy on whether or not they attended antenatal care during that pregnancy, their place of delivery, the attitude of skilled attendant, cultural practices that affect their decisions regarding pregnancy and childbirth, their ability to make decisions concerning pregnancy and childbirth, their

knowledge on closest health facility, the distance from their home to the facility and also if they would like to have their next delivery supervised by a skilled health worker.

3.3 Study Population

Study population was made up of women in reproductive age 15-49 years who delivered within the period January 2012 to December 2015 who live in the South Senchi community.

3.4 Study Variables

The dependent variable was the utilization of skilled delivery.

The independent variables were:

Socio-demographic characteristics: Age, Parity, Marital status, Ethnicity and Religion

Socioeconomic characteristics: Educational level of woman and partner, occupation of the woman and partner, possession of health insurance.

Cultural practices that affect decisions concerning pregnancy and child birth

Maternal health services: Use of Antenatal services and number of times, knowledge of importance of skilled delivery, access to health care facility in terms of knowledge of closest facility, time taken from home to health facility, decision making concerning pregnancy and childbirth, attitude of health care staff, level of satisfaction from use of Health Facility and willingness to have next pregnancy supervised by skilled health worker.

3.5 Sampling Techniques and Sample Size

200 Women of reproductive age who delivered within the period January 2012 to December 2015 and live in the community were selected purposefully to participate in the study. Trained field staff went from house to house asking if there was a woman of reproductive age who had delivered within the specified period and if there was, the questionnaire was then administered to the woman with the trained field staff interpreting the questions in the local language for the women to understand.

The Sample size of two hundred (200) women of reproductive age 15-49 years who delivered within the period January 2012 to December 2015 was chosen after consideration of response rate.

The sampling size was determined using the formula below:

$$n = \frac{z^2 pq}{d^2}$$

Where:

n = the desired sample size

z = the reliability coefficient for 95% confidence level usually set at 1.96

p = the proportion in the target population estimated to have a particular characteristics. (50%)

q = 1.0 –p, d = amount of error desired.

3.6 Pre-testing

The pre-testing of the questionnaire was carried out in the New Akrade community, this community had similar characteristics with the South Senchi Community. A total of twenty (20) questionnaires were administered and after the pretest, the questionnaire did not need any further modifications.

3.7 Data Handling

Data was securely handled by using a password on the computer which stored the data that has been entered as a soft copy as soon as it was collected. Regular verification and validation of data sets was done by the researcher.

Data obtained by trained field staff was checked by the researcher regularly during and after field work. The computer which stored the data was handled by the researcher and her assistants only. After all the data had been entered and stored in the computer, the hard copy of the questionnaires was stored in a safe locker.

3.8 Data Analysis

Data was analyzed using STATA Statistical software package (StataCorp. 2007. *Stata Statistical Software: Release* 13. StataCorp LP, College Station, TX, USA). Descriptive analysis was done. Both bivariate and multivariate analyses was done to identify factors associated with the uptake of skilled delivery. Chi-square test was used to determine the association between service utilization on selected socio demographic characteristics. Logistic regression is applied to understand the net effect of predictor variables on the uptake of skilled delivery. Logistic Regression was used because the response variables in our study are of dichotomous (i.e., binary) nature. Only the predictor variables that were found to be significant in chi-square test were included in the final logistic

regression model. The results of logistic regression are presented in the form of estimated odds-ratios with *p*-values at 95% confidence intervals.

3.9 Ethical Considerations

Ethical considerations involved ethical review board approvals, informed consent forms, confidentiality assurance, as well as informing participants about risks and benefits of the study.

3.9.1 Ethical Clearance

For this study, Ethical clearance was obtained from the Institutional Review Board of the Ensign College of Public Health Kpong and letters were sent to the District Director of Ghana Health Service Asuogyaman District where the South Senchi community is located.

3.9.2 Informed Consent

The type, purpose and procedure of the study together with the time commitment required were explained to each participant on an information sheet. Participants were informed that participating in the study was voluntary and anyone could refuse to be part of the study or can freely drop out of the study at any time and this would not affect them in anyway. The participants who could not read were informed about the study by translating the information into the local language by a trained field staff. It was ensured that the translation carried the same meaning as it appears in English. Consent was then obtained from each participant in the study where participants appended their signatures or thumbprints for those who could not sign their signatures.

3.9.3 Confidentiality

Measures were instituted to ensure maximum confidentiality during and after the study, since some of the information provided by the respondents were quite personal. Participants were assured of the confidentiality of personal information obtained. They were informed that any information obtained would be kept in a secured place for the duration of the study and also that every information will only be used for analysis and would not be traceable to them. In addition, only the researcher, and supervisory committee members had access to the raw data.

3.9.4 Risks and Benefits

For the study, there were no known risks to participants who decide to take part. Participants will rather benefit from the study since they have an opportunity to express their views and experiences concerning the importance of skilled delivery during birth. Furthermore, questions that were raised by mothers during the course of the administration of the questionnaires were answered by researcher. The findings from the study will be used to help improve upon the use of skilled delivery in the sub-district.

3.10 Limitations of Study

The time for the study was short and limited such that more mothers could have been reached and more depth of the research could have also been reached.

Resources limited the study by reducing the variables to be studies and also the number of trained field staff that could be used for the research.

Language barrier was a problem as interpreters had to be used by the researcher to conduct the study, even though interpreters were well trained, this could have led to a misunderstanding of words.

The data collection technique relies on verbal reports of behavior practiced, which has the tendency for the questionnaire to over-report good or bad behavioral practices as the respondent try to please the interviewer. This could limit the validity of the study.

There was a problem of recall of past events by some of the women.

3.11 Assumptions

These are some of the assumptions made during the study

1. It was assumed that the women in the study were truthful and answered the questions on the questionnaire honestly.
2. It was assumed that the mothers have been accessing health services in the community and so could answer questions on utilization of the services.

CHAPTER FOUR

ANALYSIS AND RESULTS

4.1 Introduction

The factors that influence the uptake of skilled delivery are vast and interrelated. This chapter highlights the findings from the sample of 200 women of reproductive age 15-49 in the South Senchi community of the Asuogyaman District who delivered within the period January 2012- December 2015. The response rate for this study was 100%.

4.2 Background Characteristics of Respondents

Table 4.1 Background characteristics of respondents

Variable	Frequency (N)	Percentage (%)
Age Range		
15-24	73	36.5
25-34	91	45.5
35-44	32	16
45+	4	2
Religion		
Christianity	173	86.5
Islam	4	2
Others	23	11.5
Marital Status		
Married	160	80
Single	23	11.5
Divorced	0	0
Cohabiting	17	8.5
Widowed	0	0
Ethnicity		
Ewe	178	89
Ga	7	3.5
Akan	14	7
Others	1	0.5

Variable	Frequency (N)	Percentage (%)
Occupation		
Farming	12	6
Trading	96	48
Teaching	2	1
Artisan	22	11
Civil Servant	0	0
Others	68	34
Educational Level		
None	30	15.2
Primary	65	32.8
Secondary	97	48.9
Vocational	5	2.52
Tertiary	1	0.51
Partners Occupation		
Farming	21	10.5
Trading	14	7
Teaching	2	1
Artisan	95	47.5
Civil Servant	2	1
Others	66	33
Partners Educational Level		
None	34	17
Primary	51	25.5
Secondary	105	52.5
Vocational	8	4
Tertiary	2	1
Parity		
1	57	28
2	46	23
3	39	19.5
4	29	14.5
5	9	4.5
More than 5	20	10
Health Insurance		
Yes	175	87.5
No	25	12.5

Source: Authors Field Data 2016.

Table 4.1 above shows the background characteristics of respondents who participated in the study.

45.5% of the respondents were in the age range of 25-24, 36.5% were in the 15-24 years age range with 2% in the 45+ age range. About 86.5% were Christians and Islam's made up only 2%, the distribution of other religions which included pagans and traditionalist was 11.5%.

Out of the 200 respondents, 160(80%) were married, 17(8%) were cohabiting and 23(12%) were single with none of the respondents divorced or widowed.

About 89% of the respondents were Ewes with other ethnic groups Akan, Ga and others being 7%, 45 and 1% respectively.

In relation to employment, 48% of the mothers interviewed were traders. Only 1% were teachers. Over thirty percent 30.0% belonged to the other occupations.

The distribution of the educational background of the respondents revealed that about 15% had no formal education, 50% had secondary education with only 0.5% obtaining certificates above the secondary/vocational levels of education.

Among the occupation engaged by the partners of the respondents were trading 7%, farming, 10% and Artisans were the highest with 47.5%, the distribution of the 33% other occupation was fishing 16.5%, driving 9.5%, Cleric 0.5% and unemployed 6.5%. About 17% of the respondents' partners did not have any formal education. Only 1% had tertiary education with 52.5% having Secondary education.

With respect to parity, respondents with one child constituted 28% and those with more than one child was 72%.

Most of the respondents (87%) had valid membership status with the health insurance scheme while the other 13% did not.

4.3 Influence of Socio-demographic Characteristics on uptake of skilled delivery

Table 4.2 Bivariate analysis of socio-demographic factors influence on the use of skilled delivery service.

Variables	Skilled delivery(N=150)	Unskilled delivery(N=50)	Chi square *p* value
Age Range			
15-24	47 (31%)	26 (52%)	
25-34	75 (50%)	16 (32%)	0.04
35-44	25 (17%)	7 (14%)	
45+	3 (2%)	1 (2%)	
Religion			
Christianity	133 (89%)	40 (80%)	1.00
Islam	3 (2%)	1 (2%)	
Others	14 (9%)	9 (18%)	
Marital Status			
Married	123 (82%)	37 (74%)	
Single	16 (11%)	7 (14%)	0.44
Cohabiting	11 (7%)	6 (12%)	
Ethnicity			
Ewe	131 (87%)	47 (94%)	
Ga	6 (4%)	1 (2%)	0.20
Akan	12 (8%)	2 (4%)	
Others	1 (1%)	0 (0)	
Occupation			
Farming	9 (6%)	3 (6%)	
Trading	74 (49%)	22 (44%)	
Teaching	2 (1.3%)	0 (0)	0.68
Artisan	19 (13%)	3 (6%)	
Others	46 (31%)	22 (44%)	

Variables	Skilled delivery(N=150)	Unskilled delivery(N=50)	Chi square *p* value
Educational Level			
None	18 (12%)	12 (24%)	0.104
Primary	46 (31%)	19 (38%)	
Secondary	78 (52%)	19 (38%)	
Vocational	5 (3.3%)	0 (0)	
Tertiary	1 (1%)	0 (0)	
Partners Occupation			
Farming	14 (9%)	7 (14%)	
Trading	11 (7%)	3 (6%)	0.54
Teaching	2 (1.3%)	0 (0)	
Artisan	77 (51%)	18 (36%)	
Civil servant	2 (1.3%)	0 (0)	
Others	44 (29%)	22 (44%)	
Partners Educational Level			
None	23 (15%)	11 (22%)	0.404
Primary	30 (20%)	14 (28%)	
Secondary	80 (53%)	25 (50%)	
Vocational	2 (1.3%)	0 (0)	
Tertiary	8 (5.3%)	0 (0)	
Parity			
1	43 (29%)	14 (28%)	
2	30 (20%)	16 (32%)	0.309
3	33 (22%)	6 (12%)	
4	24 (16%)	5 (10%)	
5	6 (4%)	3 (6%)	
More than 5	14 (9%)	6 (12%)	
Health Insurance			
Yes	137 (91%)	38 (76%)	0.003
No	13 (9%)	12 (24%)	

Source: Authors Field Data 2016

Table 4.2 illustrates the influence of socio-demographic factors on the use of skilled delivery services.

Out of the 200 respondents, 150 used skilled delivery service during their last delivery, this number representing 75% while the remaining 50 respondents representing 25% did not use skilled delivery services during their last delivery.

Age as a demographic characteristic was a statistically significant predictor of the use of skilled delivery with (p=0.04).

The 15-24 years age range had the highest number of respondent who did not use skilled delivery services constituting about 52%. About 42(85%) of the 50 respondents who did not use skilled delivery services were less than 35 years.

Majority of the respondents who had used skilled delivery were married with the majority of those who did not use skilled delivery also from the married group. The religion and ethnicity of the respondents did not have any significant influence on the respondents uptake of skilled delivery with p=1.00 and p=0.20 respectively.

The educational level of the respondent also did not have any influence on the use of skilled delivery services (p=0.104). At the secondary level of education, more than 50.0% of the respondents had used skilled delivery services during their last delivery. Respondents who had no formal education contributed 12% to those who has used skilled delivery services and 24% to the numbers who did not use skilled delivery services. To note is that the tertiary educated respondent had used skilled delivery services during childbirth.

Respondents who were traders and those in other occupations made up 49% and 31% of groups who used skilled delivery respectively. Parity which is the number of children the respondent had, also did not influence (p=0.30) their use of skilled delivery.

29.0% of the respondents with at least a child and 9.0% of those with more than 5 children had used skilled delivery.

For respondents with valid health insurance, 136 of them had used skilled delivery services that is about 91% of the total 150 respondents who had accessed skilled delivery services. For respondents without valid health insurance 13(9%) of them had used supervised delivery services while 12 did not constituting about 24% of the 50 respondents who did not use the service.

In general possession of health insurance was a statistically significant factor influencing the use of supervised delivery (p=0.003). The respondents themselves decided to use the services.

4.4 ANC attendance and use of skilled delivery

Table 4.3 Relationship between ANC attendance and use of skilled delivery

Variable (Antenatal visits)	Skilled delivery(N=150)	Unskilled delivery (N=50)	Chi square *p* values
Yes No	146 (97%) 4 (3%)	45 (90%) 5 (10%)	0.009
1-3visits > 3 visits	12 (8%) 133 (92%)	7 (16%) 36 (84%)	0.13

Source: Authors Field Data 2016

Table 4.3 shows the relationship between ANC attendance and use of skilled delivery. Out of the 200 respondents, 191(95%) had at least one antenatal visit during their last delivery while 169 (85%) of those with more than three antenatal visits had used skilled delivery services.

97% of those who had at least one antenatal visit had accessed skilled delivery services. Among those who did not use skilled delivery, 90.0% of them had attended Antenatal care clinic at least once and 72% of the respondents had attended antenatal clinic more than three times.

Antenatal care visit was statistically significant with p=0.009, while the number of visits was not statistically significant with p=0.13.

4.5 The relationship between decision to use health facility and use of skilled delivery

Table 4.4 Relationship between decision to use health facility and Utilization

Variable (Decision to use Health Facility)	Skilled delivery(N=150)	Unskilled delivery(N=50)	Chi square *p* value
Yes (Myself) No	138 (92%) 12 (8%)	44 (88%) 6 (12%)	0.31

Source: Authors Field Data 2016

Table 4.4 above shows the relationship between decision to use health facility and use of skilled delivery.

The decision to use the health facility during pregnancy and delivery was made by 182(91%) out of the 200 respondents by themselves, among those who could make decisions by themselves 92% had used skilled delivery.

Among respondents who could not make decisions themselves to use health facility, 8% of them had used skilled delivery and 12% had not. Some of the respondents listed their husbands, mothers or grandmothers as those who could make decisions for them.

The decision to use health facility did not have statistically significant influence (p=0.132) on the use of skilled delivery.

4.6 Knowledge of importance of skilled delivery and its utilization.

Table 4.5 Relationship between knowledge about importance of skilled delivery and utilization.

Variable	Skilled delivery(N=150)	Unskilled delivery(N=50)	Chi square-*p* value
Yes No	138 (92%) 12 (8%)	29 (58%) 21 (42%)	0.000

Source: Authors Field Data 2016

Table 4.4 shows the relationship between knowledge about importance of skilled delivery and utilization.

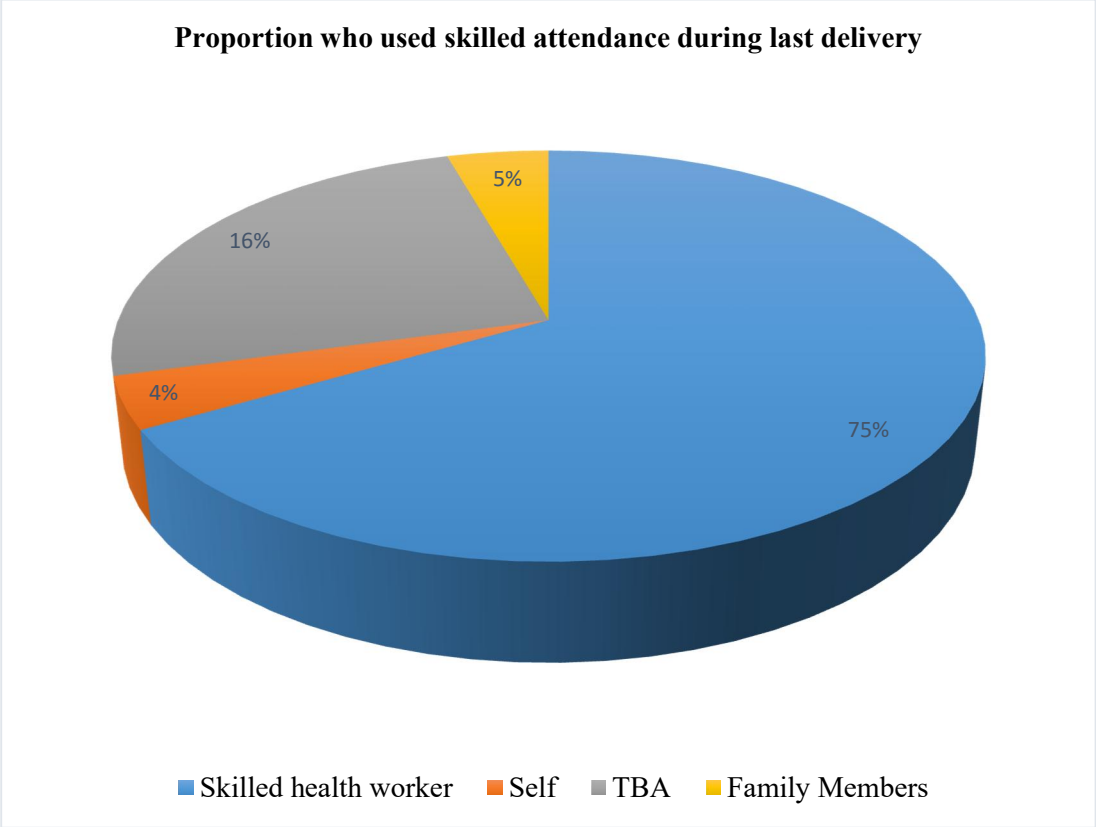
About 167 (83%) of the 200 respondent claimed they knew the importance of skilled delivery services.

92% of respondents who knew the importance had their last delivery supervised by a skilled health worker, among those who had the knowledge about 29(58%) of them had not accessed skilled delivery services. 8% of those who had no knowledge of the importance of the use of skilled delivery still used the service.

Knowing the importance of skilled delivery was statistically significant p=0.000 influencer of the use of skilled delivery services.

4.7 Proportion of Respondents who used skilled attendance at last delivery

Figure 4.1 Proportion who used skilled attendance at last delivery for respondents

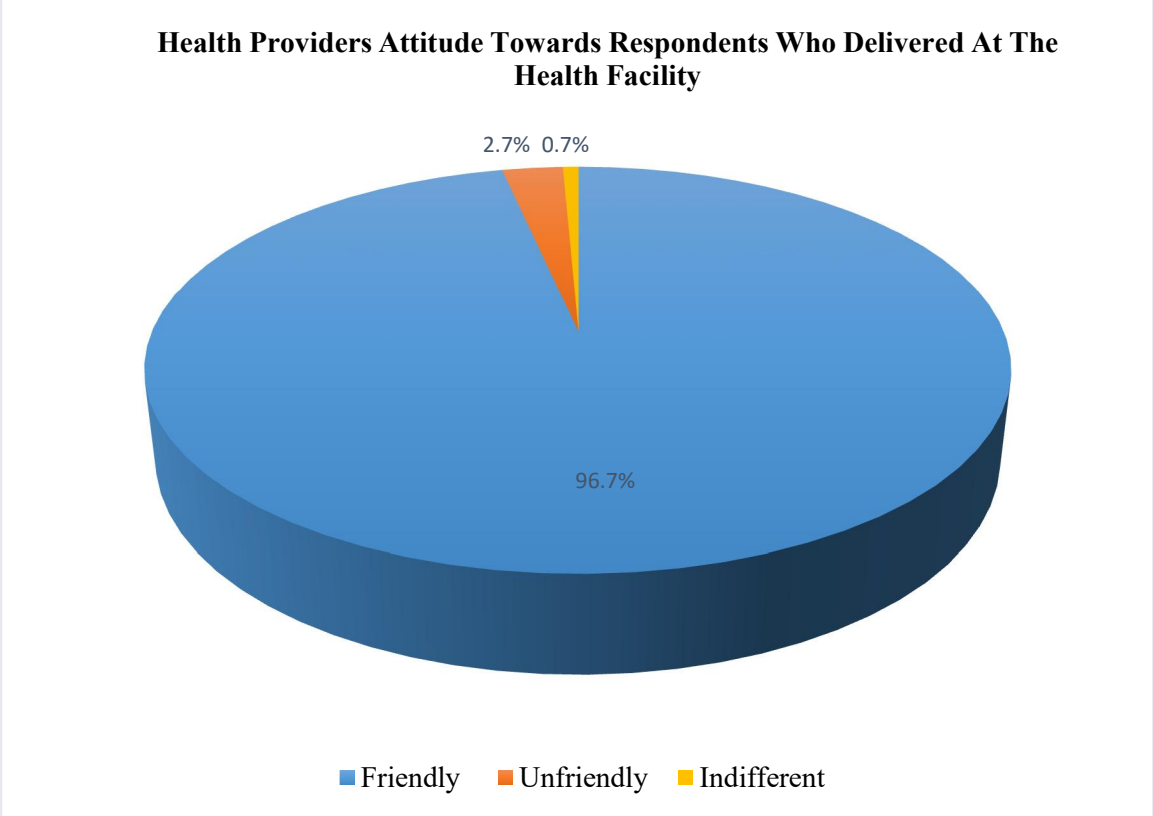


Source: Authors Field Data 2016

Figure 4.1 above show details of the proportion of respondents who used a skilled attendance during their last delivery, 75% had skilled health worker attend their last delivery, the remaining 25% did not use skilled health worker during delivery with 4% of respondents delivering by themselves, 5% had other family members assisting them during delivery while 16% had used (TBA) traditional birth attendants during their last delivery. Some of the family members listed by respondents who had assisted them during their last delivery included, their husbands, mothers, grandmother and aunties.

4.8 Assessment of health providers' attitude towards pregnant women who delivered at the facility

Figure 4.2 Health providers' attitude towards pregnant women who delivered at the facility



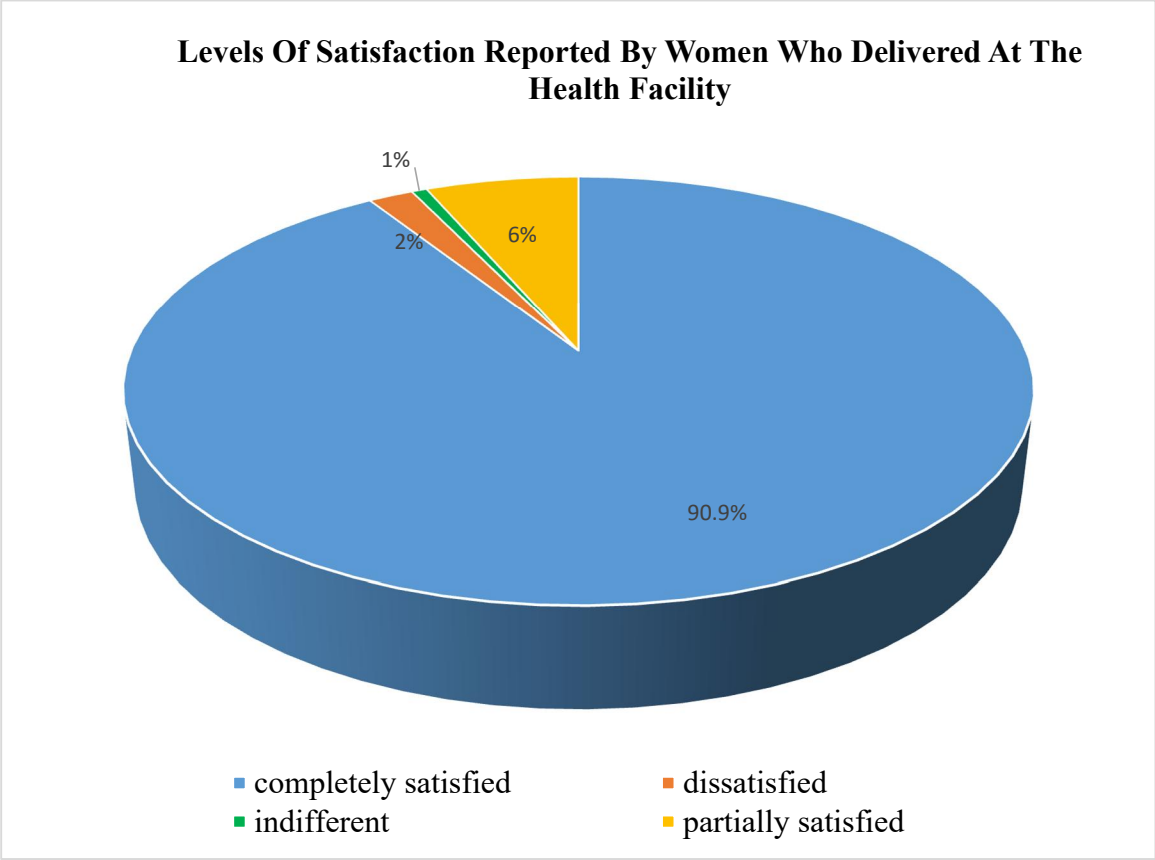
Source: Authors Field Data 2016

Figure 4.2 above shows an assessment of health providers' attitude towards pregnant women who delivered at the facility.

Out of the 200 respondents, about 97% viewed the health personnel's attitude to be friendly, 2.7% responded that they were unfriendly while almost 1% was indifferent about the attitude of health staff who attended to them during their last delivery.

4.8 Level of Satisfaction reported by respondents.

Figure 4.3 Level of Satisfaction reported by respondents who delivered at health facility



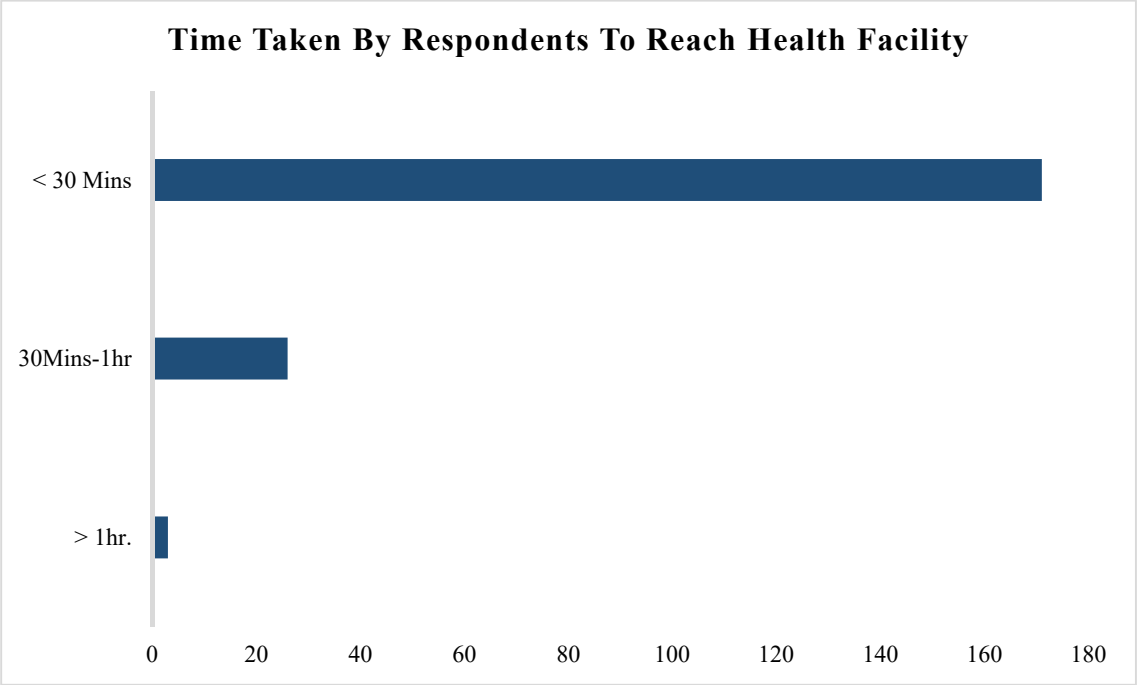
Source: Authors Field Data 2016

Figure 4.3 shows the Level of Satisfaction reported by respondents who had delivered at the health facility.

About 91% were satisfied with the level of care they received at the facility during their last delivery, 1% were indifferent, 2% were dissatisfied and 6% were partially satisfied with the care received.

4.9 The Time Taken By Respondents to Reach Health Facility

Figure 4.4 Time taken by respondents to reach health facility



Source: Authors Field Data 2016.

Figure 4.4 above shows the time taken by respondents to reach health facility, the time taken to reach the health facility was categorized into less than 30 minutes, 30 minutes to one hour, and more than one hour. About 171(85%) reported it took them less than 30 minutes to reach the facility, 26(13%) reported it took them 30minutes to one hour to reach a health facility and 3(1.5%) reported it took them about an hour to reach a health facility.

4.10 Multivariate Logistic Regression Model of Significant Variables

The following variables that were statistically significant from the Chi square test for association were included in a logistic regression model.

Table 4.6 Multivariate Logistic regression model for statistically significant variables from the Chi Square Test

Variables	Categories	No(%)	Adjusted Odds ratio	P values	95% CI
Age Range	15-24* 25-34 35-44 45+	36.5 45.5 16 2	 0.7 0.4 0.6	 0.08 0.16 0.67	 0.4-0.11 0.14-1.4 0.04-7.3
Health Insurance	Yes No*	87.5 12.5	3.0	0.04	0.9-7.8
Antenatal Attendance	Yes No*	95.5 4.5	0.8	0.83	0.14-5.0
Knowledge of Importance of skilled delivery	Yes No*	83.5 16.5	9.5	0.000	3.8-23.5

Source: Authors Field Data 2016 (*Reference category)

Table 4.5 shows the p values and adjusted odd ratios from logistic regression model for statistically significant variables from the Chi Square Test.

The possession of valid health insurance and the knowledge of the importance of skilled delivery were significant (p=0.04, p=0.000) as factors influencing the uptake of skilled care during delivery with reference to those with no health insurance and no knowledge of importance of using skilled delivery.

Respondents with valid health insurance were three times more likely to use skilled delivery services with reference to those with no valid health insurance, those who had the knowledge on the importance of using skilled delivery were 10 times more likely to use skilled care during delivery with reference to those who did not know the importance.

The respondents who attended antenatal were 0.7 times more likely to use skilled delivery with reference to those who did not attend antenatal care.

Respondents in the 25-29 age range were 0.5 times more likely to use skilled delivery with reference to those in the 15-24 age range.

Respondents in the 35-44 age range were 0.4 times more likely to use skilled delivery with reference to those in the 15-24 age range

Respondents in the 45+ age range were 0.6 times more likely to use skilled delivery with reference to those in the 15-24 age range.

CHAPTER FIVE

DISCUSSION

5.1 Introduction

Results that were obtained from the study are discussed in line with set objectives and also using previous studies and literature.

5.2 The background characteristics of respondents.

A total of 200 women of reproductive age 15-49 years who delivered a baby during the period January 2012- December 2015 were included in the study.

About 36% of the respondents were in the 15-24 age range, 45% was in the 25-34 age range, 16% were in the 35-44 age range and 2% were in the 45+ range.

86% of the respondents were Christians 4% were of the Islamic religion and 23% belonged to other religions. About 80% of the respondents were married, 11% were single and 8% were cohabiting with their partners.

89% of the respondents were of the Ewe ethnicity, 7% were Akan's, 4% were Ga's and 1% belonged to others.

72% of the respondents were traders; 1% were teachers and 16% were Artisans with 34% belonging to other occupations including those unemployed.

Only one of the respondent had tertiary education, about 49% had secondary education, with 15% having no education at all. 47% of respondent partners were Artisans, 10% were farmers, 1% teachers, 1% were civil servants, 7% were traders and 33% belonged to other occupations which included fishermen, unemployed and cleric.

Only 1% of respondent partners had tertiary education, about 52% had secondary education, about 17% had no education at all. Over 50% of the respondents had more than one child, with 10% having more than five children.

87% of the respondents had valid health insurance policies while 12% did not.

5.3 Proportion of women who accessed skilled delivery in the community

Out of the 200 respondents, 150 (75%) of them had their last delivery supervised by a skilled health staff while 50(25%) has unskilled last deliveries. The women with unskilled deliveries claimed to have been attended to by TBAs and other family members which included husbands, grandmothers and aunties, the proportion of women who utilized skilled delivery is higher than those obtained in similar studies carried out by in Ghana by who reported 45% use and also higher than the 48% use of skilled delivery reported in western Kenya from a similar study conducted by(Kawakatsu et al., 2014). The figure is also higher than that reported by the Ghana demography and health survey 2014 report for rural Ghana thus indicating improvement in the uptake of skilled delivery in the sub-district which is probable due to the continuous sensitization of the people on the importance of using skilled delivery in the district by the quasi-government hospital VRA.

5.4 Factors that influence the uptake of skilled delivery.

Some of the factors explored in the study include; woman's age, ethnicity, religion, marital status, woman's occupation, educational level, partner's occupation, partners educational level, parity and the possession of valid health insurance.

From the study results, women in the 25-34 age range had most of their deliveries supervised by skilled health worker, those in the 15-24 age range had more numbers of unskilled delivery, this is probably due to the fact that younger mothers have less decision making powers, do not have high levels of education as they have to stop schooling when they get pregnant. This study also showed that older women were more likely to use unskilled delivery or deliver at home than younger women. The woman's age was a statistically significant factor (p=0.04) that influenced the use of skilled delivery, this results correspond with that from many other studies who found woman's age to be a significant predictor of the use or uptake of skilled delivery. (Patiene Aseweh Abor et al., 2011)(Atinga et al., 2014). Therefore indicating that as women age increases, their use of skilled delivery services reduces or is nonexistent.

Ethnicity and religion were factors in existing literature that were found to be significant predictors of the use of skilled attendants during delivery (Patiene Aseweh Abor et al., 2011), this is in contrast to the results obtained from this study, which found both factors to be insignificant predictors of the utilization with p=0.20 and p=1.00 respectively.

The marital status of the respondents had no statistically significant influence on the use of skilled delivery with p=0.44, the majority of women in all the marital groups had used skilled care during their last delivery with a relative number in all marital status groups who did not.

In this study, the woman's educational level did not have a statistically significant (p=0.68) effect on the uptake of skilled delivery, this results contradicted those from other studies which found that participants who had high levels of education utilized skilled

attendance at their last delivery compared to those who had lower levels of education, those with lower levels of education tended to have unskilled deliveries.

In a similar study by Babalola et al in Nigeria 2009, the mother's educational level was a significant predictor of the likelihood that a woman would use skilled delivery. This is because women with higher educational levels tend to have better awareness of issues, have improved social status and also the ability to make informed decisions. They understood English language which eliminates language barriers during interaction with health workers.

The respondent's occupation in this study had no significant relationship with the utilization of skilled delivery ($p=0.68$) as most of the women still had less autonomy so no matter their occupation were still dependent on the heads of household or husbands to make decisions concerning their use of maternal health services. It was also observed in a similar study in Ghana (Atinga et al., 2014) that occupation of a woman no matter the type was negatively associated with the use of skilled attendance during delivery.

The educational level of respondent's partners in this study did not have a significant influence on the respondent's uptake of skilled delivery. But most of the respondents who had their last deliveries supervised by skilled health worker had partners with higher levels of education. This study results were a contrast to that of (Muhammed et al., 2015) where participants' partners' educational level had a positive relationship with the utilization of skilled delivery, he concluded that higher levels of education meant better social status for the family.

The occupation of respondent's partners did not have a significant influence on the uptake of skilled delivery in this study, although the partners' income may increase the status of women in society, majority of respondents partners were Artisans whose income levels were not specified in the study. This results are similar with that of Muhammed et al 2015 where the partners' occupation did not have significant influence on the use of skilled delivery. A study conducted by (Gabrysch & Campbell, 2009) in Kenya found that a higher occupation of a woman's partner had great influence on their use of skilled delivery services, as the partner was also likely to have high educational levels, was high income, valid health insurance policies which are also factors that could combine to improve the woman's access to health facility.

The number of children (parity) was not statistically significant in determining the uptake of skilled delivery p=0.30, but a study carried out by (Esena & Sappor, 2013)indicated that the more number of children a woman had the less her likelihood of using skilled attendants during delivery, this was attributed to the fact that the women claimed that with subsequent children since they had already delivered they had more experience hence the risk and dangers usually associated with first pregnancy was reduced.

Having a valid health insurance policy was a statistically significant predictor of the uptake of skilled delivery p=0.003. The barrier of cost is usually removed when a woman has a valid health insurance policy, this makes it easier for a woman to seek care even if the partner was not available at the time to provide finances.

5.5 Antenatal care attendance and uptake of skilled delivery

95% of the respondents had at least one antenatal visit, this is in sync with the study by (Esena & Sappor, 2013) carried out in the Ga East Municipality who reported that about

94% of the study respondents had at least one antenatal visit indicating that the percentage of women having at least one antenatal visit is high. But the number drops as the recommended number of visit which is at least four visit is considered, the number dropped to 89% in this study and similarly to 50% of participants in their study.

Some of the reasons the respondents listed for having less than three antenatal visits were not having enough money to take care of health expenses and transportation to facilities, not seeing the importance of antenatal care visits, long distance to health facility and unfriendly health staff.

Out of the respondents who had at least one antenatal care visit, about 24% of them did not use skilled attendance during their last delivery, this corresponds with data that even women who have had at least one antenatal care visit still do not use skilled attendance at delivery thereby creating the discrepancies between the number of women who attend antenatal and the number who use skilled attendance at delivery. The study in Ga East municipal also saw this decline in numbers as those who attended antenatal care was 94% and about 84% of that number had used supervised delivery.

The number antenatal care visits a woman had increased the chances of her uptake of skilled delivery as with each visit they were taught more about birth preparedness and recognition of danger signs. A study in rural western Kenya (Kawakatsu et al., 2014) showed that over 50% of women who had less than four antenatal care visits were less likely to have their delivery supervised by a skilled health worker compared to those who had more than four visit.

Having an antenatal care visit was statistically significant predictor of the use of skilled delivery with p=0.009

5.6 The knowledge on the importance of skilled delivery and its utilization

The knowledge of the use of skilled delivery was a significant predictor of the uptake of supervised delivery p=0.000.

This results were similar with that of (Kawakatsu et al., 2014) which indicated that knowledge of the importance of the use of maternal health services was a significant predictor of the uptake of supervised delivery and low knowledge resulted in low use of these services and vice versa, their study revealed that over 80% of women who knew the importance of skilled delivery had their last delivery supervised by skilled health staff, it was also stated that these women who had the knowledge were able to recognize danger signs during pregnancy.

Their observation was similar to results obtained from this study where 92% of women who knew the importance had utilized skilled attendant during their last delivery.

5.7 Healthcare service delivery factors that influence the uptake of skilled delivery

Some of the factors explored here included the level of satisfaction of care received at the health facilities, the attitude of health care workers, knowledge of nearest facility and the time taken to reach health facility.

Majority (90%) of the respondents were completely satisfied with the care they received during their last delivery at the health facility, 3% expressed dissatisfaction giving their reason to be that health staff did not give them good attention, they had to wait for long before they were attended to by health staff and also that health staff was not friendly and

kept screaming at them, 6% were partially satisfied with the care they had received while about 1% of the respondents were indifferent.

A literature review by Gabrysch & Campbell (2009) concluded that women tend to use skilled delivery more if they were satisfied with the level of care they received during the last pregnancy and delivery went well and also tend to seek alternative care if they were not satisfied with the level of care received.

The results of this study reveals same results as majority of respondents who were satisfied with care were willing to use skilled delivery services during next child birth.

The attitude of health care workers towards the women who had their last delivery at a health facility was reported in the categories of friendly, unfriendly and indifferent and 97% of the respondents who had their last delivery at a health facility reported health staff attitude as friendly and would still go back to the same health staff for their next delivery.

The poor attitude of health staff was seen to discourage women from seeking skilled attendance during their next delivery thereby contributing to the reduction in the uptake of skilled delivery and on the other hand good attitude will encourage women to utilize maternal health services and also encourage other women to use those services. (Abotzabire, 2013)

In this study all respondents knew the nearest health facility that offered maternal health services including those who did not have their last delivery supervised by a skilled health worker.

In terms of time taken to reach a health facility, 85% of the respondents claimed it took them less than thirty minutes which means the nearest health facility was easily reached

on time by respondents. But this did not increase the uptake of skilled delivery as even those who claimed they lived less than 30 minutes away from a health facility did not also uptake skilled delivery, this results are similar to that obtained by (Kitui et al., 2013) in an Analysis of the Kenya DHS data the analysis revealed that living close to a health facility did not have a positive influence on the use of maternal health services. It also contradicts results from a study by (Kawakatsu et al., 2014)who found that the nearer a health facility is to a woman the more likely she is to utilize maternal health care services.

Finally when the respondents were asked if they would like their next delivery to be supervised by a skilled health worker, about 95% of them responded yes they would while only 5% responded no they would not, the latter percent gave reasons to be that they would most likely not get pregnant again.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

In conclusion, the proportion of women who had their last deliveries supervised by a skilled health worker was high at 75% although 25% of the women did not use skilled attendance during their last delivery.

This study also showed that women less than 24 years had 52% of unskilled delivery, while 50% of respondents within 25-34years had used skilled attendance during delivery and only 17% of respondents above 34 years had their last delivery supervised by a skilled health worker, this supports the findings that age is a significant predictor of utilization of skilled delivery care, younger mothers tend to have low decision making powers, while older mothers claim to have more birth experience and so tend to use unskilled delivery.

It did not matter what religion or ethnic group the woman belonged to, all religions and ethnicity had used either skilled or unskilled care during delivery.

The education of the respondents was not statistically significant predictor of the use of skilled delivery services. The educational level of the respondents did not matter as those with or without any education had either used skilled or unskilled delivery.

Only 1% of Respondents and respondents' partners had tertiary education with majority of both groups having secondary educational levels. The partner's educational level did not have any influence on utilization as respondents irrespective of partners educational level had either used skilled or unskilled delivery.

45% of respondent partners were artisans engaging in manual labor while majority 48%of respondents in the study were traders.

From the study, the more children a woman had, the tendency to have skilled delivery reduced as 57% of the women with first pregnancy had their pregnancies supervised by a skilled health worker and only 13% of respondents with more than five children had skilled delivery.

0ver 80% of respondents had valid health insurance policy and 87% of those with a valid health insurance policy had their deliveries supervised by skilled health worker.

The study showed that most of the mothers have had some form of interaction with the health system during their pregnancy because more than 90% of them had at least one antenatal visit, but even those who have had these interaction still ended up with their deliveries unsupervised by a skilled health worker.

Antenatal attendance for the study respondents was high 95% but this did not correspond with the uptake of skilled delivery as 90% of those who had used unskilled delivery services had at least one antenatal visit.

The knowledge of the importance of skilled delivery was high among the respondents and 85% of respondents who claimed to know the importance had used skilled delivery indicating that if women really understood importance, they may be willing to uptake the services.

Most of the respondents about 90% of those who had their last delivery supervised were completely satisfied with the care they received at the health facility and this seemed to

have a positive effect on their use of skilled delivery as more than 50 % of those who expressed complete satisfaction had used the service.

Women who felt the health workers attitude was not friendly and were not satisfied with the level of care they received during their last pregnancy were most likely not to uptake skilled care.

The women who reported health workers attitude as friendly were willing to go back to the health facility for their next delivery if they were certain they will be attended to by the same health staff, this makes health workers attitude an important factor that influences uptake of skilled delivery.

The Woman's age, possession of a valid health insurance policy, attending antenatal care, knowing the importance of the use of supervised delivery were factors that were statistically significant influencers of the uptake of skilled delivery.

6.2 Recommendations

The following recommendations are made for the District Health Directorate;

- Information Education and Communication (IEC) campaigns should be held in communities to create awareness and emphasize on the importance of skilled delivery. Men and other family members should also be engaged when such programs or campaigns are organized.
- Continuous in-service training of health staff to meet community health needs, increasing staff strength in the district. Collaborating with community members and stakeholders to create transportation schemes for women during labor and using e-Health to improve emergency logistics.

- In some rural areas where TBAs have become so familiar with community members there should be an efficient system to regulate their practice and improve collaboration with skilled health workers.
- Inter-sectorial collaborations are recommended to enable policies, strategies and plans to be implemented effectively. Policies regarding the National Health Insurance Scheme should enforce all citizens enrollment as this reduces health care cost for the women and encourages uptake of skilled delivery.
- Collaborating with the educational sector to create education interventions for women such as scholarship schemes for the girl child to enable them have opportunities to attend and stay in school thereby increasing age of first pregnancies.
- Incorporating reproductive health education into school curriculums, counseling and mentorship programs for girls in schools. This will increase self-awareness, reduce the number of teenage pregnancies, empower and ultimately improve women's low status in society.

REFRENCES

Abor, P. A., Abekah-nkrumah, G., Sakyi, K., Adjasi, C. K. D., & Abor, J. (2011). *The Socio-economic Determinants of Maternal Health Care Utilisation in Ghana Patience Aseweh Abor Department of Public Administration and Health Services Management*. *International Journal of Social Economics* (Vol. 38). http://doi.org/10.1108/03068291111139258

Abor, P. A., Abekah-Nkrumah, G., Sakyi, K., Adjasi, C. K. D., & Abor, J. (2011). The socio-economic determinants of maternal health care utilization in Ghana. *International Journal of Social Economics*, *38*(7), 628–648. http://doi.org/10.1108/03068291111139258

Abotzabire, A. W. (2013). Factors Contributing to Maternal Mortality: The Case of Bawku West District in the Upper East Region, Ghana. *Journal of Chemical Information and Modeling*, *53*, 1689–1699. http://doi.org/10.1017/CBO9781107415324.004

Abou-Zahr, C., & Tessa, W. (2003). Ante-natal care in developing countries: promises, achievements and missed opportunities: an analysis of trends, levels and differentials. *World Health Organization*, 1–32.

Adegoke, A. A., & Van Den Broek, N. (2009). Skilled birth attendance-lessons learnt. *BJOG: An International Journal of Obstetrics and Gynaecology*, *116*(SUPPL. 1), 33–40. http://doi.org/10.1111/j.1471-0528.2009.02336.x

Afulani, P. A. (2015). Rural/urban and socioeconomic differentials in quality of antenatal care in Ghana. *PLoS ONE*, *10*(2), 1–28. http://doi.org/10.1371/journal.pone.0117996

Alkenbrack, S., Chaitkin, M., Zeng, W., Couture, T., & Sharma, S. (2015). Did equity of reproductive and maternal health service coverage increase during the MDG era? An analysis of trends and determinants across 74 low-and middle-income countries. *PLoS ONE*, *10*(9), 1–22. http://doi.org/10.1371/journal.pone.0134905

Arthur, E. (2012). Wealth and antenatal care use: Implications for maternal health care utilisation in Ghana. *Health Economics Review*, *2*(1), 1–8. http://doi.org/10.1186/2191-1991-2-14

Atinga, R., Baku, A., & Adongo, P. (2014). Drivers of prenatal care quality and uptake of supervised delivery services in Ghana. *Annals of Medical and Health Sciences Research*, *4*(9), 264. http://doi.org/10.4103/2141-9248.141970

Babalola, S., & Fatusi, A. (2009). Determinants of use of maternal health services in Nigeria--looking beyond individual and household factors. *BMC Pregnancy and Childbirth*, *9*, 43. http://doi.org/10.1186/1471-2393-9-43

Carter, A. (2010). Collection Factors That Contribute to the Low Uptake of Skilled Care

During Delivery in Malindi , Kenya. *Independent Study Project (ISP) Collection*, *4*(1). Retrieved from http://digitalcollections.sit.edu/isp_collection/821

Chakraborty, N., Islam, M. A., Chowdhury, R. I., Bari, W., & Akhter, H. H. (2003). Determinants of the use of maternal health services in rural Bangladesh. *Health Promotion International*, *18*(4), 327–337. http://doi.org/10.1093/heapro/dag414

Chineke, H. N. (2015). Antenatal care services utilization among women of reproductive age in semi-urban communities in Orlu LGA , Imo State , Nigeria, *27*, 1–9.

Dako-Gyeke, P., Aikins, M., Aryeetey, R., McCough, L., & Adongo, P. B. (2013). The influence of socio-cultural interpretations of pregnancy threats on health-seeking behavior among pregnant women in urban Accra, Ghana. *BMC Pregnancy Childbirth*, *13*(1), 211. http://doi.org/10.1186/1471-2393-13-211

Donkor. (2008). The Status of Information, Education and Communication on Prenatal Care and Skilled Delivery: The Case of Bibiani-Anhwiaso-Bekwai District, Ghana, 1–60.

Esena, R. K., & Sappor, M. (2013). Factors Associated With The Utilization Of Skilled Delivery Services In The Ga East Municipality Of Ghana Part 2 : Barriers To Skilled Delivery. *International Journal of Scientific&Technology Research*, *2*(8), 195–207.

Fekadu, M., & Regassa, N. (2014). Skilled delivery care service utilization in Ethiopia: Analysis of rural-urban differentials based on national demographic and health survey (DHS) data. *Adiktologie*, *14*(4), 967–973. http://doi.org/10.4314/ahs.v14i4.29

Gabrysch, S., & Campbell, O. M. R. (2009). Still too far to walk: literature review of the determinants of delivery service use. *BMC Pregnancy and Childbirth*, *9*, 34. http://doi.org/10.1186/1471-2393-9-34

Gbaden, E. A. (2014). THE INTERNATIONAL JOURNAL OF HUMANITIES & SOCIAL STUDIES Cultural and Religious Barriers to Women Accessing Healthcare in Jere , Borno State , Nigeria Abstract :, *2*(1), 31–38.

Ghana Health Service. (2014). *Family Health Annual Report*.

Graham, W. J., Bell, J. S., & Bullough, C. H. (2001). Can Skilled Attendance at Delivery Reduce Maternal Mortality in Developing Countries? *Safe Motherhood Strategies*, *17*, 97–130. Retrieved from http://www.jsieurope.org/safem/collect/safem/pdf/s2934e/s2934e.pdf

Joseph Sina, O., Lucy Iyabo, J., & Ayodele, I. M. (2014). Socio-economic status and utilization of healthcare facilities in rural. *Standard Research Journal of Medicine and Medical Sciences*, *2*(1), 1–43. Retrieved from

http://www.standresjournals.org/journals/SRJMMS

Kawakatsu, Y., Sugishita, T., Oruenjo, K., Wakhule, S., Kibosia, K., Were, E., & Honda, S. (2014). Determinants of health facility utilization for childbirth in rural western Kenya: cross-sectional study. *BMC Pregnancy and Childbirth*, *14*(1), 265. http://doi.org/10.1186/1471-2393-14-265

Kesterton, A. J., Cleland, J., Sloggett, A., & Ronsmans, C. (2010). Institutional delivery in rural India: the relative importance of accessibility and economic status. *BMC Pregnancy and Childbirth*, *10*, 30. http://doi.org/10.1186/1471-2393-10-30

Kitui, J., Lewis, S., & Davey, G. (2013). Factors influencing place of delivery for women in Kenya: an analysis of the Kenya demographic and health survey, 2008/2009. *BMC Pregnancy and Childbirth*, *13*, 40. http://doi.org/10.1186/1471-2393-13-40

Lindstrom, D. P., & Muñoz-Franco, E. (2006). Migration and maternal health services utilization in rural Guatemala. *Social Science and Medicine*, *63*(3), 706–721. http://doi.org/10.1016/j.socscimed.2006.02.007

Martínez, R., & Fernández, A. (2010). The Social and Economic Impact of Illiteracy: Analytical Model and Pilot Study. *Education*.

Mekonnen, Y., & Mekonnen, A. (2002). Utilization of maternal health care services in Ethiopia, 1–23. http://doi.org/10.1590/S1020-49892008000800001

Melkamu Fanta(2005). (2005). Assessment of factors affecting utilization of maternal heath care services in Ayssaita and Dubti towns, Afar Regional State, North East Ethiopia, Department of Community Health Faculty of Medicine, Addis Ababa University, Masters thesis, (June).

MOH. (2014). Ministry of Health Ghana Holistic Assessment of the Health Sector Programme of Work 2014.

Muhammed, A., Donkor, E., & Naab, F. (2015). Perceived Need for Supervised Delivery among Women in Moriki, Zamfara, Nigeria. *IOSR Journal of Nursing and Health Science Ver. I*, *4*(3), 2320–1940. http://doi.org/10.9790/1959-04318187

Nations, U. (2015). The Millenium Development Goals Report 2015, 1–75. Retrieved from http://www.undp.org/content/dam/undp/library/MDG/english/UNDP_MDG_Report_2015.pdf

Nwokocha, E. E. (2007). Maternal crises and the role of African men: The case of a Nigerian community. *Etude de La Population Africaine*, *22*(1), 35–56.

Pearson, L., Larsson, M., Fauveau, V., & Standley, J. (2007). Childbirth care. *Opportunities for Africa's Newborns: Practical Data, Policy and Programmatic*

Support for Newborn Care in Africa, 63–78. Retrieved from http://www.who.int/pmnch/media/publications/oanfullreport.pdf

Pfeiffer, C., & Mwaipopo, R. (2013). Delivering at home or in a health facility? health-seeking behaviour of women and the role of traditional birth attendants in Tanzania. *BMC Pregnancy and Childbirth*, *13*, 55. http://doi.org/10.1186/1471-2393-13-55

Requejo, J. H., Bryce, J., Barros, A. J., Berman, P., Qar Bhutta, Z., Chopra, M., & Daelmans, B. (2015). Countdown to 2015 and beyond: fulfi lling the health agenda for women and children. *The Lancet*, *385*(14), 466–476. http://doi.org/10.1016/S0140-6736(14)60925-9

Service, G. S. (2014). Ghana Demographic and Health Survey. *Studies in Family Planning*, *21*(1), 1–5. http://doi.org/10.1007/s13398-014-0173-7.2

Singh, A., Kumar, A., & Pranjali, P. (2014). Utilization of maternal healthcare among adolescent mothers in urban India: evidence from DLHS-3. *PeerJ*, *2*, e592. http://doi.org/10.7717/peerj.592

Thaddeus, S., & Maine, D. (1994). Too far to walk: Maternal mortality in context. *Social Science and Medicine*, *38*(8), 1091–1110. http://doi.org/10.1016/0277-9536(94)90226-7

UNFPA. (1999). *ICPD Programme of Action*.

UNICEF. (2013). Thematic Report 2013 Young child survival and development.

van Eijk, A. M., Bles, H. M., Odhiambo, F., Ayisi, J. G., Blokland, I. E., Rosen, D. H., … Lindblade, K. A. (2006). Use of antenatal services and delivery care among women in rural western Kenya: a community based survey. *Reproductive Health*, *3*(APRIL), 2. http://doi.org/10.1186/1742-4755-3-2

WHO. (2008). Proportion of births attended by a skilled health worker: 2008 updates, 16. Retrieved from http://ideas.repec.org/p/ess/wpaper/id1596.html

WHO. (2014). Trends in Mternal Mortality: 1990-2013. Estimates by WHO,UNICEF, UNFPA, The World Bank and the United Nations Population Division. *World Health Organisation*, 56. http://doi.org/WHO/RHR/14.13

Wilunda, C., Quaglio, G., Putoto, G., Lochoro, P., Dall'Oglio, G., Manenti, F., … Oyerinde, K. (2014). A qualitative study on barriers to utilisation of institutional delivery services in Moroto and Napak districts, Uganda: implications for programming. *BMC Pregnancy and Childbirth*, *14*(1), 259. http://doi.org/10.1186/1471-2393-14-259

Witter, S., Arhinful, D. K., Kusi, A., Zakariah-Akoto, S., S., W., D.K., A., & A., K. (2007). The experience of Ghana in implementing a user fee exemption policy to

provide free delivery care. *Reproductive Health Matters*, *15*(30), 61–71. Retrieved from http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emed8&NEWS=N&AN=2007495363

Zone, K., & Jackson, R. (2008). PRIZE WINNING ESSAYS The Three Delays as a Framework for Examining Safe Motherhood in Introduction Of all the health statistics monitored by the World Health Organization (WHO), maternal mortality has the highest discrepancy between developing and devel, *29*(1), 11–25.

APPENDIX A

Questionnaire on Factors Influencing Uptake of Skilled Delivery in South Senchi community (For Women Age 15-49)

IDENTIFICATION NUMBER…… DATE----/----/---

SECTION A (Demographic Characteristics) Please tick as appropriate

1. What is your Age Range?

[ ] 15-24, [ ] 25-34, [ ] 35-44, [ ] 45+

2. What is your Religion?

[ ] Christianity, [ ] Moslem, [ ] others, please specify…….

3. What is your Marital Status?

[ ] Married, [ ] Single, [ ] Divorced, [ ] Cohabiting, [ ] widowed

4. Ethnicity?

.....

Section B (Socioeconomic Characteristics)

5. What is your Occupation? [ ] Farming [ ] Trading [ ] Teaching [ ] Artisan [ ] Civil Servant [ ] others, specify…….

6. What is your Educational Level? [ ] Primary, [ ] Secondary, [ ] Vocational, [ ] Tertiary

7. What is your Partners s occupation? [ ]Farming [ ]Trading [ ]Teaching [ ]Artisan [ ] Civil Servant [ ] Others, specify…….

8. What is your Partners educational level? [ ] Primary, [ ] Secondary, [ ] Vocational, [ ] Tertiary

9. How many children do you have? [ ] 1 [ ]2 [ ]3 [ ]4 [ ]5 [ ] more than 5

10. Do you have health insurance? [ ] YES, [ ] NO

SECTION C (Questions on Maternal Health Utilization)

11. Did you attend Antenatal Clinic during your pregnancy? [ ] YES, [ ] NO

12. How many times did you visit the Antenatal clinic during your last pregnancy?

[ ] 1 to 3 visits [ ] More than 3 visits

13. If less than 3 times why?

[ ] Cost, [ ] Distance, [ ] Culture, [ ] Unfriendly health staff, [ ] Did not see importance

14. During your last delivery, were you attended by a skilled birth attendant (doctor, nurse, or midwife)? [ ] YES [ ] NO

(If YES skip to Question 16, If NO answer Question 15 and skip to Question 18)

If No who attended to you?

……

15. Why did you go to this person for your delivery?

[ ] Cost [ ] Distance [ ] Culture [ ] Attitude

16. How would you describe the attitude of the skilled birth attendant?

[ ] Friendly, [ ] Unfriendly, [ ] Indifferent

17. How satisfied were you with the care you received from the skilled birth attendant?

[ ] Completely Satisfied

[ ] Partially Satisfied

[ ] Neither satisfied nor dissatisfied

[ ] Dissatisfied

What were the reasons for your dissatisfaction? (Open-ended

……
……

18. Do you know the importance of skilled delivery?

[ ] YES, [ ] NO

19. Does your culture prevent you from accessing health facility during pregnancy and childbirth?

[ ] YES [ ] NO

If YES what specifically does it say?

.....
.....

20. Can you make decisions on visiting the Antenatal clinic/ use of skilled delivery in your home?

[ ] YES, [ ] NO

If no who can make the decision?

……

21. Do you know the nearest health facility that offers maternal health services?

[ ] YES, [ ] NO

22. How long does it take you to reach the health facility?

[ ] Less than 30 min.

[ ] 30 min. to 1 hour

[ ] 1 hour to 1 ½ hours

23. Would you visit the health facility for your next pregnancy and delivery?

[ ] YES [ ] NO

If No why?

.....

.....

APPENDIX B: INFORMED CONSENT FORM

TOPIC: Factors influencing uptake of skilled delivery in South Senchi Community.

Part 1. Participant Information

Introduction

Hello my name is Emem Mfon Ibanga, I am a student from the Ensign College of Public Health Kpong. I am working with our partners from Ghana Health Service, and University of Utah U.S.A. We are carrying out a study to identify the factors that influence the uptake of skilled delivery in South Senchi Community which will help improve maternal morbidity and mortality.

This participant information leaflet explains the research study you are being asked to join. Please take all the time you need to read it carefully. You may ask questions about anything you do not understand at any time. You are a volunteer. You can choose not to take part and if you join, you may quit at any time. There will be no penalty if you decide to quit the study

Why you are being asked to participate?

You are being asked to take part in this study because you live in South Senchi community in Asuogyaman district of Ghana. Specifically, we are interested in interviewing women of reproductive age (15 to 49).

Procedures

If you agree to be part of the study, a trained field staff will ask you a series of survey questions alone for approximately 20-25 minutes. Your responses will be recorded on paper and later entered into a computer database. The questions will only begin after you have agreed to be in the study and have signed the consent form.

We will be administering questionnaires to women of reproductive age (15- 49) who agree to partake in the study. You will only be interviewed, there will be no direct benefits to you for agreeing to participate. Our work is to learn about the different factors that may

influence a woman's decision to uptake supervised delivery. We have approached you to take part in this study after obtaining approval from the ethics review board of the Ghana health service.

Confidentiality

The information obtained from the questionnaires will be entered into a data base together with others obtained from other participants. Your name will not be entered and no information will be traceable to you individually.

Contacts

If you have any questions please feel free to contact Emem Ibanga at Ensign College Of Public Health Kpong +233579219705, The Director Lower, Asuogyaman District Health Directorate, +2332082231907. Dr. Juliana Y. Enos Ensign College of Public Health Kpong, +233504229909

You are free to decide whether you want to participate or not, participation is voluntary and before deciding whether you will participate, you can ask any questions about what is not clear to you about all you have read. If you agree to participate, we will record your written agreement now.

Part 2. CONSENT DECLARATION

Declaration

"I have read the information given above, or the information above has been read to me, I have been given a chance to ask questions concerning this study; questions asked have been answered to my satisfaction. I now voluntarily agree to participate in this study".

Signature of Respondent…….. Date……

Name of Respondent…… Date……

Name of Researcher/interviewer…….. Date……

Thumb Print of Respondent