

**FACTORS INFLUENCING SKILLED DELIVERY IN THE ASANTE AKIM
NORTH MUNICIPALITY OF GHANA.**

By
KNUST

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DEDICATION

I dedicate this work to Brian Steve Papa Kobina Adu, Jayne Maame Efua Mainoo and George Kwame Enchill. I love you all very much.

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DEFINITION OF TERMS

Enabling environment: an environment in which there is the provision of a skilled attendant with the backup support to perform routine deliveries and make sure that women with complications receive prompt emergency obstetric care. It essentially means a well-functioning health system, including equipment and supplies; infrastructure and transport; electrical, water and communication systems; human resources policies, supervision and management; and clinical protocols and guidelines.

Maternal morbidity: refers to serious disease, disability or physical damage such as fistula and uterine prolapse, caused by pregnancy-related complications.

Maternal mortality: according to the Tenth International Classification of Diseases, a maternal death is defined as “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.”

Maternal mortality rate: this measurement, the number of deaths per 100,000 women in the 15-49 age group, measure the impact of maternal deaths on the population of women as a whole, not just on pregnant women.

Maternal mortality ratio: the number of maternal deaths per 100,000 live births measures the risk of maternal death among pregnant or recently pregnant women.

Midwife: a person who, having been regularly admitted to a midwifery educational programme, duly recognized in the country in which it is located, has successfully completed the prescribed course of studies in midwifery and has acquired the requisite qualifications to be registered and/or legally licensed to practice midwifery.

Adopted by the International Confederation of Midwives Council meeting, 19th July, 2005, Brisbane, Australia and supersedes the ICM “Definition of the Midwife” 1972 and its amendments of 1990

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

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

Skilled attendance (or skilled care): a skilled attendant operating within an enabling environment or health system capable of providing care for normal deliveries as well as appropriate emergency obstetric care for all women who develop complications during childbirth.

Traditional birth attendant (TBA): a community-based provider of care during pregnancy and childbirth. TBAs are not trained to proficiency in the skills necessary to manage or refer obstetric complications.

ABBREVIATIONS/ACRONYMS

ANC	Antenatal Care
FIGO	International Federation of Obstetrics and Gynecology
GHS	Ghana Health Service
ICM	International Confederation of Midwives
ICPD	International Conference on Population and Development
IMMPACT	Initiative for Maternal Mortality Programme Assessment
KATH	Komfo Anokye Teaching Hospital
KHC	Kikoneni Health Centre, Kenya
KNUST	Kwame Nkrumah University of Science and Technology
MDG	Millennium Development Goals
MOH	Ministry of Health
SBA	Skilled Birth Attendant
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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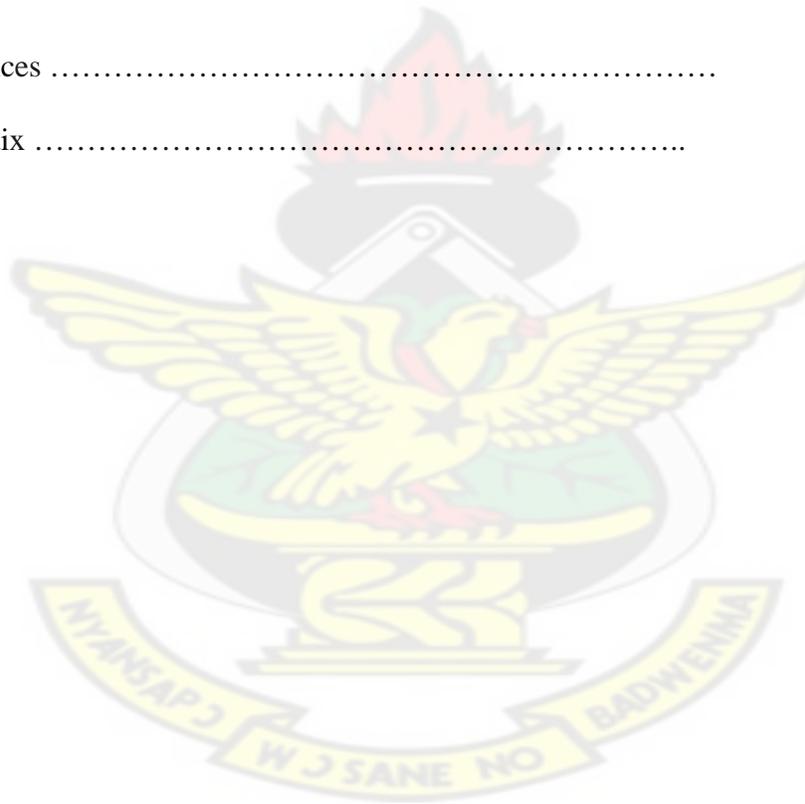
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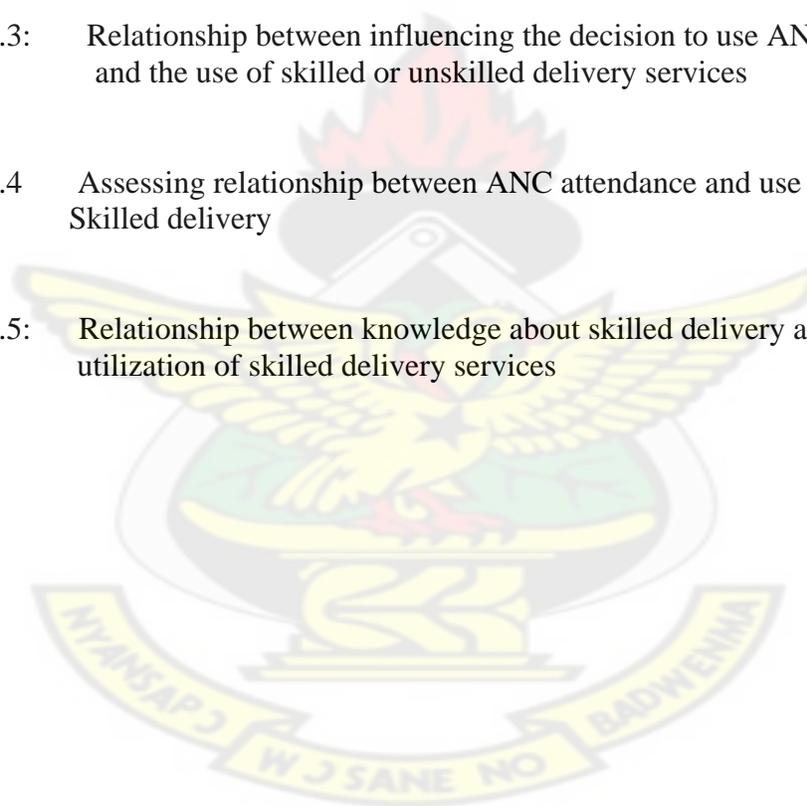
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ABSTRACT

Childbirth is important to human existence. Complications during childbirth can lead to death or disability of a mother or a child. Maternal mortality is estimated to be over 440,000 per 1000 live births and the highest which is 99.0% is in the developing countries (WHO 2004). The risk of maternal death is about 175 times greater in some parts of the developing world than in the industrialized countries. (Hill *et al.*, 2001). In the more developed countries, skilled attendance have reached 99.5%, on the other hand, 46.5% and 65.4%, of women gave birth with professional assistance in Africa and Asia respectively (2008 Updates Proportion of birth attended by skilled attendant – WHO).

In Ghana, skilled delivery remain stagnant around 47.1%, which is 37.9% away from WHO's target for 2010, which estimates that by 2010, 90.0% all births should be attended by skilled attendants. The Asante-Akim North municipality recorded an increase of 58.8% of skilled attendance in 2006 from that of 53.4% in 2005. The fact is that the municipal area is still below the target set by WHO.

The main objective of the study was to assess the factors influencing skilled delivery in Asante Akim North Municipal.

The study was a cross-sectional non-experimental descriptive design. Data was collected using questionnaires. Simple random sampling and convenience sampling were both employed in the selection of participants to the study. Statistical tool used for the analysis of the data collected for the study was SPSS version 15.0.

Majority of respondents were aged 36 years and above with a few below that age. Most of the respondents had basic education with a few obtaining certificates above the secondary/vocational levels of education and some with no formal education. Respondents who had 2-4 children were more than those with 5 or more children. Majority of the respondents were Christians (95.7%). Moslems (2.9%) formed just a

few of the respondents. Some of the respondents lived with partners who they are not legally married to, whilst others, a minority, were single, divorced and widowed. Employment status of respondents ranged from civil services, to traders, farmers and tradesmen, a few of them were unemployed. More than half of the respondents (71.2%) had membership status with the health insurance scheme. Married respondents, farmers and the unemployed formed the majority groups of those who did not use the skilled attendants. Half of non-members of the health insurance scheme were among those who used unskilled delivery services. More than half of the respondents claimed they visited ANC. Over eighty percent of those who used unskilled delivery visited ANC during pregnancy. Respondents who were told to prepare for their delivery were significantly influenced to use skilled attendants. Majority of respondents (95.1%) indicated from the data that they were aware of the importance of the skilled delivery services; however, they were not influenced enough by this knowledge to make use of skilled attendants during delivery.

The study recommended the sensitization of the following members of the society: married respondents, farmers and the unemployed, on the need to use health facility during delivery and be attended to by a professional midwife to help prevent maternal and infant mortality.

CHAPTER ONE

INTRODUCTION

1.1 Background Information

Childbirth is a very important part of human existence. Complications during childbirth can lead to death or disability of a mother or a child. Maternal mortality is estimated to be over 440,000 per 1000 live births and the highest which is 99.0% is in the developing countries (WHO 2004). The risk of maternal death is about 175 times greater in some parts of the developing world than in the industrialized countries. (Hill *et al.*, 2001) Primary direct causes of maternal mortality globally include haemorrhage (24.8%), infection (14.9%), eclampsia (seizure or coma related to pregnancy — 12.9%), obstructed labour (6.9%), unsafe abortion (12.9%), and other direct causes (7.9%). Indirect causes (e.g. malaria, HIV, untreated rheumatic heart disease) account for 19.8% of global maternal mortality.

Skilled attendance during pregnancy, childbirth and after childbirth is a factor in preventing maternal death and will help in attaining the Millennium Development Goal (MDG No. 5), which aims at the improving maternal health by 75.0% from 1990 to 2015. Skilled attendants has been defined by WHO 2004 as “an accredited health professional- such as midwife, doctor or nurse, who has been educated and trained to proficiency and skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period and in the identification, management and referral of complications in women and newborns”. Skilled attendants should have access to

equipments and drugs. Facilities, equipments and referrals could also save lives of women during childbirth. In the more developed countries, WHO estimates skilled attendance to have reached 99.5%, on the other hand, 46.5% and 65.4%, of women gave birth with professional assistance in Africa and Asia respectively (2008 Updates Proportion of birth attended by skilled attendant – WHO).

Reduction of maternal mortality, as called for in Target 6 of the Millennium Development Goals requires that emergency care be accessible and used by pregnant women experiencing complications. Deadly complications randomly occur in all women, and it is often difficult to predict which women will develop these complications. Maternal mortality and morbidity have been found to correlate with delays in receiving the required care (including delays in deciding to seek care for an obstetric complication, in actually reaching a care facility, and in actually obtaining care). This emphasizes the need for birth attendants to be capable of performing efficient emergency interventions. Consequently, the global emphasis on provision of skilled birth attendants and basic and comprehensive emergency obstetrical care is highly relevant, where availability, access, quality and use of maternal services are important issues.

1.2 Problem Statement

Historical and observational evidence had shown a protective relationship between having a skilled health worker at delivery and the reduction of maternal and neonatal mortality (Graham et al., 2001). Skilled attendants will not include traditional birth attendants because it is defined as; midwife, doctor or nurse who has been trained and

educated to proficiency and skills that is needed to manage uncomplicated normal pregnancies, childbirth and the immediate post-natal period. These professionals should be able to identify, manage and refer complications in women and newborns. The environment in which these professionals operate should also be enabling that is, there should be equipments and drugs available and an efficient referral system (WHO, 2004).

Indeed, it has been established that certified nurse midwife attendance during delivery saves lives of mothers and children. (MacDorman & Singh, 1998) According to UNFPA, evidence from many countries, such as China, Cuba, Egypt, Jordan, Malaysia, Sri Lanka, Thailand and Tunisia, indicate that skilled midwives functioning in or very close to the community can have a drastic impact on the reduction of maternal and neonatal mortality.

Every district in Ghana makes use of skilled delivery which is considered to be very essential to improvement of maternal health and safe delivery to prevent maternal and infant mortality and morbidity. According to the Deputy Director in-charge of Public Health, Dr. Henrietta Odoi-Agyarko, even though ante-natal care impacts positively on pregnancy and birth outcome through early diagnosis and treatment of complications as well as promoting the health of the pregnant woman, it has long been observed that skilled delivery is central in any case at reducing maternal and neonatal mortality. The problem however, is that skilled delivery although has increased globally, in Ghana it is still very low compared to the developed world (Statesman Newspaper, 2007).

For example, in 2003, Ghana recorded only 43.00% deliveries attended by skilled personnel (UNICEF Global Database on Skilled Attendant Care). In 2002, Ghana lost 837 women at a ratio of 204 per 100,000 live births. 854 expectant women died in 2003, 824 in 2004, 912 in 2005 and 954 in 2006.

By the end of June, 2007, 470 women had died in pregnancy and childbirth. Dr. Henrietta Odoi-Agyarko identified cost of service, distance to service delivery points and quality of care as some of the hindrances to access to supervised delivery service, particularly in the rural areas.

The municipality under study recorded an increase of 58.8% in 2006 from that of 53.4% in 2005 (2006 Annual Report - Asante Akim North Municipal). The attendance at antenatal clinic at the health facilities in the municipality has increased but with no correspondent increase in the delivery attendance at the facilities.

It was reported that in sub-Saharan Africa, many more women attend antenatal care clinics than seek skilled attendants' delivery services, although the magnitude of this differential varies from country to country and regionally within border areas of countries. This means that even among women who have formal interactions with the healthcare system through antenatal care-seeking, a significant sub-set still delivers without adequate obstetric care (Cotter, et al, 2006). The fact is that, the municipality is still below the target set by the Ghana Health Services (GHS). The Ghana Health Service has pegged skilled attendance during delivery to be high if it is 90.0% (Ghana Health Service 2004 Annual Report).

1.3 Rationale of the Study

According to WHO (2004), by the year 2015, 90.00% pregnant women globally should be supervised by skilled attendants during delivery. This study therefore aims at looking at the factors that influence skilled delivery in the Asante Akim North Municipal area in Ghana. It also seeks to provide information which will be a guide to decision makers in the municipal, regional and at the national level to help solve the problem of maternal mortality, infant mortality and morbidity in the municipality by increasing the coverage on skilled supervision before, during and after child birth.

1.4 Research Questions

1. What proportion of mothers makes use of skilled attendants during delivery in the Municipal area?
2. What are some of the socio-demographic characteristics that affect access to skilled delivery?
3. Does ANC attendance influence the use of skilled delivery care?
4. Does the level of knowledge about skilled delivery influence its acceptance and use?
5. What is the health workers' attitude and behaviour towards clients who use the facility for delivery?

1.5 General Objective

To assess the factors influencing skilled delivery in Asante Akim North Municipality.

Specific Objectives

1. To describe the proportion of mothers who access skilled delivery during delivery in the Asante Akim North Municipality.

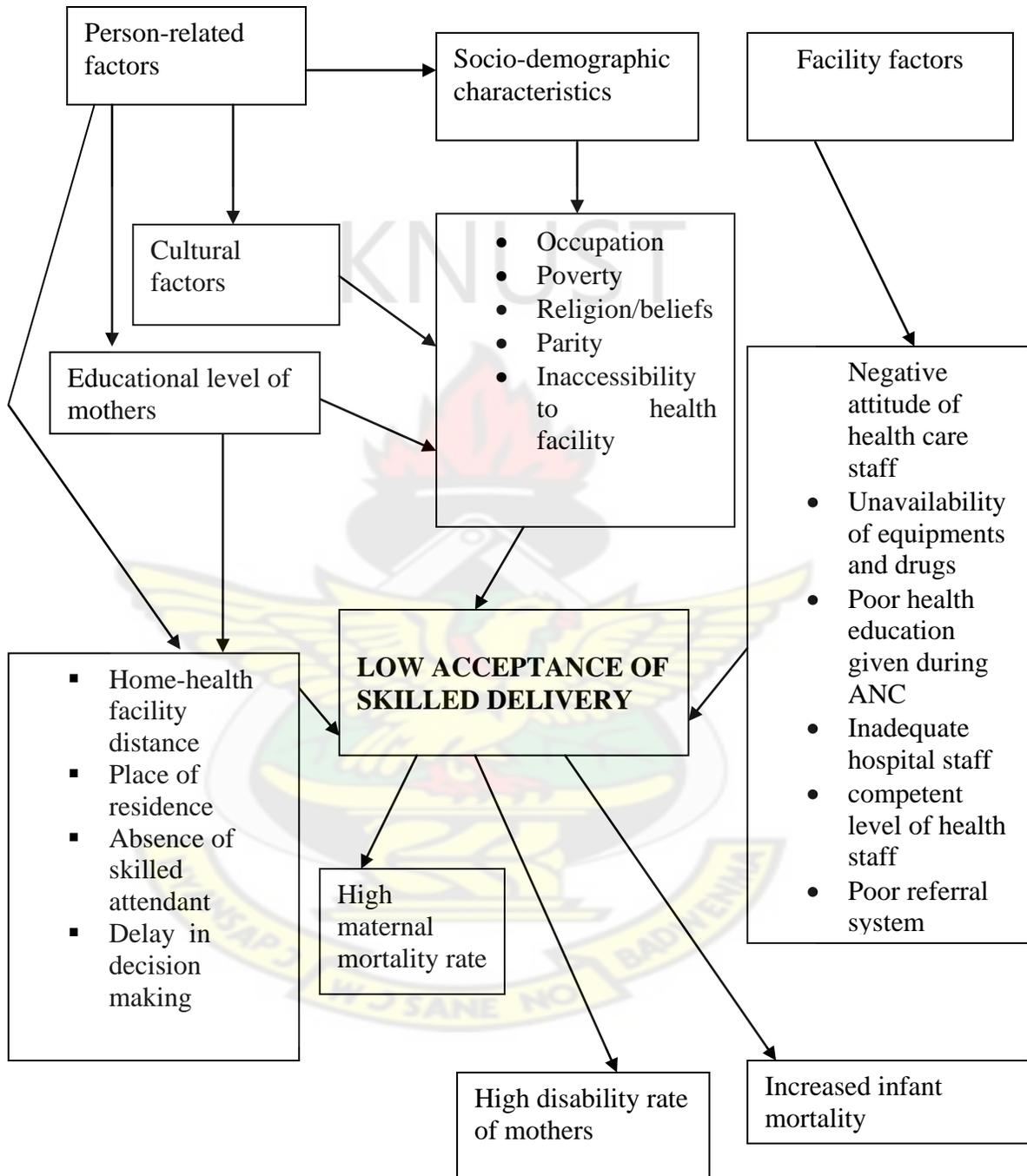
2. To determine whether socio-demographic characteristics affect access to skilled delivery during delivery.
3. To ascertain the extent to which ANC attendance influences the use of skilled delivery services.
4. To estimate the level to which knowledge about skilled delivery influence its acceptance and use by mothers.
5. To identify health workers' attitude and behaviour that affect clients who use the facility for delivery purposes.

1.6 Conceptual Framework

The factors are mainly person related and facility related. The person-related factors include the mother's socio-demographic characteristics; their educational background and the religious environment and how it supports the use of health care facility before, during and after child birth. The facility-related factors include the attitude of health care professional towards women who seek biomedical attention during pregnancy, birth and post-natal care; health care personnel training and knowledge level; availability of equipment and drugs; health education given during ante-natal care (ANC); inadequate hospital staff; distance to health centre, absence of skilled attendance, delay in decision making and place of residence. All the above points directly and indirectly affect the accessibility of women to health care facility during pregnancy, birth and after birth. When these factors hinder supervised birth and complications are not managed then it will certainly lead to infant mortality and maternal death, maternal disability and its aftermath.

CONCEPTUAL FRAMEWORK

Figure 1.1: Conceptual Framework on factors influencing skilled delivery



1.7 Profile of Study Area

The area under review is one of the 21 districts in the Ashanti Region of Ghana, which has now been made a municipal area. The municipality has an estimated population of 159,829 and covers an area of 1,362 sq. km of land, about 5.6% of the total land area of the Ashanti Region. (This projection was made from the 2000 population census). The municipality has tropical rainforest vegetation but savannah grassland is gradually taking over the forest vegetation due to frequent bush fires and logging activities of the timber industry.

The municipality shares boundaries with Ejisu-Juaben to the west, Sekyere East to the north, Kwahu South to the east and Asante-Akim South to the south. Konongo/Odumasi, the municipal capital, has a population of 37.60% of the total area of the municipality and has fifteen (15) communities, Agogo, made up of forty-seven (47) communities has a population of 35.5% of the total population of the municipality, Juansa has 10.7% of the total population with eight (8) communities, Dwease/Praaso - 8.4% of the total population with eleven (11) communities and Amantenaman with 7.80% of the total municipality's population has eight (8) communities. The municipality is administered by a Municipal Chief Executive.

The municipality has two Training Colleges, Four Senior High Schools, Forty-four Junior High schools, Eight Preparatory Schools, Eighty-seven Primary schools, Kindergartens numbering Seventy-one and Twelve Day Care Centres. The municipality can boast of two Commercial banks and three Rural banks.

Communication exist in the form of telephones – including mobile phones and landlines, fax and email services, transportation is available in the municipality with taxis and trotros (public transport) for public use, and private cars, pick-ups etc. There is a first class road which passes through Konongo Odumase to Accra from Kumasi and a second class road from Konongo Odumase to Agogo.

The people of the municipal area are mostly Ashantis with a minority Fantis, Ewes, Gas, Moshies, Sissalas, Nzemas, Dagombas and Kussasis. They engage mostly in small-scale farming, trading, fishing, charcoal production and other means of livelihood include sand winning, “galamsey” – small scale mining, and chain saw operation.

There are eleven (11) health care facilities including three (3) private health care centres. There is a municipal health team in the municipality which is responsible for managing health activities. The municipality has herbalists and spiritualists estimated to be around one hundred and fifty (150) operating with licenses from the Municipal Administration.

Maternal mortality rate increased from 1.6 per 1000 live births to 2.7 per 1000 live births in the year 2006 in the municipality. Infant mortality rate however decreased in 2006 from 18.7 per 1000 live births to 9.1 per 1000 live births. Skilled attendance during delivery also increased from 53.4% in 2005 to 58.8% in 2006. (2006 Annual Report – Asante-Akim North Municipality).

The following were the top ten causes of OPD attendance in the district in year 2006:

Malaria – 20311, Acute eye Infection – 8782, Cold and Cough – 3963, Diarrhoea – 3054, Skin disease – 2019, Home and Occ. – 1294, Cataract – 1285, UTI – 1107, HPT – 1003, Vaginal discharge – 819.

1.8 Scope of the Study

Mothers of very young children (1 day to one year) were the focus of the study with the use of questionnaires. The study was carried out to assess the factors influencing skilled delivery in Asante Akim North Municipality. A conceptual framework used for the study was based on the facility-related factors and the person related factors including: the attitude of health care professional towards women who seek biomedical attention during pregnancy, birth and post-natal care; health care personnel training and knowledge level; availability of equipment and drugs; health education given during ante-natal care (ANC); inadequate hospital staff; distance to health centre, absence of skilled attendance, delay in decision making and place of residence.

1.9 Organization of the Report

The study is organized according to chapters. The report has six chapters in all. Chapter one addresses the background to the study, the statement of the problem, rationale, research questions, study objectives, conceptual framework, profile of study area, scope of the study and the organization of the report.

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

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

The results and interpretations of the study are presented according to the specific objectives are in chapter four.

Chapter five discusses the findings of the research and six deals with the conclusions and recommendations. The bibliographic follows these chapters.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Many studies have been conducted on various topics globally including maternal mortality, infant mortality and their causes and recommendations have also been done. Studies have also been done on the subject of supervised delivery by skilled attendants. This literature review therefore looks at some of the studies done in this area and their significance to this study in particular. The relevant literatures which are reviewed are on the proportion of women who make use of skilled attendants during delivery, occupation/autonomy of women, age, employment of women and their husbands/partners, parity, and other socio-demographic characteristics. It also reviewed literature in the area of antenatal care and its influence on decision to utilize skilled delivery, relationship between knowledge level of skilled delivery and its use, attitude of health care personnel towards women during delivery. It also looked at the three delays, which are, delay in decision making, delay in transportation to health facilities and delay of care in health institutions.

2.2 Proportion of women who make use of skilled attendance during delivery

The World Health Organization estimates that, in low income countries about 60.0% of birth occurs outside health care facilities with 47.0% occurring with the assistance of traditional birth attendants, family members and other times with no help from anyone (WHO 1997). The proportion of birth attended by certified nurse midwives in the USA for instance has increased from 88.0% in 1991 to 90.0% in 1994 and those attended to in

hospital to about 95.0% (MacDorman & Singh,). The percentage of skilled attendant in the developing countries also increased from 42.0% to 52.0% from the years 1990 to 2000, a representation of 24.0% in the developing countries as a whole (Maternal Mortality Update 2004 - UNFPA and the University of Aberdeen). The World Health Organization in the 2007 updates of the proportion of births attended by skilled attendants estimates that 63.1% of births are attended to by skilled professionals globally, 59.1% in the more developed countries whilst 34.3% in the less developed countries (WHO 2007 updates on proportion of births attended by skilled attendants). However in the these African countries, such as Ethiopia at 9.8%, Niger at 15.7%, Chad at 16.2%, and Burundi at 19.1%, deliveries assisted by skilled personnel is still very low (Kristen, et al, 2006). In Ghana, the proportion of births attended by skilled professional in 2003 was 47.1% (WHO, 2007).

The proportion of skilled attendants during delivery has increased in the whole world as mentioned above but the fact remains that the target set by the Millennium Development Goals (2000) which calls for 90.0% births to be delivered by a skilled attendant has still not been met.

As reported by UNFPA on the progress from the field, Botswana, Burundi, Senegal, Uganda and Zimbabwe have developed policies defining a skilled attendant and strategies to increase the proportion of deliveries they attend. They indicted that, in Burundi in 1995, only 9.5 per cent of deliveries occurred in health facilities. Burundi has since that time designed reproductive health programme which has designated strategies to increase the proportion of attended births, such as enhancing the technical capacity of

personnel and facilities and promoting the use of partographs during labour (UNFPA, 2004).

The table 1 below shows the global, regional and sub-regional estimates of the proportion of births with skilled attendant in 2007.

Table 2.1: The global, regional and sub-regional estimates of the proportion of births with skilled attendant in 2007

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: Proportion of births attended by a skilled attendant, 2007 updates, page 2.

2.3 Socio-demographic characteristics affecting access to skilled delivery

Almost all maternal mortality is avoidable. Death of a woman during pregnancy or childbirth is a violation of her rights to life and a social injustice to her, her family and community. The health of a country is directly dependent on its economic and social development. Social and economic growth is also based on the healthy living conditions and access to good and quality health care for all the people of the nation and it is their right. The health indicators of a society or nation are therefore affected by inequalities in economical and social conditions. The most affected indicators of health in a country are maternal and infant mortality rates. Women in India find themselves in subordinate positions to men socially, economically and culturally. They are economically dependent on men. Women are largely excluded from making decisions, have limited access to and control over resources, are restricted in their mobility, and are often under threat of violence from male relatives (Deogaonkar, 2004).

Socio-economic factors that affect access to health care and causes maternal mortality operates at the individual, family and community level and is a complex issue. The individual woman makes decisions about her health depending on her educational level, occupation, level of personal income or wealth and her autonomy. The aggregate family income and occupation and education of family members could also affect access to health care for the woman. With the community, the collective resources and wealth plays an important role in the socio-economic aspects of the health needs of community members (McCarthy and Maine, 1992).

Some of the socio-economic factors which influence decision making on where to deliver include the women's age, her educational level, as well as her marital status. Younger women who have just started child-bearing and are told to be in a high risk group, tend to fear home deliveries. The possibility that the new generation with a higher proportion of women who have formal education have different perspectives on delivery care when compared to the older generations.

Studies have shown that mothers with less education have more difficulties in having access to health care facilities (Deogaonkar, 2004).

A study conducted in Eritrea (Eritrea Health Update – 2007) found that illiteracy was very high among the mothers. It established that about two-thirds, that is, 59.3% did not have any form of education. The level of education one had increased the knowledge of the advantage of delivering in a health care centre which ranged from 78.2% for women who were uneducated to 93.1% for those who reached grade 10 – 12. The level of education determined the practice of safe motherhood, for instance, the number of pregnancies (gravida) per woman was inversely proportional to the level of education which that particular person had. Among women who had no education, 38.6% had grand multi-parity (having more than 4 children) and 13.8% among those who reached grade 10 – 12. It was again found that as the level of education of a woman increased, the skilled attendance at birth also increased. 24.3% uneducated women were attended to by skilled attendance compared to 83.9% for those who reached grade 10-12. Education is therefore a key to the reduction of maternal mortality as a long term strategy.

A woman who is educated, single and of higher socio economic status is able to make wise decisions about her own health than her counterparts. Women with knowledge about risk factors were more likely to use health facilities for delivery compared to those with no knowledge. And it is also expected that a better informed individual is better placed to make reasonable decisions (Mpembeni et al, 2007).

In Entebbe, Uganda, it was found that access to essential skilled birth attendants remains difficult especially for less educated, poorer women, commonly mediated by financial and transport difficulties (Tann et al, 2007).

A study conducted in urban and rural Zambia explored childbirth practices and beliefs. 36 women accompanying labouring women to maternity units were interviewed and these women half considered themselves to be midwives or traditional birth assistants. They advised laboring women on the use of traditional medicines and relied on traditional beliefs and witchcraft to explain complications. The women gave social support to the labouring women but lacked understanding of causes of obstetric complications and appropriate management of labour and delivery (Maimbolwa et al, 2003).

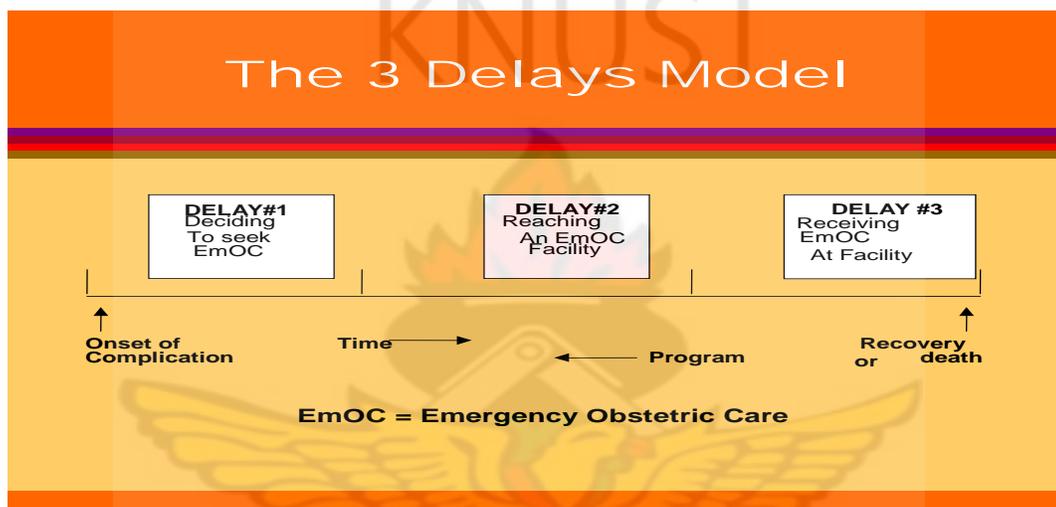
Distance to the health facility is indeed a significant determinant of the type of delivery care sought for by pregnant women. This is further made worse by the fact that there are no means of transport to the health care facility (Mpembeni et al, 2007).

An aspect of skilled delivery at birth, especially in the developing countries is the ‘three delays model’ suggested by Maine et al. (1997).

The delays are:

- Delay in deciding to seek care,
- Delay to reach medical facility, and
- Delay to receive adequate treatment.

Figure 2.1: A model of the 3 delays



Source: UNFPA strategy for increasing access to skilled birth attendants in institutions (with special focus on rural/isolated areas).

Obviously, effective use of this model requires an in-depth investigation and understanding of the factors underlying the delays, particularly that which is related to the decision to seek care which is strongly influenced by transportation facilities available, cost of transportation and the quality of care provided in a facility.

A study conducted in India has shown that distance from private hospitals does not affect health but rather distance from public health care centre does (Deogaonkar, 2007).

People in remote areas with poor transportation facilities are more often removed from

the health care centres. People are deterred from using existent facilities at health care centres because they are inadequate, insufficient and equipping these facilities is difficult and ineffective.

2.4 Influence of Antenatal Care on the use of skilled delivery

It has been established that antenatal care helps saves women's lives. It is therefore important that pregnant women attend antenatal care clinic to enable them to have some knowledge about danger signs of pregnancy and the like. As reported in a study by Anwar and others, (Anwar et al., 2008), the likelihood that women will use skilled attendance at deliveries and postnatal care will increase if they make use of antenatal care. It will also be useful as suggested by WHO that all women get four visits from a competent provider. This will help strengthen the demand and quality of antenatal care (Anwar et al., 2008).

In a study in rural Kenya it was reported that, the use of the ANC by the clients was high, but the opportunity to deliver important health services was not fully utilized. And that use of professional delivery services was low almost 1 out of 5 women delivered unassisted (van Eijk et al., 2006).

Also, Adamu and Salihu, (2002) set out to find out the reasons why in Kausani most women deliver at home and just a few attend antenatal care. According to them, the majority (88.0%) of women were not receiving antenatal care, and 96 percent had previously delivered at home (Adamu and Salihu, 2002).

In their study, Bloom and the others reported that, antenatal care utilization is an important determinant of safe delivery care, which suggests that enabling women to get

better antenatal care will increase the use of safe delivery care as well (Bloom et al., 1999).

2.5 Level of knowledge about skilled delivery and its influence on skilled delivery's use.

It is crucial that women are made aware of the importance of the use of skilled delivery during birth. This is because it is only when they are aware of its importance that they will be willing and prepared to use it. Skilled delivery has been established to save lives of mothers and its use should be encouraged by health personnel at antenatal clinics.

In a study conducted at Tanzania by Mpembeni and others in 2007, they indicated that improving coverage of health facilities needs to be done by raising awareness for both men and women on danger signs during pregnancy/delivery and also by strengthening counseling on facility delivery and individual birth preparedness. (Mpembeni et al., 2007).

According to the authors, Bloom and the others of a study on “Does antenatal care make a difference to safe delivery?” methods of raising awareness about the benefits of safe delivery care should be sought, and that services need to be placed within a context acceptable to women and their families (Bloom et al., 1999).

There is the need to really invest in the education of women on dangers associated with pregnancy and the usefulness of skilled delivery not only to attend antenatal clinics but especially to use skilled delivery during birth as reported in “Testing Approaches for Increasing Skilled Care During Childbirth: Key Findings from Ouargaye, Burkina Faso”, prepared by Family Care International Burkina Faso, in October, 2007 when they mentioned that there were improvements in ANC counselling. At baseline only 26.0% of

women in Ouargaye were counselled on danger signs of problems during pregnancy and childbirth. This increased to 40.0% at endline. Meanwhile, in Diapaga the percentage dropped from 28.0% to 14.0%. While the increase in Ouargaye is encouraging, it should be noted that overall, the majority of women are not receiving such counselling, and that opportunities to inform antenatal clients about danger signs during pregnancy and childbirth are being missed (Family Care International Burkina Faso, 2007).

2.6 Health staff attitude and behaviour that affect the use of skilled delivery

Investing in human resources is crucial for improving skilled attendance at birth. Critical issues include “brain drain,” salary and benefits, supervision and management, and skills maintenance. Upgrading delivery care often begins with improving the quality of services offered in facilities. When facilities provide quality services, they become widely used and trusted by community members (UNFPA, 2004). The lack of doctors, nurses and midwives poses serious problems for developing countries.

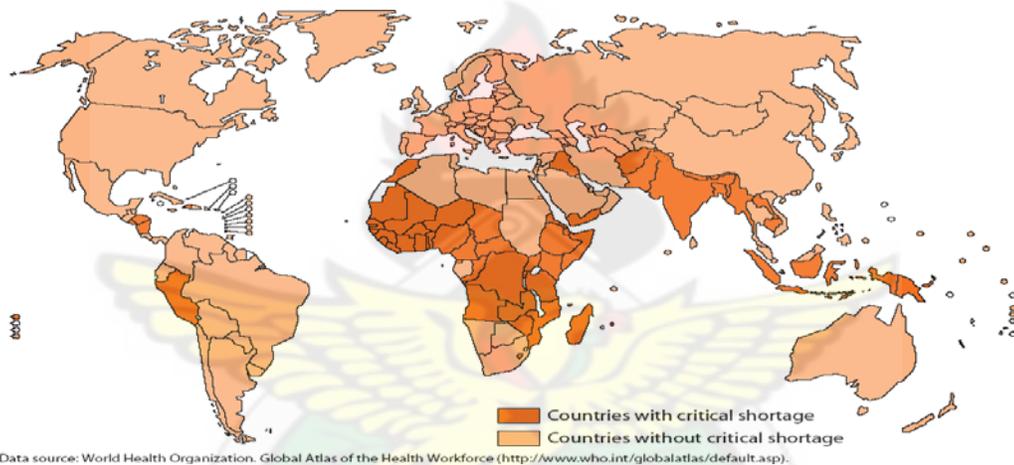
The human resource crisis is real, and the challenge is to post (and keep) skilled and committed providers in district level facilities. There are too few skilled attendants to provide round-the-clock services at many rural health facilities (Global Health Council, 2008). ICM/FIGO recommend one midwife for 5000 population (Regional workshop on skilled birth attendants in South and West Asia, 2004). Essential competencies are also missing at the referral level. In Burkina Faso, for example, caesarean section had to be referred from the district level. Pre-service training institutions are not producing graduates with the essential competencies of a skilled attendant—either for routine obstetric care or for emergency obstetric care (Global Health Council, 2008). Two

midwifery nurses college in Ghana were close down due to shabby work (Ghana, TV3 mid-day news, 12/2/2008).

The map 1 below shows clearly that the developed worlds of Asia, Europe, Australia and North America do not have many problems with health service providers as could be found in Africa.

Map 1

Countries with a critical shortage of health service providers (doctors, nurses and midwives)



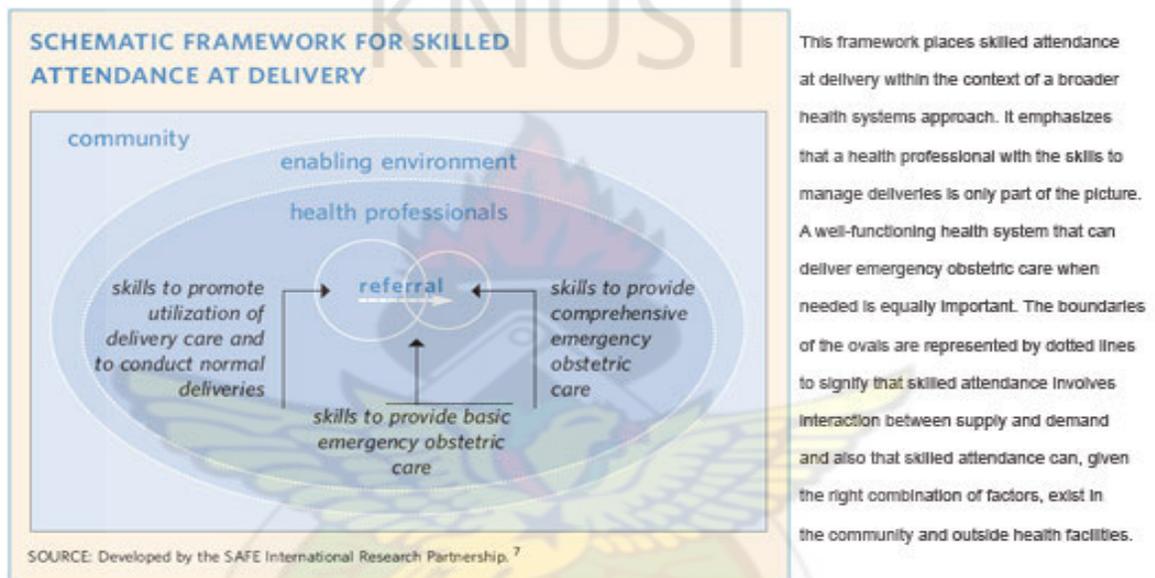
Source: WHR 2006 -Human Resources for Maternal and Newborn Health: the main challenge!! By de Bernis Luc, 2007.

Countries like Egypt, Malaysia, and Jordan with reduced maternal mortality emphasized on health system improvement in rural areas with increasing availability of skilled attendants, highly supervised and free referral to specialist and essential obstetric care and maintenance of standards in the private sector. Urban areas often offer a higher quality of care than rural communities, mainly due to proximity and accessibility of facilities and modern communication systems. Due to high vulnerability of adolescents

during pregnancy, birth attendants should be oriented to provide youth-friendly services (UNFPA & Aberdeen University, 2004).

Below is a framework for skilled attendance at delivery. It looks at skilled delivery not only within the context of personnel's skills to manage normal birth, but also the enabling environment as an important part of skilled delivery.

Figure 2.2: Schematic framework for Skilled Attendance at delivery



Source: Maternal Mortality Updates 2004- delivering into good hands by UNFPA and University of Aberdeen, 2004.

The shortage of health personnel has greatly contributed to the negative attitude of health care staff. In some settings, women feel reluctant to go for health facility-delivery because of negative attitudes of the health professionals which include: poor reception, condescending, shouting, and refusing to attend to women in pain (especially during weekends and at night). In Eritrea, for some women with complications who did reach a health facility, critical gaps in provider skills, medical equipment, drugs and supplies often resulted in obstetric fistula as encountered by a 20-year-old fistula patient from the

Tigrinya ethnic group. She told her story, “Even the delivery went normally, but there was a nurse, who was just in training, and after my baby was born, he pulled the placenta out by force.... when he pulled, another nurse shouted at him: ‘Don’t do that!’ I was torn badly down there, so they had to stitch it all up, but everything got so infected, and that infection never seems to have gone away” (Campbell-Krijgh et al., 2003).

Women place value on delivery by a traditional birth attendant (TBA). The society respects and recognizes the role played by TBAs in communities and their attendance is highly valued. The TBAs provide services that the formal health system does not, including postpartum care in the home. Some of the women believe that childbirth-related complications are caused by witchcraft, and the TBAs are perceived as better equipped to intervene in these cases. The women have the perception that the health facility is a harsh setting for childbirth. In a study done on Low Use of Skilled Attendants’ Delivery Services in Rural Kenya by Cotter et al., (2006), one community health worker said, “They leave you alone during your labour pain at the health centre; the TBA stays with you and helps you to deal with the pain.” This perception is due to under-staffing situation of the KHC. A woman in labour in the maternity ward during the day is usually left alone because the nurse on duty needs to attend to a busy outpatient clinic as well. In the same study it found out that logistic barrier exists in the KHC, including distance, frequent absence of any available transportation, and cost of transportation when it is available. An organized transportation system is nearly non-existent in the area. It also seems that at the antenatal clinics of the KHC, there is lack of sensitization among women regarding the importance of skilled attendance at delivery.

In Ghana 47.1% of deliveries occur in health facilities and the remaining 52.9% deliver at home under supervision of unskilled attendant. Some are of the view that high fees charged during delivery is a factor for less people making use of skilled attendant during delivery. Ghana's free delivery care policy is seen as an effective approach to an important problem by the key informants as it is believed to have substantially increased utilization of skilled care for delivery. However, this has proved to be wrong because even when the delivery-fee-exemption policy has increased utilization of delivery services, poor quality of care, low staff strength, poverty, transportation, long distances to health facilities, socio-cultural barriers, and the custom of using traditional birth attendant still remains and these hinder access to skilled delivery (Immpact, 2007).

An evaluation of Ghana's free delivery care policy on maternal mortality has these lessons for future: behaviour change strategies for providers and users, improving clinical quality of care and provider competencies, ensuring availability of funds to cover the exemptions, creating an enabling environment to address cultural barriers, identifying ways to improve the imbalance between the rich and the poor and strengthening the culture of performing policy analysis (Immpact, 2007).

From literatures that have been reviewed, clearly the factors above influence the use of skilled attendance during delivery. In the presentation of the results of this study and the discussion that will follow it, we will look at the factors that are unique to the municipality under review, that influence skilled delivery.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This is the part of the study that describes how, when and where, the study was done, and what the study is about. The aspects of the study which are discussed here include the type, design, data collection techniques and tools, study population, study variables, sample size, sampling techniques, analysis, data handling, pre-testing, ethical issues, limitations and assumptions.

3.2 Study Types, Design and Steps

The study had a cross-sectional approach with a non-experimental descriptive design. The study was carried out from the months of July 21, 2008 to October 10, 2008.

Data was entered into a computer and analyzed by the use of Statistical Package for Social Sciences (SPSS for Windows version 15.0).

The study started with the design of tools for data collection which was the questionnaire for the mothers of very young children aged between one day and six months in the communities of the municipality. It continued with the pre-testing of the tool and after the pre-test, consent was sought for the study from participants. Data collection was then done by the use of questionnaires. Whilst data collection was on-

going, entry and validation was being undertaken. After data collection and entry, analysis was done.

3.3 Data Collection Techniques and Tools

Data was collected using questionnaires for mothers of very young children of age one day to six months who has been in the communities of Asante Akim North for the past two years. They were asked to answer questions with regards to the most recent pregnancy experienced and whether or not they attended antenatal care during that pregnancy which also included the frequency of antenatal visits, the primary place of attendance and the type of services that they received there. In addition, the mothers were asked about their delivery experience for that pregnancy including the place of delivery, what assistance they received during labour, hygiene practices at birth and care of the infant soon after delivery. They were also asked about the attitude of the midwives during labour, the transport and referral systems at the facility and the affordability of the delivery charges/items that they provide to the facility after delivery.

3.4 Study Population

Study population was made up of mothers of very young children (1day – 6 months) in ten (10) communities of the municipality who have been living in the communities for the past 2 years.

3.5 Study Variables

The dependent variable is the low acceptance of skilled delivery and the independent variables include socio-economic status of pregnant women such as poverty, parity,

occupation, cultural environment, religion/beliefs, level of education of the mothers, accessibility to health care facility in terms of distance from home to health care centre, transportation, place of residence, absence of skilled attendant, decision making, attitude of health care staff, availability of equipment and drugs, health education given during ANC, strength of hospital staff, knowledge level of health staff, referral system of the health care facilities.

3.6 Sampling Techniques and Sample Size

Simple random sampling was used to select the ten communities of the municipality and mothers of very young children (1day – 6 months) who have been in the communities of the municipality for 2 years were selected by convenience.

The sampling size was determined using the formula below:

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

Where:

n = the desired sample size (when population is greater than 10,000)

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.

q = 1.0 –p

d = amount of error desired.

The total sample size came up to two hundred (200) after the careful consideration of non-response.

3.7 Pre-testing

There was the need for the study to be done in a similar area with a similar environment to enable the instruments to be redesigned if need be. The pre-testing therefore was carried out in a municipality with similar environmental characteristics. The municipality which was identified to be close with similar characteristics is the Ejisu-Juaben municipality which shares boarder with Asante Akim North municipality to the west. Some questions in the data collection tools were modified after the pre-testing.

3.8 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 be done by the principal investigator. Data was checked regularly during 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 locker and locked for safe keeping.

3.9 Ethical Consideration

Ethical considerations involved ethical review, informed consent, confidentiality, as well as risks and benefits.

Ethical review

Ethical clearance for the study was obtained from the School of Medical Sciences, Kwame Nkrumah University of Science and Technology (KNUST) and the Director of Ghana Health Service for the Asante Akim Municipality.

Informed Consent

The nature, purpose, and procedure of the study together with the time commitment required were explained to each participant on an information sheet. Participants were made aware that they were at liberty to refuse to answer any questions or drop out of the study at any time and this will not affect them. Participants who could not read were informed about the study by translating the information into the Twi language. 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.

Confidentiality

Participants were assured of the confidentiality of personal information and written materials. They were informed that any information obtained would be kept in a secured place for the duration of the study and also for further analysis. In addition, only the researcher, and supervisory committee members had access to the raw data.

Risks and benefits

There are no known risks to participants who take part in this study. 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, several questions were raised during the course of the administration of the questionnaires by the mothers. It is hoped that the findings from the study will help improve upon the use of skilled delivery in the municipality.

3.10 Limitations of Study

The short period of time for undertaking this research limited the study so that the depth of the study was not reached. Again resources limited the study by narrowing the variables to be measured.

The data collection technique relies on verbal reports of behaviour practised, which has the tendency for the questionnaire to over-report good or bad behavioural practices as the respondent try to please the interviewer. This limits the validity of the study. There was a problem of recall of past events by mothers.

3.11 Assumptions

- That the women in the study as well as the health workers interviewed were truthful in their responses to the questionnaire.
- Mothers have been accessing health services in the municipality.
- The period of 1 day to 6 months after delivery will dispel the problem of recall biases by mothers.

CHAPTER FOUR

RESULTS

4.1 Introduction

Factors affecting skilled delivery services are complex and intricately related. This chapter highlights the findings from the sample of 200 women interviewed in the Asante Akim municipality. The results are presented in tables and graphs.

4.2 Background of respondents

Table 4.1: Background characteristics of respondents

Variable	Frequency (N = 200)	Percentage (%)
Age		
< 15 years	3	1.5
15 – 20 years	44	22.0
21 – 25 years	35	17.5
26 – 30 years	56	28.0
30 – 35 years	36	18.0
36 years and above	26	13.0
Educational level		
None	36	18.0
Basic	144	72.5
Secondary/Vocational	18	9.0
Tertiary	1	0.5
Parity		
1	48	24.0
2 – 4	113	56.5
5 and above	39	19.5
Religion		
Christians	187	93.5
Moslems	8	4.0
Other	5	2.5
Denomination of Christians		
Pentecostal	120	64.2
Protestants	46	24.5
Orthodox	21	11.3

Place of residence	83	41.5
Rural	117	58.5
Urban		
Marital status		
Married	138	69.0
Cohabiting	36	18.0
Single	15	7.5
Divorced/Separated	8	4.0
Widowed	3	1.5
Employment		
Civil servants	3	1.5
Trading	46	23.0
Farming	55	27.5
Tradesman	50	25.0
Unemployed	46	23.0
Partners employment status		
Civil servant	7	3.5
Trading	31	15.5
Farming	57	28.5
Tradesman	84	42.0
Unemployed	9	4.5
Don't know	11	5.5
Partners educational level		
None	19	9.5
Basic	112	56.0
Secondary	47	23.5
Tertiary	7	3.5
Don't know	11	5.5
Health insurance holder		
Member	120	60.0
Not a member	80	40.0

Source: Author's field data, 2008

As detailed in table 4.1 above, 1.5% of the respondents were below the ages of 15 years and 13.0% were 36 years and above. The distribution of the educational background of the respondents further revealed that 18.0% had had no formal education with only 0.5% obtaining certificates above the secondary/vocational levels of education. As far as parity was concerned, primids constituted 24.0% and multiparous, 19.5%. The distribution of the Christian denomination of the respondents was Pentecostal, 64.2%,

Protestants, 24.5% and Orthodox, 11.3%. It is note-worthy that Moslems formed 4.0% of the respondents. Out of the 200 respondents, 36 were cohabiting, 15 single, 8 divorced and 3 were widowed. In relation to employment, only 1.5% of the mothers interviewed were employed in the civil services. The others were traders, farmers and tradesmen representing 23.0%, 27.5% and 25.0% respectively. Over twenty percent (23.0%) were unemployed. About six percent (5.5%) of the respondents did not know the employment status of their partners. Among the occupation engaged by the partners of the respondents were trading, 15.5%, farming, 28.5% and tradesman, 42.0%. About 10.0% of the respondents' partners did not have any formal education. In fact, 5.5% of the respondents did not know the educational background of their partners. Among those educated, 3.5% of the partners had obtained tertiary education. More than half, 60.0% of the respondents had membership status with the health insurance schemes in the municipality whilst the rest 40.0% did not.

4.3 Influence of socio-demographic characteristics on skilled delivery

The table 4.2 below illustrates the influence of socio-demographic factors on the use of skilled delivery services.

Table 4.2: The influence of socio-demographic factors on use of skilled delivery service

Variable	Skilled delivery (n=139)	Unskilled delivery (n=61)	Chi square or F-test; (p-value)
Age			
< 15 years	0 (0)	3(4.9%)	9.48 (0.11)
15 – 20 years	32 (23.0%)	12 (19.7%)	
21 – 25 years	27 (19.4%)	8 (13.1%)	
26 – 30 years	36 (25.9%)	20 (32.8%)	
30 – 35 years	28 (20.1%)	8 (13.1%)	

36 years and above	16 (11.5%)	10 (16.4)	
Educational level			
None	21 (15.1%)	15 (24.6%)	4.10 (0.24)
Basic	101 (72.7%)	43 (70.5%)	
Secondary/Vocational	15 (10.8%)	3 (4.9%)	
Tertiary	2 (1.4%)	0 (0)	
Parity			
1	37 (26.6%)	11 (18.0%)	1.95 (0.37)
2 – 4	77 (55.4%)	36 (59.0%)	
5 and above	25 (18.0%)	14 (23.0%)	
Religion			
Christians	133 (95.7%)	54 (88.5%)	3.83 (0.13)
Moslems	4 (2.9%)	4 (6.6%)	
Other	2 (1.4%)	3 (4.9%)	
Residence			
Rural	58 (41.7%)	25 (41.0%)	0.01 (0.92)
Urban	81 (58.3%)	36 (59.0%)	
Marital status			
Married	98 (70.5%)	40 (65.6%)	11.70 (0.01)
Cohabiting	27 (19.4%)	9 (14.8%)	
Single	11 (7.9%)	4 (6.6%)	
Divorced/Separated	1 (0.7%)	7 (11.5%)	
Widowed	2 (1.4%)	1 (1.6%)	
Employment			
Civil servants	3 (2.2%)	0(0)	11.5 (0.05)
Trading	37 (26.6%)	9 (14.8%)	
Farming	32 (23.0%)	23 (37.7%)	
Tradesman	53 (39.1%)	11 (18.0%)	
Unemployed	28 (20.1%)	18 (29.5%)	
Partners employment status			
Civil servant	5 (3.6%)	2 (3.3%)	10.09 (0.28)
Trading	26 (18.7%)	5 (8.2%)	
Farming	38 (27.3%)	21 (34.4%)	
Tradesman	54 (38.8%)	7 (11.4%)	
Unemployed	8 (5.8%)	1 (1.6%)	
Don't know	8 (5.8%)	5 (8.2%)	
Health insurance			
Member	99 (71.2%)	21 (34.4%)	23.91 (0.00)
Not a member	40 (28.8%)	40 (65.6%)	

Source: Author's field data, 2008

Out of the 200 respondents, 139 used skilled delivery service representing 69.5% and the rest, 61 representing 30.5%, used unskilled delivery services in their last delivery. Age as a demographic characteristic did not have any significance ($p=0.11$). All (3) the respondents less than 15 years used unskilled delivery service. Even though there was a relatively fair proportional distribution of age among those who used skilled attendance, over 30.0% of those who did not use skill attendance were of the age 26 – 30 years. In fact, 38 out of the 61 respondents who indicated that they used unskilled delivery attendants were aged 26 years and above. As evident in table 4.2 above, the educational level of the mothers also did not influence ($p=0.24$) the choice of skilled attendant for purposes of delivery. In the basic level of education, more than 50.0% of the respondents used skilled attendants. In fact among the tertiary educated respondents, none of them used an unskilled attendant. The number of children the women had, also did not influence ($p=0.37$) their choice of using health facilities for delivery purposes and a similar ($p=0.13$) observation was made in between religious affiliation and the use of skilled attendants. 18.0% of respondents with at least a child and 23.0% of those with 5 children or more used unskilled attendants in their last episode of birth. Among the Moslems interviewed, 50.0% each used skilled and unskilled attendance. Marriage ($p=0.01$), employment ($p=0.05$) and being a member of the health insurance scheme ($p=0.00$) influenced significantly the use of skilled delivery. It is worthy of note that among the divorced/separated respondents, 87.5% (7/8) used unskilled attendants. Among those who used the unskilled attendant, married respondents constituted 65.6%. Farmers (37.7%) and the unemployed (29.5%) formed the majority groups who did not use the skilled attendants. Fifty percent of non-members of the health insurance each used both services respectively however, among those who used unskilled delivery

services, the non-members of health insurance scheme formed 65.6% as against 34.4% of those insured. The influences on the person who decides where to delivery was significant ($p=0.00$). The respondents themselves decided to use the services.

Table 4.3: Relationship between the decision to use ANC and the use of skilled or Unskilled delivery services

Variable	Skilled delivery (n=139)	Unskilled delivery (n=61)	Chi square or F-test; (p-value)
Decides to use services			
Myself	77 (55.4%)	55 (90.2%)	23.22 (0.00)
Partner	34 (24.5%)	2 (3.3%)	
Other relatives	28 (20.1%)	4 (6.6%)	

Source: Author's field data, 2008

From table 4.3 above, the decision maker's influence on the use of skilled delivery services is significant ($p=0.00$). The decision to use skilled delivery services mostly rests with the respondent herself. Those who decided to use skilled delivery on their own accord were 55.4% and those who did not use it but made the decision themselves were 90.2%. Those of the respondents who the decision was made for them by their partners to deliver at the health facility made up 24.5% and those that the partners decided should use unskilled delivery were 3.3%. Some respondents were influenced by other relatives to use skilled delivery services and these made up 20.0% whilst those who were influenced by other relatives not to use skilled delivery made up 6.6%.

4.4 Association between ANC experiences and the use of skilled delivery

Among the 200 respondents, 180 representing 90.0% claimed they visited ANC. Respondents who visited ANC 4 times (OR = 4.01) were more likely to use skilled delivery services than those who did not. However, over 80.0% of those who used

unskilled delivery visited ANC during pregnancy. As shown in table 4.4 below, 19.2% of those who did not use ANC did not use skilled delivery services.

Table 4.4: Assessing relationship between ANC attendance and use of skilled delivery

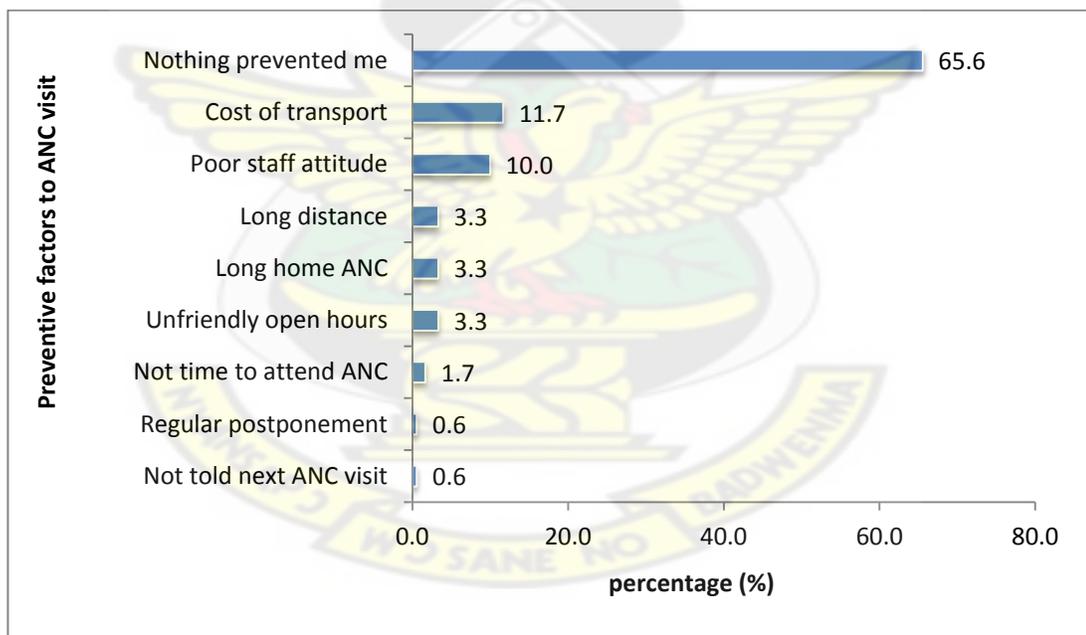
Variable	Skilled delivery (n=139)	Unskilled delivery (n=61)	Chi square or F-test; (p- value)
ANC visit			
Visited ANC	131 (94.2%)	49 (80.3%)	9.12 (0.00) <i>OR = 4.01</i>
Did not visit ANC	8 (5.8%)	12 (19.2%)	
Frequency of visit to ANC	(n=131)	(n=49)	
< 2 times	5 (3.8%)	1 (2.0%)	16.35 (0.05)
2 or more times	126 (96.2%)	48 (98.0%)	
Month of visit to ANC	(n=131)	(n=49)	
1 – 3 months	61 (47.3%)	16 (32.7%)	8.96 (0.02)
4 – 6 months	58 (45.0%)	17 (34.7%)	
7 – 9 months	8 (6.2%)	15 (30.6%)	
Don't know	2 (1.6%)	1 (2.0%)	
Where ANC was attended	(n=131)	(n=49)	
Community outreach point	7 (5.3%)	2 (4.1%)	17.43 (0.00)
TBA home	2 (1.5%)	4 (8.2%)	
Private health facility	5 (3.8%)	6 (12.2%)	
Public health facility	117 (89.3%)	37 (75.5%)	
Mother told about dangers of pregnancy at ANC	(n=131)	(n=49)	
Was told	93 (71.0%)	30 (61.2%)	1.57 (0.21)
Was not told	38 (29.0%)	19 (38.8%)	
Told to prepare for delivery at ANC	(n=131)	(n=49)	
Was told	112 (85.5%)	31 (63.3%)	10.79 (0.02)
Was not told	19 (14.5%)	18 (36.7%)	

Source: Author's field data, 2008.

The number of attendance to ANC also showed a significant (0.05) relationship with the use of skilled attendants. Among those who used unskilled services, 98.0% had attended

ANC 2 or more times. It is evident from the table 4.4 above that the place where ANC was accessed had a significant ($p=0.00$) relationship with the use of skilled services. Interestingly majority, 89.3% and 75.5% of those who used skilled and unskilled attendant respectively were those who used the public health facility. Being informed of the dangers signs and symptoms of pregnancy at ANC sessions, did not influence the use of skilled attendants for delivery. Among those who were told of the dangers signs of pregnancy 38.8% did not use skilled attendants. However, being told to prepare to delivery influence significantly ($p=0.02$) the decision of respondents to use skilled attendants.

Figure 4.1: Factors that are perceived to have prevented or could have prevented the used of ANC services (n = 180)



Source: Author's field data, 2008

Assessment of potential factors that could have prevented respondents from using ANC services, it was revealed that for 65.6% of them, nothing prevented them. For those who were prevented, cost of transport - 11.7%, poor staff attitude - 10.0%, long distance -

3.3% and unfriendly hours of opening the health facility - 3.3% were the factors that prevented them from using ANC services continuously. The details are as shown in figure 4.1 above.

4.5 Relationship between knowledge about skilled delivery and the utilization of skilled delivery services

Table 4.5: Relationship between knowledge about skilled delivery and the utilization of skilled delivery services

Variable	Skilled delivery (n=139)	Unskilled delivery (n=61)	Chi square or F-test; (p- value)
Aware of importance of skilled delivery			
Aware of its importance	129 (92.8%)	58 (95.1%)	3.97 (0.38)
Not aware	10 (7.2%)	3 (4.9%)	
Risk of home delivery			
No risk	10 (7.2%)	10 (16.4%)	9.54 (0.00)
Complications	36 (25.9)	18 (29.5%)	
Delayed emergency care	100 (71.9%)	33 (54.1%)	
Confidence in:			
Health professional	89 (64.0%)	26 (42.6%)	7.94 (0.00)
Non-health professional	50 (36.0%)	35 (57.4%)	

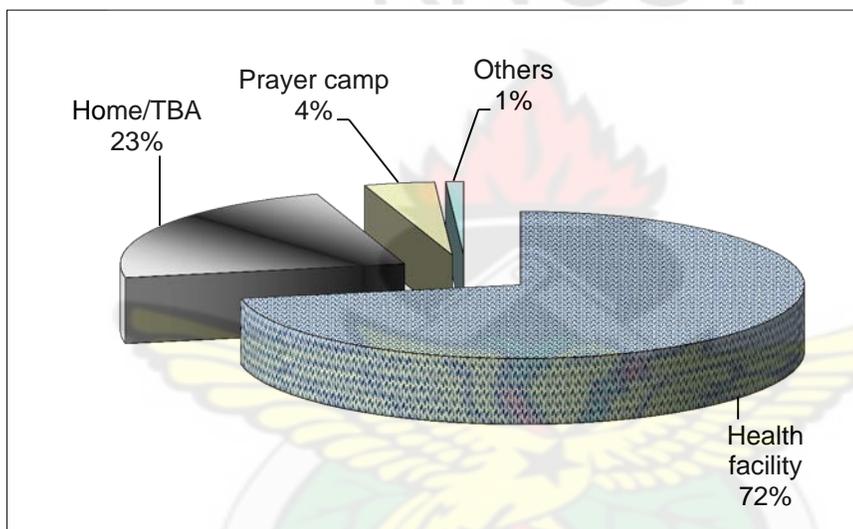
Source: Author's field data, 2008

92.8% of the women indicated that they were aware of the importance of skilled delivery services, and they were influenced by this knowledge to use skilled attendants. Consequently, out of the 61 respondents who did not use skilled attendants, 95.1% were aware of its importance. Their knowledge however, on the risk of delivering at home had a significant ($p=0.00$) influence on the decision to use skilled attendants. Complications, 25.9%, and delayed emergency services, 71.9%, were the identified risks of delivering at home. The clients confidence in the service provider, health professional or non-health professional also influences significantly ($p=0.00$) the use of skilled

delivery services. Over forty percent (42.6%) of the respondent who did not use skilled delivery indicated that they had confidence in services delivered by others than health professionals.

Place that last birth was delivered (N = 200)

Figure 4.2: Place of delivery

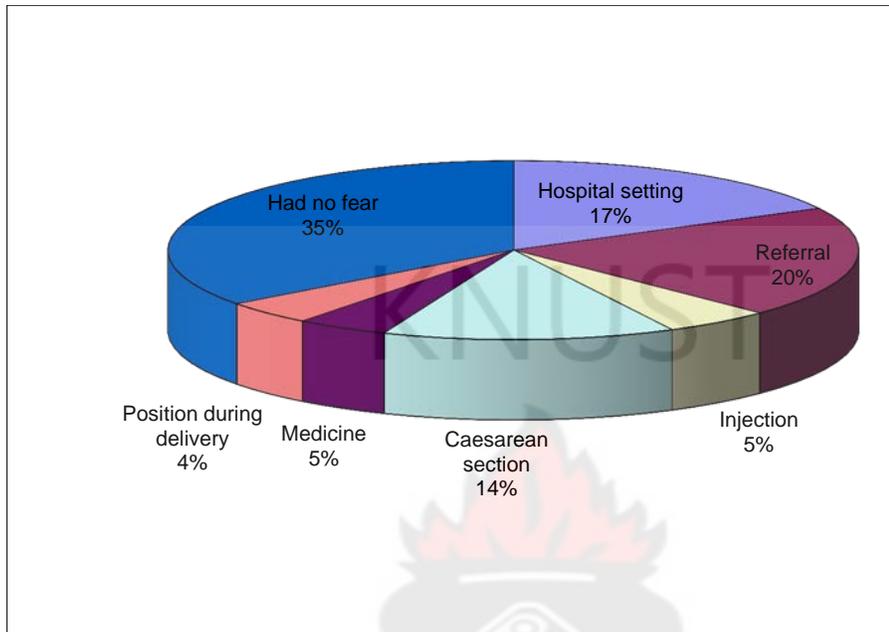


Source: Author's field data, 2008

About 72.0% of the respondents used health facility as a place of delivery.

Over seventy percent of the respondents used health facility as a place for delivery. As shown in figure 4.2 above, 23.0%, 4.0% and 1.0% respectively, used Home/TBA, Prayer camp and others.

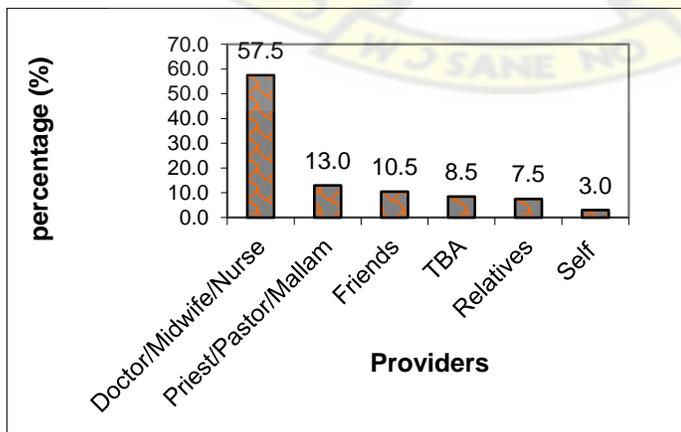
Figure 4.3: Health facility services that create apprehension among clients (n = 139)



Source: Author's field data, 2008

The fear of being referred, caesarean section and the hospital setting itself created apprehension among the client and constituted, 20.0%, 14.0% and 17.0% respectively, among them as pictorially indicated in figure 4.3 above.

Figure 4.4: Type of providers in whom clients had confidence in (N=200)



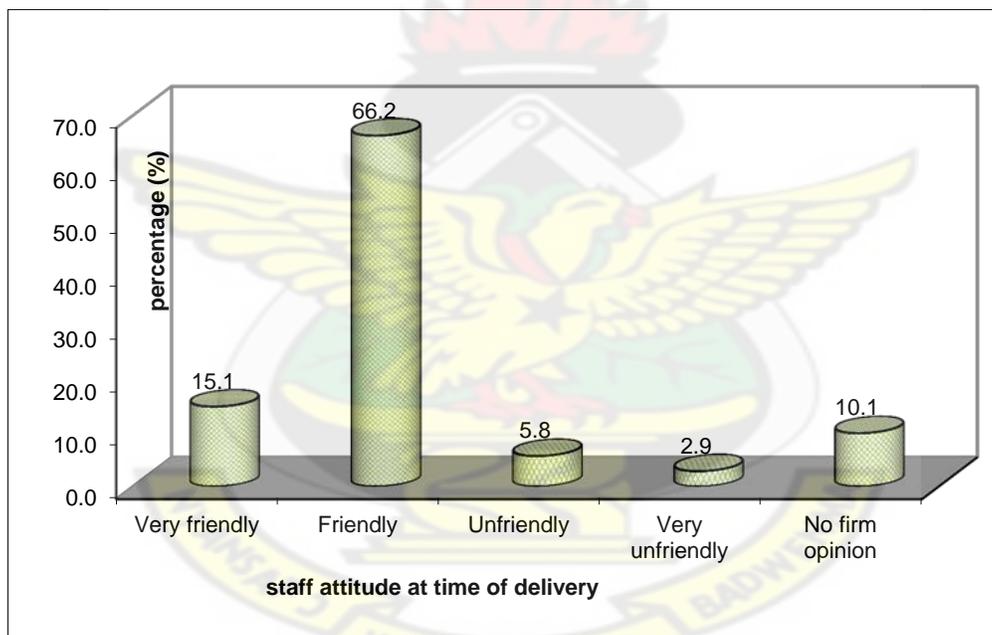
Source: Author's field data, 2008

Health professionals constituted the majority (57.5%) in whom client's had confidence in. Other providers in whom they had confidence were religious leaders - 13.0%, friends - 10.5%, and TBAs - 8.5% as shown in figure 4.4 above.

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

Figure 4.5 below illustrates health providers' perceived attitude towards women during delivery.

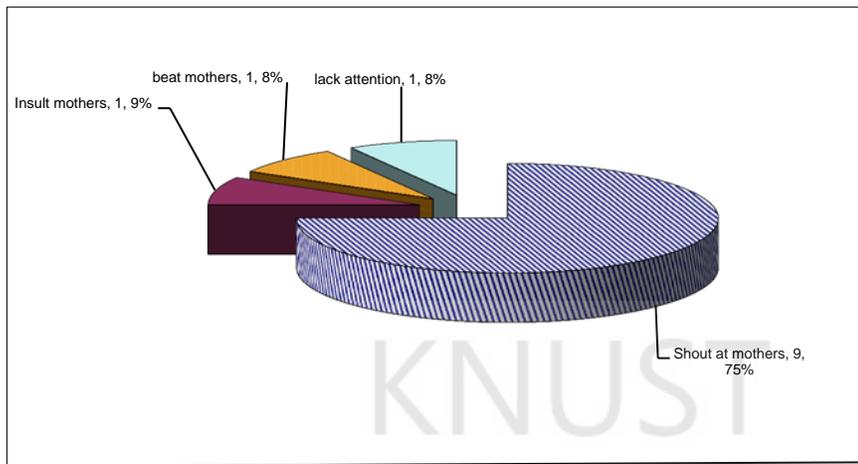
Figure 4.5: Perceived staff attitude by respondents (n=139)



Source: Author's field data, 2008

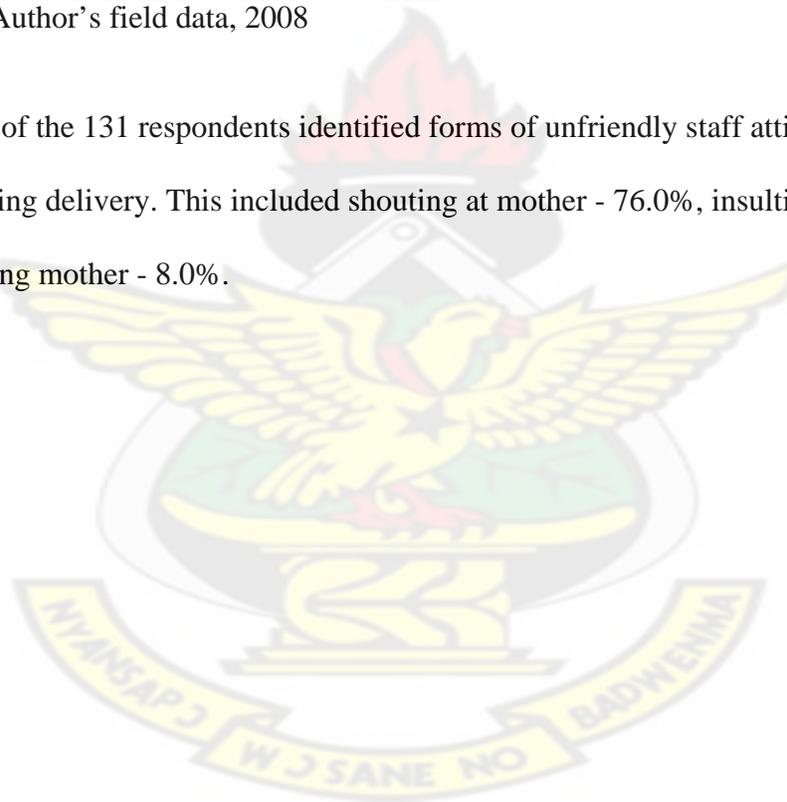
Out of the 139 respondents who used skilled services, 66.2% considered staff attitude as friendly and 10.1% had no opinion on the matter. Over five percent (5.8%) asserted that staff were unfriendly.

Figure 4.6: Forms of unfriendly attitude of staff identified by respondents (n=9)



Source: Author's field data, 2008

Nine out of the 131 respondents identified forms of unfriendly staff attitudes towards them during delivery. This included shouting at mother - 76.0%, insulting mother - 8.0% and beating mother - 8.0%.



CHAPTER FIVE

DISCUSSION

5.1 Introduction

This chapter looks at the results collected on the sample from the study population and discusses it in line with the objectives, literature review, and the key variables of the study.

5.2 Background of respondents

Respondents numbered 200 in the study area have the following background characteristics:

Respondents below the ages of 15 years were 1.5% and 13.0% were 36 years and above. (18.0%) of respondents had no formal education with only 0.5% obtaining certificates above the secondary/vocational levels of education. Primids constituted 24.0% and multiparous, 19.5%. Christian denomination of the respondents was Pentecostal, 64.2%, Protestants, 24.5% and Orthodox, 11.3%. Moslems formed 4.0% of the respondents. 36 of the respondents were cohabiting, 15 single, 8 divorced and 3 were widowed. In relation to employment, only 1.5% of the mothers interviewed were employed in the civil services. The others were traders, farmers and tradesmen representing 23.0%, 27.5% and 25.0% respectively. (23.0%) were unemployed. About six percent (5.5%) of the respondents did not know the employment status of their partners. Among the occupation engaged by the partners of the respondents were trading, 15.5%, farming, 28.5% and tradesman, 42.0%. About 10.0% of the respondents' partners did not have any formal education. In fact, 5.5% of the respondents did not

know the educational background of their partners. Among those educated, 3.5% of the partners had obtained tertiary education. More than half, 60.0% of the respondents had membership status with the health insurance schemes in the municipality whilst the rest 40.0% did not.

5.3 Influence of socio-demographic characteristics on skilled delivery

The socio-demographic characteristics that influence the use of skilled delivery by the mothers in this study include age, educational level, religion, employment status, place of residence, place of delivery, parity and whether or not a mother is registered to use the National Health Insurance Scheme.

Age of the mother as a demographic characteristic did not have any significant ($p=0.11$) effect on the use of skilled delivery. All the (3) respondents less than 15 years used unskilled delivery service. Even though there was a relatively fair proportional distribution of age among those who used skilled attendance, over thirty percent of those who did not use skilled attendance were of the age 26 – 30 years. In fact, 38 out of the 61 respondents who indicated that they used unskilled delivery attendants were aged 26 years and above.

Education has been noted to affect greatly the use of skilled delivery in numerous studies. In contrast, the findings of this study has established that the educational level of the mothers did not influence ($p=0.24$) the choice of skilled attendant for purposes of

delivery. In the basic level of education which is the level with majority respondents more than 50.0% of the respondents used skilled attendants. Among the tertiary educated respondents, none of them used an unskilled attendant. (15.1%) of respondents with no formal education also used the services of skilled attendant. It seems that both educated and uneducated women are now becoming aware of, and accepting skilled delivery.

Parity, that is, the number of children the women had, also did not influence ($p=0.37$) their choice of using health facilities for delivery purposes, and a similar ($p=0.13$) observation was also made for the relationship between religious affiliation and the use of skilled attendants. 18.0% respondents with a child and 23.0% with 5 children or more used unskilled attendants in their last birth. Among the Moslems interviewed, 50.0% each used skilled and unskilled attendance. There has been the issue that number of children a person has, can influence the decision to the use or otherwise of skilled delivery, this was indeed the case in this study. The respondents who had delivered a child before tend to rely more on the unskilled attendant than those who had not delivered previously. From the findings of this study it is clear that half of the Moslems used unskilled attendants, which shows that indeed religion can influence the use of skilled delivery services. The influences on the person who decides where to deliver was significant ($p=0.00$). The respondents themselves, 66.0% decided to use the services. Meanwhile most of those who did not use skilled attendants responded that they made the decision to do so themselves.

Anwar (2008) found in Bangladesh that education, area of residence, and distance to hospital had an influence on the use of skilled attendance. This was 15.6% among mothers from the poorest quintile households and 63.3% for mothers from the richest quintile households. The skilled attendance rate was 18.2% and 74.3% among mothers with no education and with higher education (≥ 10 years schooling), respectively. Use of skilled birth attendants was higher among those living in urban areas than among those in rural areas (42.8% versus 32.0%). Distance to the nearest government hospital had a negative influence on delivery by an SBA (41.0% of women living within 5 km of a government hospital gave birth with an SBA compared with 28.0% of women living more than 5 km from a facility). Use of skilled attendance was higher among other religious groups (mostly Hindus) than among Muslims (61.3% versus 33.6% respectively). In relation to this study therefore, it seems that indeed marriage, occupation, distance to health facility, religion have significant influence on the use of skilled delivery services.

D'Ambruso and others, (2005) did a study in Ghana and came out with the fact that most women were aware of the existence of various facilities for delivery within the area of their residence. In that study it was established that majority of women delivered in public health facilities. This has been collaborated in this present study where respondents are aware of the facilities available, but do not make use of them. And indeed those who did use facility delivery used public health faculties as indicated by D'Ambruso and others, (2005).

In March 2006, Furuta and Salway , also found out that, the variable of employment and influence over earnings showed significant differences for both antenatal and delivery care in a study conducted at Nepal on “Women's Position Within the Household as a Determinant of Maternal Health Care Use in Nepal”. According to them, women who worked and had no influence over earnings were the least likely to have received either type of care (33.0% and 9.0%, respectively), whereas levels of use were much higher among non-workers (58.0% and 29.0%) and women who worked and had influence over earnings (59.0% and 26.0%). Indeed in the present study employment played a very important role in deciding to use skilled attendants by respondents. The level of employment significantly influenced the use of unskilled delivery in this study just as in the study reported above.

Again, women who reported that geographic or economic accessibility was a "big problem" were significantly less likely to receive skilled maternal health care, especially during delivery, just as has been found in this study.

On household position and maternal health care, the results from their study showed that women's involvement in decision making for their own health care was not associated with the use of skilled antenatal care; the indicator did show an association with skilled delivery care, but the differential was small.

5.4 Association between ANC experiences and the use of skilled delivery

According to data gathered on the field on this study, 180 out of the 200 respondents representing 90.0% claimed they visited ANC. Respondents who indicated that they

visited ANC (four) 4 times were more likely to use skilled delivery services than those who did not. The number of attendance to ANC also showed a relationship with the use of skilled attendants. ANC attendance has a positive impact on the use of skilled delivery. It is therefore strange that over 80.0% of those who used unskilled delivery visited ANC during pregnancy. Among those who used unskilled services, 98.0% had attended ANC two or more times. This shows that ANC attendees were not likely to use skilled attendants during delivery. This could be explained that women felt that if there was no complication during childbirth, there was no need to deliver at a health facility.

Interestingly, majority, 89.3% and 75.5% of those who used skilled and unskilled attendant respectively, were those who used the public health facility. The respondents mostly made the decision themselves to attend ANC.

Van Eijk and the others, (2006) in Kenya also made the assertion in their study that participants in the study (67.0%) gave more than one (1) reason to visit an ANC; the reasons they most frequently gave were: to check the position, condition or growth of the baby (83.0%); to detect maternal problems and to be treated when sick (55.0%) which was one of the reasons given by respondents in this study as well. Many respondents when asked why they did not attend the minimum of four ANC clinics replied that they were not sick until that period of time during their pregnancy; to get a tetanus injection (24.0%); and to get an ANC card (18.0%).

Again here the respondents in this study gave the reason for attending ANC as getting a card in case they needed to go to the health facility for delivery in case of complications.

Participants expressed the belief that medical staff in health facilities treat pregnant women better if they attend with an ANC card, particularly if the card shows evidence of multiple visits. Eleven percent (11.0%) of the women mentioned that they appreciated the health information the ANC provided in the form of talks or posters.

According to Van Eijk, (2006), unlike Nigeria and Uganda, where the husbands played an important role in determining their partner's ANC attendance, in our study most women made an independent decision to attend.

It was evidenced in a report on the study by Abrahams and others, (2001) in Cape Town that the women's perceptions of the quality of care greatly influenced their health care-seeking practices. For this reason, women generally consider antenatal care to be beneficial, particularly to avoid being scolded by staff should they arrive in labor without prior antenatal care, just as has been found from this study.

It was also reported in Tanzania in a study by Mpembeni and others, (2007) that, women who had more than four (4) ANC visits were more likely to deliver with a skilled attendant than those with fewer visits. Reference was also made by Mpembeni and others, (2007) to similar findings in Cambodia. This, they explained that it may be due to the fact that women with more ANC visits also showed a higher satisfaction with the care quality, and hence more likely to use health services for delivery. They also contended that it is a fact that many ANC visits expose the women to more health education and counseling which are both likely to increase service utilization.

Anwar (2008) in Bangladesh in his study on skilled delivery also found that, antenatal care visits increased use of SBAs at birth: only 7.6% of those with no antenatal care visit used SBAs, while nearly 50.0% of mothers with four or more visits did so. Skilled attendance at birth was 48.0% among mothers who reported at least one complication during pregnancy or the delivery period compared with 23.0% among those who did not.

5.5 Relationship between knowledge about skilled delivery and the utilization of skilled delivery services

From the data gathered for this study, 95.1% of the women indicated that they were aware of the importance of skilled delivery services, however, they were not influenced significantly ($p=0.38$) by this knowledge to use skilled attendants. Consequently, out of the 61 respondents who did not use skilled attendants, 95.1% were aware of its importance. The participants who were aware of the importance of skilled delivery services and yet did not make use of it gave reasons that the use of skilled delivery services was only necessary when there was a complication.

The respondents were asked about their knowledge of danger signs and symptoms of pregnancy at ANC sessions to which they answered positively, but this knowledge did not influence the use of skilled attendants for delivery. Among those who were told of the danger signs of pregnancy 61.2% did not use skilled attendants. Being told to prepare for delivery, however, influenced the decision of respondents to use skilled attendants during delivery.

A study conducted by Mpembeni and others in (2007) found that women who were knowledgeable of risk factors were more likely to utilize health facilities for delivery compared to those with no knowledge (Mpembeni et al, 2007). They also reported that there are similar findings from Malawi and Zambia, which is certainly in contrast to what pertains in the present study under review.

In a study conducted in Tanzania, women were not aware of the importance of skilled care during delivery and they reported that lack of any attendant for women during delivery makes it difficult for them to seek assistance in the event of life-threatening complications. They advised that women should be strongly encouraged to deliver with assistance. The promotion of a delivery plan may be a good step towards sensitizing women on this issue. And this should be done to promote the acceptance and use of skilled delivery care during delivery (van Eijk et al., 2006).

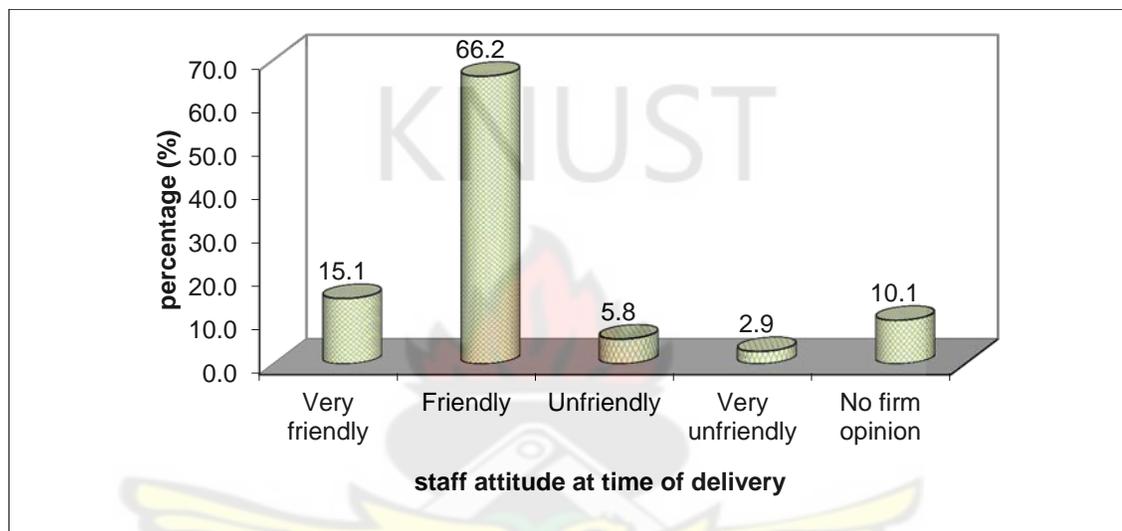
Again in a study on Skilled Attendance at Delivery in Bangladesh: an Ethnographic Study, by Mushtaque and others, (2003) they reported that the villagers interviewed did not have adequate knowledge about the health facilities that they had to delivery in. Therefore, they were found to try the facilities one by one, which eventually became expensive for them.

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

The attitude of health staff towards mothers during labour and delivery has been perceived to be unfriendly most of the time. Many studies have come out with the fact

that health workers beat, shout and ignore mothers in pain during labour and delivery. However, others have said that health staff are very friendly. The figure 8 below summarizes this trend.

Figure 5.1: Perceived staff attitude at time of delivery by respondents (n=139)



Source: Author's field data, 2008

Out of the 139 respondents who used skilled services, 66.20% considered staff attitude as friendly and 10.10% had no opinion on the matter. Over five percent (5.80%) asserted that staff was unfriendly.

Some of the respondents went as far as to say that they even gave gifts to the nurse who assisted them during their delivery.

D'Ambruoso, Abbey and Hussein, (2005) in a study in Ghana reported the following as some of the things the women said about the staff attitude towards mothers during delivery:

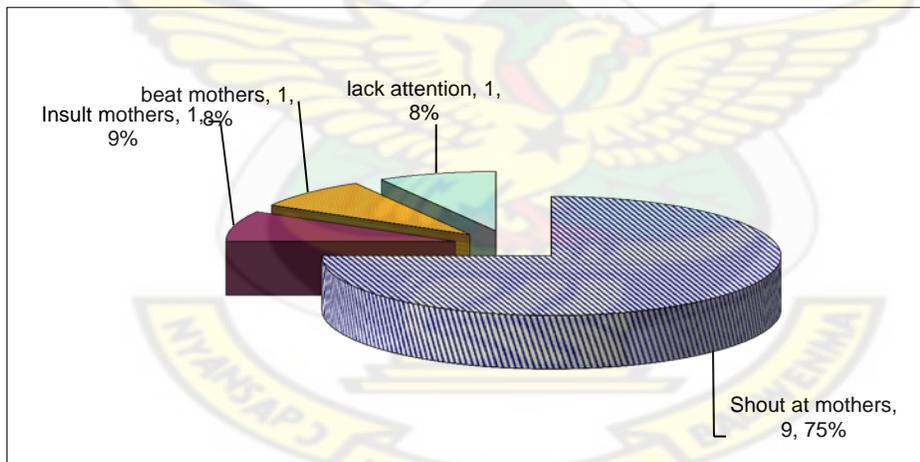
"I like the place I went to. They helped me deliver, gave me a nice place to sleep and gave me advice on how to feed the baby."

"The people there are very good. They prayed with me and taught me how to care for the baby."

It is indeed true that some of the attitudes of staff were commendable as indicated from some of the respondents in this study and corroborated by the study by D'Ambruso and others, (2005) discussed above. Some of the staff were very friendly and treated the women in labour with respect and care. However, some of the respondents from this study and that of D'Ambruso and others, (2005) asserted that some staff were not friendly towards them when they went into labour.

Those of the respondents who asserted that staff was unfriendly towards them gave various reasons as translated in the figure below.

Figure 5.2: Forms of unfriendly attitude of staff identified by respondents (n=9)



Source: Author's field data, 2008

The unfriendly attitudes of staff that the respondents mentioned included shouting at mothers, (76.0%), insulting mothers, (8.0%) and beating of mothers, (8.0%). Indeed it was confirmed by a midwife that the mothers sometimes needed to be beaten, because

they refused to 'push' when asked to do so, and this could kill the baby, so when they are canded the mothers that is when they do as told.

D'Ambruso and others, (2005) also reported the following as some of the negative attitude of staff towards women during labour and delivery.

"The services were not so good, the attendant ... refused when I needed to hold her while I was in pain she said it won't change anything...even when I asked the ward assistant for water she brought me chilled water, when I said I preferred tap water, she became angry."

"One nurse refused to make a cup of tea for me. When I requested for it she insisted that I make it for myself although she knew I was in pain."

In the same study, women were also not satisfied with other aspects of services which included high cost and evidence of poor quality; crowding babies on the same bed; inadequate number of nurses to attend to women in labour; no local anaesthetic for episiotomy suturing; unduly waiting before weighing the baby; and asking mothers to vacate beds regardless of time and inconvenience.

According to Abrahams and others, (2001) in a study on Health Care-seeking Practices of Pregnant Women and the Role of the Midwife in Cape Town, South Africa, in which 103 interviews were done with 32 pregnant women in a peri-urban area of Cape Town, they reported that, women had poor interactions with staff and the women expected to be treated badly by the midwives. In this study however, women who asserted that health care staff did not treat them well excepted differently, they wanted to be treated well by the staff.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter is the final chapter that concludes the study. Key findings such as socio-demographic factors, antenatal care, attitude of staff form the basic findings of this study and these are summarized here with appropriate recommendations made to stakeholders for implementation.

6.2 Conclusions

From the discussions on the factors influencing skilled delivery, it could be concluded that indeed the socio-demographic characteristics had an influence on the decision of women to use skilled delivery. For example, Marriage ($p=0.01$), employment ($p=0.05$) and being a member of the health insurance scheme ($p=0.00$) influenced significantly the use of skill attendants delivery. It is notable that among the divorced/separated respondents, 87.5% (7/8) used unskilled attendants. Among those who used the unskilled attendant, married respondents constituted 65.6%. Farmers (37.7%) and the unemployed (29.5%) formed the majority groups who did not use the skilled attendants. However, among those who used unskilled delivery services, the non-members of health insurance scheme formed 65.6% as against 34.4% of those insured, which is a certainty that those not insured need to be insured.

Age as a socio-demographic factor did not affect the use of skilled delivery from the findings of this study: 38 out of the 61 respondents who indicated that they used unskilled delivery were aged from 26 years and above.

Findings of this study have established that respondents' level of education did not really influence their choice of a delivery attendant. (15.1%) of respondents with no formal education used the services of skilled attendance. Among the tertiary educated respondents, none of them used an unskilled attendant. It can be concluded from the findings that both educated and uneducated women are now becoming aware of, and accepting skilled delivery services.

Socio-demographically, the number of children a woman had did not influence her choice of using health facilities for delivery purposes. Almost a fifth (18.0%) of the respondents with a child and (23.0%) of respondents with 5 children or more used unskilled attendants in their last birth.

Antenatal care attendance could greatly influence the use of skilled attendants during delivery. Respondents who indicated that they visited ANC four (4) times were more likely to use skilled delivery services than those who did not. However, over 80.0% of those who used unskilled delivery visited ANC during pregnancy. The number of attendance to ANC showed a significant relationship with the use of skilled attendants. Among those who used unskilled services, 98.0% had attended ANC two or more times. It is evident that the place where ANC was accessed had a significant relationship with the use of skilled services. The conclusion one draws from the findings of this study on

the influence of ANC on the use of skilled attendants is that, majority of respondents only attend ANC in order to secure a card in case of complications and there is the need to go to the health facility, not that they want to use health facility for delivery purposes.

Being aware of the importance of skilled delivery care could influence a woman's decision to use it. However, 95.1% of the women in this study indicated that they were aware of the importance of skilled delivery services, but they were not influenced enough by this knowledge to use skilled attendants. The findings from this study however, noted that the knowledge on the risk of delivering at home had a significant ($p=0.00$) influence on the decision to use skilled attendants. They identified complications (25.9%), and delayed emergency services (71.9%), being some of the risks of delivering at home. The influence of the level of knowledge of the importance of the use of skilled delivery could be concluded from the findings that it does not have any significance but rather the knowledge about the danger signs of delivering at had a significant influence on the decision to deliver in a health facility.

The findings of this study indicate that the attitude of staff can really influence the use of skilled attendants during delivery. Most (66.2%) of the respondents who used skilled delivery services considered staff attitude as friendly, while a few of the respondents (5.8%) asserted that staff was unfriendly.

6.3 Recommendations to the Municipal Director of Health

- Married people alongside farmers and unemployed in the municipality need to be targeted for sensitization on the importance of skilled delivery care during delivery.
- All members of the society should be encouraged to register for the national health insurance scheme to help women in accessing skilled delivery care during childbirth.
- There is the need to sensitize women who make decisions themselves on the use or otherwise of the health facility on its importance and the need be attended to by a professional midwife to help prevent maternal and infant mortality.
- Health facility staff should be encouraged to be a little more friendly to their clients who use the facility for delivery.
- Finally, another study is recommended to look in-depth into the influence of culture and religion, cost of transport, availability of drugs and equipments at the facility level on skilled delivery in the municipality.

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APPENDIX

FACTORS INFLUENCING THE ACCEPTANCE OF SKILLED DELIVERY IN THE ASANTE AKIM NORTH MUNICIPALITY OF GHANA

QUESTIONNAIRE FOR MOTHERS

Code number							
Interviewer's name							
Date of interview	D	M	Y				
			2	0	0	8	
Community Name							
House №/ Name							

INSTRUCTIONS

Provide the necessary information in the dotted lines and indicate the correct response(s) where applicable by ticking (✓) in the box provided.

SECTION A

DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS

1. What was your age in years at the time you gave birth to your last child?
 - a. Less than 15 []
 - b. 15-20 []
 - c. 21-25 []
 - d. 26-30 []
 - e. 31-35 []
 - f. above 35 []

2. What was your highest level of education at the time you gave birth to your last child?
 - a. None []
 - b. Basic education completed []
 - c. Secondary education (Voc./Tech.) completed []
 - d. Tertiary education completed []

3. How many children (still birth, dead or alive) have you delivered?
- a. One
 - b. Two
 - c. Three
 - d. Four
 - e. Five
 - f. Others (please indicate).....
4. To what religion did you belong?
- a. Traditional region
 - b. Protestant
 - c. Pentecostal
 - d. Moslem
 - e. Others (please tell us).....
5. In your candid opinion how would you describe your place of residence?
(Please name your place of residence)
- a. Rural
 - b. Urban
6. What is your marital status?
- a. Single
 - b. Co-host
 - c. Married (customary/legally)
 - d. Divorced/Separated
 - e. Widowed

7. What do you mainly do for a living?
- a. Government worker []
 - b. Trading []
 - c. Farming []
 - d. Dressmaking []
 - e. Hair dressing []
 - f. Mining []
 - g. Unemployed []
 - h. Others (please indicate).....
8. What work does your husband/partner mainly do for a living?
- a. Government worker []
 - b. Farming []
 - c. Trading []
 - d. Dressmaking []
 - e. Hair dressing []
 - f. Mining []
 - g. Mechanic []
 - h. Unemployed []
 - i. Others (please indicate).....
9. What is your husband's/partner's highest level of education?
- a. None []
 - b. Basic education completed []
 - c. Secondary (Voc./Technical education) completed []
 - d. Tertiary completed []
10. Were you insured (NHIS) at the time you gave birth to your last child?

- a. Yes []
- b. No []
11. At the time you gave birth to your last child, what opinion did you hold about delivery charges in the nearest health facility in the district?
- a. Absolutely free []
- b. Partially free []
- c. Affordable []
- d. Costly []
- e. Very costly []
12. At the time you gave birth to your last child, what opinion did you hold about transport fares (including chartering taxi) to the nearest health facility during labour in your community?
- a. Absolutely free []
- b. Partially free []
- c. Affordable []
- d. Costly []
- e. Very costly []
13. Who is the head of your household?
- a. Husband []
- b. Myself []
- c. Mother-in-law []
- d. Father-in-law []
- e. Others (please indicate).....
14. Who mainly decides in your household where women should delivery?
- a. The pregnant woman herself []
- b. Husband/Partner []

- c. Mother-in-law []
- d. Father-in-law []
- e. Others (please tell us).....

15. What was the level of influence of this person’s decision on your choice of place of delivery during your most recent pregnancy?

- a. Very low []
- b. Low []
- c. High []
- d. Very high []
- e. I don’t know []

SECTION B

ANTENATAL CARE EXPERIENCE

16. Did you attend antenatal care clinic during your last pregnancy?

- a. Yes []
- b. No []

17. How many times did you attend antenatal care clinic during the pregnancy of your last child?

- a. None []
- b. One []
- c. Two []
- d. Three []
- e. Four and above []

18. Where did you attend antenatal care during the pregnancy of your last child?

- a. Your community outreach point []
- b. TBA home []
- c. Private health facility []

- d. Public health facility []
- e. Others (please indicate).....
19. How many months pregnant were you when you attended your first antenatal care during your most recent pregnancy?
- a. One to three months []
- b. Four to six months []
- c. Seven to nine months []
- d. I don't know []
20. Why did you decide to receive antenatal care during that particular time of your pregnancy?
- a. I couldn't take time off my work []
- b. I didn't have money to pay for my visit []
- c. I didn't want anyone to know I was pregnant []
- d. I didn't know the time to start antenatal care []
- e. I became aware of my pregnancy at that time []
- f. Found that time appropriate []
- g. Others (please indicate).....
21. During your antenatal visit(s) for your last pregnancy, were you told of danger signs or complication associated with your pregnancy?
- a. Yes []
- b. No []
22. Which of the items below nearly prevented or prevented you from antenatal care visit? (Tick the one that applies to you)
- a. Unfriendly open hours []
- b. Hostile attitude of health staff []
- c. Long home-antenatal care clinic distance []
- d. Cost of transportation []

- e. Couldn't remember the date for the next antenatal care visit []
- f. I was not told of the next antenatal care visit []
- g. Regular postponement of scheduled antenatal care visit []
- h. Couldn't find time to attend antenatal care []
- i. Nothing disturbed my antenatal care visit []
- j. Others (please indicate).....

23. Why did you think it was necessary for you to attend antenatal care clinic during your most recent pregnancy? (Tick the one that applies to you)

- a. Detect and reduces dangers associated with my pregnancy []
- b. Receive education and counselling on maternal health issues []
- c. Screening and prevention of major diseases []
- d. Avoid rebuke during delivery in a health facility []
- e. Others (please indicate).....

24. From your antenatal visits, did you know these pregnancy risks in your surrounding? Tick **Yes** if you were aware of the risk or **No** if you were not aware of the risk.

	Yes	No
a. Sniffing cocaine	[]	[]
b. Drinking of alcohol	[]	[]
c. Woman in her fifth (5th) pregnancy and above	[]	[]
d. Smoking	[]	[]
e. History of pregnancy risk	[]	[]
f. First pregnancy	[]	[]
g. Age less than 15 and above 35	[]	[]
h. Multifetal pregnancy	[]	[]
i. Pregnancy after a short birth interval (< 18-24mths)	[]	[]

- j. Pre-pregnancy weight is < 40kg [] []
- k. Short woman (< 150 cm) [] []
- l. Poor nutrition(e.g. spicy/fried food) [] []
- m. Anaemia [] []
- n. Swelling of ankle/ feet (pitting oedema) [] []
- o. Vagina bleeding [] []
- p. Chronic headache during day and night [] []
- q. Stoppage of foetal movement [] []
- r. Persistent vomiting or “morning sickness” [] []
- s. Blurred vision [] []
- t. Others (please tell us).....

25. During your last pregnancy, were you told to prepare for your delivery at the ANC clinic?

- a. Yes []
- b. No []

SECTION C
MOTHERS’ KNOWLEDGE ABOUT SKILLED DELIVERY AND CHOICE OF PLACE OF DELIVERY

Were you aware of the nearest health facility where you can receive skilled delivery care in the district at the time you gave birth to your last child?

- a. Yes []
- b. No []

26. In your candid opinion, do you think health facility delivery is important?

- a. Yes []
- b. No []

27. If you choose **Yes**, why do you think health facility delivery is important?(Tick the one that applies to you)

- a. Access to skilled care []
- b. Prevent delay in getting emergency care if needed []
- c. Immediate treatment to the mother and the baby []
- d. It is not important []
- e. I don't know []
- f. Others (please indicate).....

28. Did you have any fear for the following processes of health facility delivery as at the time you gave birth to your last child? (Tick one of the options)

- a. Hospital setting []
- b. Referral []
- c. Injection []
- d. Caesarean section []
- e. Medicine []
- f. Position taken during delivery []
- g. I had no fear []
- Others (please indicate).....

29. Which of the following is the main risk behind home delivery?

- a. Delay in getting emergency care if needed []
- b. There is no risk []
- c. I don't know []
- d. Others (please indicate).....

30. In which of the following providers did you have confidence in their service at the time you gave birth to your last child?

- a. Priest/pastor/mallam attending to your delivery at home []

- b. Skilled attendant (midwife, doctor/nurse with midwifery skills) attending to your delivery at health facility []
- c. TBA attending to you delivery at home []
- d. Relatives attending to your delivery at home []
- e. Self assisted delivery at home []
- f. Others (please indicate).....

31. Where did you give birth to your last child?

- a. Health facility []
- b. Home/TBA home []
- c. Prayer camp []
- d. Others (please indicate).....

32. Why would you prefer health facility delivery? Tick **Yes** if you prefer health facility delivery or **No** if you dislike it.

- | | Yes | No |
|--|------------|-----------|
| a. Distance covered to access skilled delivery | [] | [] |
| b. Rules regarding visitors | [] | [] |
| c. Respect for privacy and other personal needs | [] | [] |
| d. Position taken during delivery | [] | [] |
| e. Items like soap, antiseptic, pad and gloves required | [] | [] |
| f. Facilities/utilities available (water, light, bath room, etc) | [] | [] |
| g. Attitudes of health personnel | [] | [] |
| h. Delivery room temperature | [] | [] |
| i. Delivery assisted by midwife/medical doctor/nurse; not TBAs | [] | [] |
| j. Immediate care given to the mother and baby | [] | [] |
| k. Access to emergency care if needed | [] | [] |
| l. Opening hours during the day | [] | [] |

- m. Opening hours during the night [] []
- n. Service provider readiness [] []

33. Do any cultural practice(s) or traditional norm exist in your community that prevents you from accessing skilled delivery at a health facility? (Tick the one that applies to you)

- a. Placenta is buried []
- b. The mother and/or baby is/are bathed with hot water []
- c. The mother and/or baby is/are bathed with warm water []
- d. The mother and/or baby is/are bathed with normal water []
- e. Mother-in-law is to be present during delivery []
- f. Men do not assist delivery []
- g. Others (please indicate).....

MOTHERS' OPINION ON ATTITUDE OF HEALTH FACILITY STAFF

34. At the time you gave birth to your last child, what opinion did you hold about the attitude/behaviour of midwives, nurses or other health personnel during health facility delivery?

- a. Very friendly []
- b. Friendly []
- c. Unfriendly []
- d. Very unfriendly []
- e. No firm opinion []

35. If you did not choose (a) and (b) in Q37 above, which of the following attitude/behaviour in your candid opinion could doctor, midwife, nurse or other health personnel exhibit?

- a. They shout at mothers []
- b. They insult mothers []
- c. They don't attend to mothers during labour []

- d. They beat mothers []
- e. They look down upon mothers []
- f. Others (please indicate).....

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