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COLLEGE OF HEALTH SCIENCES
DEPARTMENT OF COMMUNITY HEALTH

Factors Influencing Supervised Delivery in the Asunafo North District in the Brong-Ahafo Region, Ghana.

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September, 2005

Factors Influencing Supervised Delivery in the Asunafo North District in the Brong-Ahafo Region, Ghana.

A thesis submitted to the Department of Community Health, College of Health Sciences, Kwame Nkrumah University of Science and Technology, Kumasi, in partial fulfilment of the requirement of the Degree of Masters of Science in Health Education and Promotion

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DECLARATION

I, Francis Asante, hereby declare that, except for references to other people's works, which have been duly acknowledged, this work is the result of my own original research.

I hereby also declare that this work has neither in whole nor in part been presented for degree elsewhere.

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DEDICATION

With an indebt gratitude to the Lord God Almighty, I dedicate this thesis to the Ghana Bible College

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DEFINITION OF TERMS

Community: A group of people who have something in common and act together in their common and collective interest.

Fistulae: Fistulae of the urinary tract, which open from the urethra or bladder to the perineum (the area between the anus and the genitals) usually occurs as a damage caused by a difficult childbirth

Incontinence: Uncontrollable, involuntary urination, often due to injury or disease of the urinary tract.

Infant Mortality: Death of a child occurring under one year of age

Maternal Mortality: Female deaths due to complications of pregnancy, childbirth and the puerperium.

Neonatal Mortality: Death of an infant occurring under the first 28 days after birth

Perinatal Mortality: Death of a fetus occurring after 27 weeks in pregnancy and in the first week after birth.

Placenta previa: Implantation of the placenta in the lower part of the uterus, near or over the cervix.

Postpartum Haemorrhage: Excessive blood loss after childbirth

Skilled Birth Attendants: Providers with midwifery and obstetric skills, thus excluding trained birth attendants.

Stakeholders: A person or group of persons with a direct interest in something (Government, Community, and Household)

Stillbirth: Death of a fetus occurring after 27 weeks in pregnancy

Uterine prolapse: A condition in which the uterus descends from its normal position down into the vagina.

Infertility: Inability to conceive

ABREVIATIONS/ ACRONYMS

ANC.-.....Antenatal Care

Biostat Assist ..... - Biostatistics Assistant

CHPS.....Community Based Health Services and Planning

CWC.....Child Welfare Clinic

DA.....District Assembly

DCE .....District Chief Executive

DDHS .....District Director of Health Service

DHA.....District Health Administration

DHD.....District Health Directorate

DHMT.....District Health Management Team

Disp Tech ..... - Dispensary Technician

FGD-.....Focus Group Discussion

GPRTU.....Ghana Progressive Road and Transport Union

Lab tech .....Laboratory Technician

MHC..... Maternal Health Care

N O .....Nutrition Officer

NGOs .....Non Governmental Organizations

PHC.. .....Public Health Center

PI.....Principal Investigator

PNC – .....Post natal Care

PNO ... .Principal Nutrition Officer

PPH.....Post partum Haemorrhage

RCH.....Reproduction and Child Health Clinic

RHMT.....Regional Health Management Team

SMO.....Superintendent Medical Officer

SNO .....Senior Nutrition Officer

SPSS	Statistical Package for Social Scientists
SUP/DEL	Supervised Delivery
T. O. (BIO)	Technical Officer of Biostatistics
T.O NUT	Technical Officer of Nutrition
TBAs	Traditional Birth Attendants
UN	United Nations
UNICEF	United Nation Children's Fund
WHO	World Health Organization
WIFA	Women in Fertile Age

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ABSTRACT

For more than 20 million women each year, pregnancy and childbirth mean suffering, ill health or death. Recent estimates suggest that 515,000 women die annually of pregnancy related complications. This is in addition to the 3.9 million newborn and three million still born lives that are lost every year. It is estimated that 90% of maternal deaths could be avoided if adequate care was provided (including skilled attendant at birth).

The objective of this study was to identify the factors for the low percentage of supervised delivery in the Asunafo North District.

A cross-sectional study was done in all the three sub-districts of the Asunafo North District with a total population of 110,262
Structured questionnaires consisting of both open and close ended questions were administered on a sample of mothers who attended the child welfare clinic. A total of 90 mothers were selected by using systematic sampling method.

Cross-tabulation and bivariate analyses were performed using statistical software known as SPSS 7.5. The results are presented in terms of correlation for the bivariate analysis and Chi-Square test for the cross-tabulation analysis. These analytical programmes were employed to establish the relative influence of the independent variables on the dependent variable; place of delivery.

The interviews conducted among the mothers, health personnel and during the FGD revealed numerous reasons why women deliver at home in the Asunafo North District. Among the factors, the most prominent ones are quick child birth 30.0%, transportation difficulty 23.6%, financial difficulty 14.5%, long distance to the health facility 7.2%, high cost of transport 5.5%, inability to recognize labour signs 3.6% and ability to deliver without help 3.6%. The other factors contributed 2.0% each.
In the study the most common factors mentioned as reasons for delivering with the TBA are; competency 17.3%, difficulty in getting transport 26.0%, quick childbirth 13.8%, low

fees charged 5.2%, herbal treatment 5.2%, long distance to the health facility 5.2%, good care 5.2%, financial difficulty 3.4, high cost of transport 3.4%, and spiritual protection 3.4%. The other factors contributed 1.7% each. The prominent among the reasons why mothers delivered at the health facility were; ability to handle complications 53.1%, competency of health personnel 7.7%, ANC education 6.2%, no body to assist delivery at home 6.2%, prefer to deliver at health facility 4.7%, good medical treatment to baby 4.7%, primi-gravida 3.1% and good attitude of health workers 3.1%. The other factors contributed 1.6% each.

None of the predisposing factors was statistically significant with the place of delivery. The enabling factor of income showed a significant difference with the place of delivery. All the restrictive factors of cost of hired transport, fees charged at the health facility, attitude of health workers, distance to the health facility, and waiting time except frequency of transport showed a statistically significant relationship with the place of delivery.

It was recommended that the government, community and the household should collaborate in the improvement of road and transport in the district. Education, through antenatal and community durbars should also be intensified.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND INFORMATION

Each year, 60 million deliveries take place in which the woman is cared for only by a family member, an untrained traditional birth attendant or no one at all. Only 53% of deliveries in developing countries take place with the assistance of a skilled birth attendant -a doctor or midwife (WHO, 1997).

More than 40 percent of pregnant women may experience acute obstetric problems during pregnancy, childbirth and the postpartum period; an estimated 15% of pregnant women develop life-threatening complications (WHO, 1994). This means having a skilled health professional at delivery is essential for making motherhood safer. A skilled birth attendant can ensure hygiene during labour and delivery, provide safe and non-traumatic care, recognize complications and manage them effectively or refer the woman to a higher level of care.

Most maternal deaths occur either during or shortly after delivery, yet this is the time when women are least likely to receive the health care they need (WHO, 1997). For more than 20 million women each year, pregnancy and childbirth mean suffering, ill-health or death. Recent estimates suggest that 515,000 women die annually of pregnancy related complications. This is in addition to the 3.9 million newborn and three million still born lives that are lost every year (WHO, 2002). As many as 300 million women more than one-quarter of all adult women now living in the developing world suffer from short or long term illness related to pregnancy and childbirth (UNICEF, 1996).

According to the WHO progress report on safe motherhood, 1993-1995, which was published in 1996, deaths and disabilities related to maternal causes accounted for 18.5% of the burden of disease among women of reproductive age in developing countries (WHO, 1996). The long-term complications of pregnancy and childbirth include uterine

prolapse, fistulae, urinary incontinence, pain during intercourse and infertility (WHO, 1994). Quality health care during and immediately after the critical period of labour and delivery, is the single most important intervention for preventing maternal and newborn mortality and morbidity. Therefore, most maternal deaths could be prevented if women had access to basic medical care during pregnancy, childbirth and the postpartum period (WHO, 1994).

The vast majority of women will need only basic care during labour and delivery. Cleanliness and the presence of skilled personnel will help to ensure that normal births are clean and safe and that obstetric complications are dealt with promptly. Doctors, midwives and nurses who attend deliveries must have the midwifery skills needed to recognize the onset of complications, and perform essential caregiver's competence (WHO, 1996a). They also must be able to monitor the condition of the fetus and provide care for infants after birth including for newborns that require special attention in the first critical hours of life to prevent neonatal morbidity and mortality (WHO, 1996b).

In developing countries due to the scarcity of trained health personnel for delivery, pregnancy related care and delivery are most often provided by less qualified staff such as auxiliary nurse/midwife, village midwives, health visitors, trained and untrained TBAs and even relatives (WHO, 1998). However, for the fulfillment of the complete set of tasks required to manage normal pregnancies and births, and to identify, manage or refer complications, their education, training and skills are insufficient. Also their background may mean that their practice is conditioned by strong cultural and traditional norms, which may impede the effectiveness of their training (Malata, 2000).

In industrialized countries and in many urban areas in the developing world, skilled care at delivery is usually provided in a health facility. However, in most developing countries, and particularly in rural areas, many women prefer to deliver in the familiar home environment or in the home of parents, parents-in-law or in a setting provided by the traditional birth attendant (TBA). For example, the majority of births in rural Bangladesh are carried out in unhygienic conditions by relatives and TBAs. This results in a high

incidence of maternal and infant mortality that could be reduced if childbirth were to occur in health centers or under the supervision of trained TBAs (Paul et al., 2002).

According to the United Nations, the global and regional estimates of delivery care showed that Forty-six percent of world total deliveries occur in health facilities. Thirty-six percent of deliveries in Africa occur in the health facilities and in West Africa only thirty-two percent of deliveries occur in health facilities. (UN, 1996)
There is the need therefore to improve the percentage-supervised deliveries in order to reduce maternal and infant mortality and morbidity.

The Asunafo District hospital and the other health centers in the sub-districts are well equipped with the appropriate human and material resources to take care of most delivery related complications and ensuring safe delivery but the women in the district under utilize the delivery facilities.

The purpose of this study was therefore to determine the factors for the low percentage of supervised delivery in the district.

1.2 STATEMENT OF THE PROBLEM

Traditionally, children in Ghana are delivered at home with the assistance of birth attendants or elderly women of the community. According to the 2003 Ghana Demographic Health Survey, 46% of births were delivered in health facilities with 36 % in public health facilities and 9 percent in private health facilities. More than half of births 53% occurred at home (GSS, 2003).

Brong Ahafo Region is the third highest in supervised deliveries in Ghana being 56% compared to 79.6% in Greater Accra Region and 60% in Ashanti Region (GSS, 2003). Even though the percentage of supervised deliveries in the Brong Ahafo Region is higher than 50% there is much to be desired. This is because it still falls short of the WHO recommendation that skilled attendant should be present at every birth (WHO, 1998).

The 2003 annual report revealed that the percentage-supervised delivery in the Asunafo district was 59%. However, it cannot be considered as satisfactory since out of the 4137 deliveries, which took place in 2003, 1144 births representing 27.6% occurred under the supervision of trained traditional birth attendants (TBAs). The percentage of births, which occurred at home, was 41% (District Annual Report, 2003)

The question is, why the high preference for the TBAs and home deliveries? The district hospital at Goaso recorded only half the total deliveries that were supervised by TBAs in the year. There are factors that have contributed to the low percentage of supervised deliveries, and it is therefore the objective of this study to determine these factors.

1.3 RATIONALE FOR THE STUDY

The Asunafo North district cannot be said to be a deprived district in terms of health facilities. Even though, the health facilities are not in abundance, there are enough to take care of health conditions compared to some other parts of the country.

It is a fact that the available health facilities can adequately cater for all deliveries that may occur within the year. Yet even among those who attend the antenatal, only a few of them come back for delivery at the health facility. Out of the 5 maternal deaths that were recorded in 2003, 2 representing 40% occurred at the TBAs. This is just the tip of the iceberg since probably most of the deaths that might have occurred outside the health facilities were not recorded.

Based on the available data, the perinatal mortality rate is 15/1000 live births and the maternal mortality ratio is 123/100,000 live births. Comparing the maternal mortality ratio to the national figure, it can be said that, it is just about half, yet much can be done to improve upon it in the district if percentage supervised delivery is improved.

1.4 RESEARCH QUESTIONS

- Why do some women deliver at home?
- Why do some women deliver with the TBA?

- Why do some women deliver at the health facility?
- What enabling factors affect supervised delivery?
- What are the predisposing factors that affect supervised delivery?
- What restrictive factors contribute to the low percentage of supervised delivery in the district?

1.5 GENERAL OBJECTIVE

The main objective of the study is to identify the factors contributing to the low percentage of supervised delivery and to establish the relative influence of each factor to the low percentage of supervised delivery

1.6 SPECIFIC OBJECTIVES

- To determine the reasons why women deliver at home
- To determine the reasons why women deliver with the TBA
- To determine the reasons why women deliver at the health facility
- To identify enabling factors that affect the place of delivery
- To identify the predisposing factors that affect place of delivery
- To identify the restrictive factors that influence place of delivery
- To make recommendations to interested parties.

1.7 HYPOTHESIS

From the research questions and the specific objectives, the following null hypotheses (Ho) were tested;

- There is no association between the place of delivery and enabling factors
- There is no association between the place of delivery and the predisposing factors
- There is no association between the place of delivery and the restrictive factors

- The research hypothesis (H_A) states that there is an association between the place of delivery and restrictive, enabling and predisposing factors.

A Chi-square test of probability ($p<0.05$) was used to test the hypothesis. This means that when $p<0.05$, the null hypothesis is rejected and the alternative hypothesis (H_A) may be said to be true. Otherwise the null hypothesis may be accepted as true whiles rejecting the alternative hypothesis.

1.8 PROFILE OF THE STUDY AREA

The Asunafo District forms the base of the colonial Ahafo district, which was one of the first districts, created in present Brong Ahafo region and dates as far back as 1912.

1.8.1 The Land and People

The total land area of the district is 2,187.5km^2 with forest reserves covering 779.4km^2. The terrain is generally low lying (150-300m high) with rugged ends towards the Northeast (Mim) and south-west (Abuom).

1.8.2 Location

The district lies between latitudes 6^{0}27' north and 7^{0}00' North and longitudes 20^{0}23' West and 2^{0}52' west and shares common boundary with the following (Appendix 7):

- Asutifi District to the North and East
- Dormaa district to the North West
- Western region (Juabeso Bia, Sefwi Wiaso and Bibiani Anwiaso districts) to the West and South
- Ashanti Region (Atwima District) to the Southeast.

1.8.3 Population

The population of the district is estimated at 188,143 (projected from 2000 population figure of 174,026 at the growth rate of 2.6% per annum). Males constitute 51.1% while females make up 48.9%.

1.8.4 Employment Structure

The dependent population constitutes 46.7% (children, 41.4% and aged 5.3%) implying a labor force of 53.3% out of which 11.5% are estimated to be unemployed. The economic labour force now stands at 72,760 or 41.8% of the population.

1.8.5 Household Ethnicity and Religion

The average household size in Asunafo district is 5 persons. With regard to ethnicity, Akans make up 80% of the population, ewes 10%, northerners 9% and Ga-Adange 4%. The high degree of ethnic homogeneity promotes socio-cultural stability in the district. In the religious domain, followers of the Christian faith constitute 84% of the population, followed by Islam 14% and traditional religion only 2%.

1.8.6 Settlement

There are over 434 settlements scattered throughout the district but only five have population above 5000. These Are Goaso, Mim, Kukuom, Akrodie, And Sankore. In terms of official standard, only Mim has attained urban status with a population of 22000. The district has 45 km stretch of tarred road linking the district to Bibiani and over 1000km stretch of feeder roads intricately linking small towns and villages.

1.8.7 Poverty Levels

It is estimated that 24% of the population live below the poverty line of ¢900,000 income per annum. The picture does not look very gloomy when considered nationally because, even when people do not obtain physical income in their pockets, at least, they can obtain their daily food requirements from their own farms. Approximately 60% of the poor in the district are females. The economic dependency ratio in the district is 1:2.4, meaning that one worker takes care of 3 persons in the district. (District Development Profile)

1.8.8 Health Facilities

There are eighteen health facilities and thirty seven outreach points as shown in the table below:

Table 1.1 Number of Health facilities and Outreach points

Hospital	1
Health centres	3
Rural clinics	8
Mission clinic(s)	1
Industrial clinics	2
Private maternity home	4
Outreach clinic	19
Total	**38**

(Source: District annual report, 2003)

1.8.9 The Sub District Concept

For the purpose of health administration, the district has been divided into five sub districts as follows (Appendix 9):

Goaso sub-district: Goaso, Mim and Ayomsu areas

Sankore Sub-district: Sankore, Kokooso, Asarekrom and Abuom areas

Akrodie Sub-district: Akrodie and Asumura areas.

Kukuom- Sub-district: Kukuom, Kwapong and Norberkaw areas

Kasapin Sub district: Kasapin, Wam-Adiembra and Ampenkro areas

Camp 15 Sub-district: camp 15 areas.

1.9.10 The Personnel

The district has staff strength of 181 health personnel at post as indicated below with the various categories of staff and the number at post.

Table 1.2: Health Personnel at post

CATEGORY	NUMBER AT POST
Medical officers	4
Health service administrators	1
Medical assistants	6
N.O/SNO/PNO	5
Staff midwives/midwife supt.	12
Staff nurse	3
Enrolled nurse	9
T.O NUT/disease control	4
F/T (CDC)	1
T. O. (BIO)	1
Accountant	2
Jnr. A.O. Snr. & Pr. Acc.Officer	6
Pharmacist	1
Lab tech	1
Disp. Tech	2
Dist assist/attendants	7
Biostat. Assist	3
MRA	2
Typist	3
Drivers	3
Senior Ward Assists	27
Orderlies	18
Tradesman	1
Laborers	11

Others	27
Total	181

(Source: District annual report, 2003)

Below is a table showing the trend of percentage coverage of ANC. Sup/del., and PNC for the period 1996- 2003

Table 1.3: Percentage coverage of ANC, SUP/Del, and PNC

COVERAGE	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
ANC	82.3	86	85	86.9	85.7	93.8	97.4	109.1
SUP./DEL	**45.8**	**46.7**	**45.9**	**51.5**	**49.4**	**49.2**	**51.4**	**59.0**
PNC	3207	35.3	33.2	37.9	43.7	44.9	45.5	52.4

(Source: District annual report, 2003)

The Asunafo District has been divided into two separate districts namely; Asunafo North District and Asunafo South District (Appendix 8). The line of demarcation is similar to the electoral constituency demarcation line, which was created in 2003. Goaso is still the District capital of Asunafo North whilst Kukuom has been made the District capital of Asunafo South. The Asunafo North District now has three Subdistricts namely; Goaso Subdistrict, Akrodie Subdistrict and Kasapin Subdistrict. The major towns in the Asunafo North District are;

Goaso, Mim, Ayomso, Akrodie, Asumura, Kasapin, and Dominase.

1.9 SCOPE OF STUDY

The research included all women of child bearing age that is women in fertile age (WIFA) who have delivered during the past one year in any of the following places: Health facility, Home, and with a TBA. The questionnaire will be administered to mothers who will be selected in the sampling techniques.

1.10 ORGANISATION OF REPORT

Chapter one of this report covers the background information, statement of the problem, rationale for the study, research questions, objectives, conceptual framework, profile of the study area and the scope of the study.

Chapter two covers the review of the related literature in a format of the specific objectives.

Chapter three is about methodology, which includes the study design, data collection techniques and tools, sampling, ethical consideration, assumptions and limitations of the study.

Chapter four is the result. This is where the results of the work that was undertaken displayed in a form of tables.

Chapter five discusses the results, by explaining the relationship between the dependent variable and the independent variables.

Chapter six gives conclusion and recommendations. The recommendations were addressed to the stakeholders.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 INTRODUCTION:

This chapter looks at the review of the many works done by other researchers on this topic. The chapter has been arranged in accordance with the specific objectives.

The theme for the 2005 world health day is "make every mother and child count". In effect, the health of mothers has now been considered paramount on the world health agenda, as has been indicated in the Millennium Development Goals. When we talk of the health of mothers, the most important indicator is the maternal mortality ratio. According to Graham et al. (2001), 16-33% of maternal deaths could potentially be avoided assuming access to and utilization of skilled attendants, although this estimate has not been supported by any randomized trials. However, Faundes et al. (1998) estimated that 90% of maternal deaths could be avoided if adequate care was provided. Safe delivery therefore, can only be obtained under the supervision of a skilled birth attendant. However, especially in the developing world, delivery under the supervision of a skilled birth attendant is influenced by a lot of factors, which may include;

- Enabling factors
- Predisposing factors and
- Restrictive factors.

2.2 ENABLING FACTORS

2.2.1 Income Level and Occupation

A persons' occupation invariably determines his or her income level. Some jobs attract low wages whiles others give high wages. In the developing world greater percentage of the population are peasant farmers and live on subsistence form of agriculture. They do not therefore have enough food both to eat and also to sell. They only sell the little surpluses; as a result it greatly affects their ability to afford health care.

In a study conducted by Nwakoby (1994), in rural Nigeria, it was realized that maternal, and husband occupations were found to be most consistently associated with the use of health institutions for delivery. This means that a persons' ability to access and use a health institution for delivery depends on his or her occupation.

Rasheed et al. (1990) concluded in a study conducted in Saudi Arabia that economic status was one of the variables that influenced the choice for place of delivery.

According to van de Heuvel et al. (1999) in a population-based study conducted in a rural area of Zimbabwe, the results showed that unemployment was a significant factor that was associated with deliveries outside the hospital. Of course an employment status determines the purchasing power of a person. Therefore if the person is unemployed, his or her ability to afford health care is drastically reduced.

Uryirworth et al. (1996) noted that lack of money to pay for services contributed significantly to home birth. Most people may have the desire to deliver at the health institution, but may end up delivering in the home because they may not have money to pay at the facility. Some may not even have the money for hiring transport to the nearest health facility. All these contribute to the low supervised delivery.

According to Addai (1998), in a study of demographic and socio-cultural factors influencing the use of maternal health service in Ghana, it was realized that occupation was one of the factors that influenced the use of maternal services.

The 2003 Ghana demographic and health survey has it that the place of delivery is significantly affected by the wealth quintile of women. For example, 89% of women in the highest wealth quintile had an institutional delivery compared with 19 percent of women in the lowest wealth quintile (GSS, 2003).

2.3 PREDISPOSING FACTORS

2.3.1 Mother's Age Education and Marital Status

Khan et al. (1994), in their study of mother's education and utilization of health care services, mothers with higher educational status were more likely to avail themselves of prenatal and delivery services. He realized the trend in the use of modern medical facilities. Mothers with a middle school education were more pronounced than those with primary school education. However, he noted that the effect of education was less significant in urban areas where modern health care is easily accessible.

Women with higher education are more likely to deliver in a clinic. This was the conclusion for a study conducted in Zambia to determine the level of use of maternal health services and to identify and assess factors that influence women's choices of where to deliver.

Factors' affecting home delivery in the Kathmandu valley, Nepal; was a study conducted by Bolam et al. (1998), he realized that maternal education was associated with place of delivery in a univariate analysis comparing home and institutional deliveries.

When Mekonnen and Mekonnen (2003), conducted a study in Ethiopia to examine the factors that influence the use of maternal health care services, it was realized that the independent factors influencing the use of maternal health care services included very importantly the education of mothers.

Bangladesh is one of the countries that have very low institutional deliveries. In a retrospective survey conducted to collect relevant information from couple who experienced childbirth during a two year period from 1995 to 1997, the data indicated that slightly over 11% of the deliveries were performed by trained personnel with the rest attended by TBAs. A multivariate analysis clearly showed that parental education was the second most significant factor determining the use of modern health care resources for childbirth (Paul et al., 2002).

In two different studies conducted by Esimai et al. (2002), and Nwankoby (1994), in Nigeria, it was realized in both studies that maternal education was significantly associated with the use of health institution for delivery. One of the studies found out that maternal age was not significant in determining the choice between home and institutional delivery.

Addai (1998), in a study conducted in Ghana found age at marriage as not significant in determining the place of delivery but mother's education is a significant factor in determining the place of delivery

The Ghana demographic and health survey, 2003 found that 89 % percent of births to women with at least secondary education occurred in a health facility compared with 28 percent of births to women with no education. However, mother's age at birth is not a significant factor in determining place of delivery.

2.3 RESTRICTIVE FACTORS

In a cross-sectional population survey carried out to determine utilization of approved health facilities for delivery by mothers in Ile-Ife, Nigeria, it was shown that 49% delivered outside the health facilities. The prominent reasons given for the non-utilization of health facilities were time of occurrence of labour, difficulty with transportation, fear of surgical operation, husband/family influence and assistance by TBAs and relatives.

According to a study conducted in a rural area in Kenya on household characteristics affecting where mother's deliver, it was found that 52% of deliveries occurred at home or with traditional birth attendants. The factors that determined the place of delivery were distance to nearest maternity bed, head of the household being a male and travel time (Hodgkin, 1996).

In a study conducted by Uyirworth et al. (1996), to identify obstetrics services utilization by the community in Lebowa, Northern Transvaal, in South Africa, he found that 26% of all births occurred at home and the reasons for their choice of home delivery were inaccessibility of maternity services, negative staff attitudes and lack of privacy.

Celik et al. (2000), also identified parity level and ethnicity as significant factors that affect the use of health care services thought essential to reduce infant and child mortality rates.

In Ethiopia, only 6% of women had received a professionally assisted delivery care services in a five-year period preceding the 2000 Ethiopia demographic and health survey. Mekonnen and Mekonnen (2003), identified the independent factors influencing the use of maternal health care services as including marital status, place of residence, parity and religion

A nested case control study conducted by Bolam et al. (1998), compared the characteristics of mothers having home delivery or institutional deliveries in Kathmandu, Nepal and explored the reasons given by mothers for a home delivery. A univariate analysis comparing home and institutional deliveries identified parity as a restrictive factor that contributed significantly to home delivery.

Stekelenburg et al. (2004), conducted a study in Kalabo District of Zambia to determine the level of use of maternal health services and to identify and assess factors that influence women's choices of where to deliver. The results of the study indicated that although 96% of respondents would prefer to deliver in a clinic, only 54% actually did, because of long distances, health education given during antenatal care and, poorly staffed and ill-equipped institutions with poorly skilled personnel.

Phoxay et al. (2001) found that women with strong superstitious beliefs were less likely to utilize all three types of maternal health care (MHC). Accessibility to heath care facilities strongly affected ANC and attendance delivery. They concluded that enhancing women's knowledge on obstetric care and reducing barriers related with socio-cultural beliefs are essential to improving maternal health in Southern Laos.

In Uganda, lack of skilled staff at primary health care level, complaints of abuse, neglect and poor treatment in hospital and poorly understood reasons for procedures, plus health

worker's view that women were ignorant, explained the unwillingness of women to deliver in health facilities (Kyomuhendo, 2003).

In a study conducted by Chakraborty et al. (2003), to identify the determinants of the use of maternal health services in rural Bangladesh, it was found that mothers' education and household socio-economic status strongly influenced the utilization of maternal health services.

Using data from the 1993 Ghana demographic and health survey (GDHS) to investigate the demographic and socio-cultural determinants of use of maternal health services, Addai (1998) identified place of residence and religion as the strong restrictive factors that influence the utilization of maternal health services in Ghana.

According to the Ghana demographic and health survey, 2003 only 10% of births to women who did not receive antenatal care occurred at a health facility compared with 59% of those women with four or more ANC attendance. Also women with birth order one and two are more likely to deliver at health facility than those with a higher order births (GSS, 2003).

2.4 REASONS WHY WOMEN DELIVER AT HOME, WITH THE TBA OR AT THE HEALTH FACILITY

In a study conducted by Nwakoby (1994), in Nigeria, on the use of obstetric services, it was found that the likelihood of a health care institution delivery tripled among mothers with post primary education compared to mothers with no schooling. There was a 1.7 times higher likelihood of institutional delivery among mothers in petty trades and a 2.3 times higher probability of a heath care institution delivery with a Christian mother. Marriage to a civil servant increased the probability of health institution delivery by 2.2 times.

In a cross-sectional survey conducted to determine patterns of obstetric services utilization in Lebowa, a community in northern Transvaal, South Africa. It was realized that 74.6% of deliveries occurred in a heath facility, while 26.3% were home births. The reasons for

the home delivery included lack of access to health services 19%, lack of money to pay for services 15.2%, negative staff attitude 9.8% and precipitate labour 7.2%

Katung, 2001 also identified the relative influence of each factor to the poor utilization of the primary health care services in rural community in Nigeria as high cost of drugs 29% and service changes 19%, easy access to traditional healers 39% and difficulty in getting transport to health facility 30%. The unfriendly attitude of the health workers 3.6%, and the wasting of patient's time at the facility 7.8%.

In a community-based, cross-sectional study conducted in the catchments area of Gutu Mission hospital, in rural Zimbabwe from January to June 1996, to determine the use of maternal care services, 235 women aged 16 to 54 years who had delivered a child in the past three years were interviewed on the general characteristics (age, marital status, religion, education, work), obstetric history, use of family planning, pregnancy complications, number of antenatal visits, and use of maternity waiting shelters. The results showed that use of maternity waiting shelters and complications during the pregnancy were important factors for hospital delivery. (van de Heuvel et al., 1999).

According to Rasheed et al. (1990), maternal health care problems in Saudi Arabia revolve around under-utilization of health care facilities for maternity care. A multi-factorial analysis was performed to study the association of certain social correlates with options for birth settings in a rural region of the kingdom. The results showed that housing conditions though non-significant tailed to make an impressive contribution to the under utilization of the health care facilities for maternity care

CHAPTER THREE

METHODOLOGY

This chapter deals with the methods and designs that were used during the research work, the tools and techniques that were used to collect the data, the study population that the sample size was taken from, and the statistical tools that were used to analyze the data.

3.1 RESEARCH METHODS AND DESIGN

A cross-sectional study was done from June 2005 to August, 2005 in all the three sub-districts of the Asunafo North District with a total population of 110,262 in order to identify the factors that influence the low supervised delivery in the district. The three Sub-districts consist of Goaso Sub-district, Akrodie Sub-district and the Kasapin Sub-district.

3.2 DATA COLLECTION TECHNIQUES AND TOOLS

3.2.1 Questionnaire for mothers

Structured questionnaires consisting of both open and close-ended questions were administered on a sample of mothers who attended the child welfare clinic. The questionnaires were designed to collect information on demographic characteristics, socio-cultural and health information, and information on reasons for choice of place of delivery. The questions were administered through face – to – face interviewing where the questions were translated to Twi and the mothers answers for the qualitative data was translated back to English. The principal investigator administered most of the questionnaires.

3.2.2 Questionnaire for Health Personnel

Ten health workers consisting of 5 midwives and 5 TBAs were interviewed using a structured questionnaire containing both open and close-ended questions. This was done to gain insight into the outlook of delivery services provided by the midwives and the TBAs and in their opinion what they think are the factors influencing place of delivery.

3.2.3 Focus Group Discussion

A focus Group Discussion (FGD) was conducted in one of the three Sub-districts of the study area. The members consisted of mothers, fathers, an elderly woman, a TBA, and the Assemblyman. The midwife at the health center in the community refused to participate in the FGD with an excuse that she was busy.

The discussion was conducted by a nutrition officer at the District Health Directorate's administration at Goaso due to her vast experience in conducting FGDs. The Principal Investigator (PI) manually recorded the discussion. However, a tape recorder was also used to record the discussion in order to make sure that no information was lost. There were 10 members in all who participated and the discussion lasted for about two hours. The records for the members are placed in the appendix 2

3.3 STUDY POPULATION

The research was carried out in Asunafo North district in the Brong Ahafo region of Ghana with a total population of 110,262 (District Half year Report, 2005). There are about 200 settlements scattered throughout the three Sub-districts but only three have population above 5000. These are Goaso, Mim, and Akrodie. In terms of official standard, only Mim has attained urban status with a population of 22000 (District Development Profile).

The target population for this study was women in the fertile age (WIFA) group from 15-45 years that resided in the study area and had delivered within one year and are attending the Child Welfare Clinic. They were estimated to be about 26,463 (DHMT Half year Report, 2005).

Delivery was defined as giving birth to a live baby excluding still births, perinatal and neonatal deaths because women with such conditions would not attend the CWC.

3.4 STUDY VARIABLES:

The study is an analytical cross-sectional study conducted in the three sub-districts of the Asunafo North District in the Brong Ahafo Region. It covers the women in the fertile age

group (WIFA), who have delivered in the past one year. The respondent characteristics included age, education, marital status, occupation, place of delivery , income, and parity.

The dependent variable is place of delivery whiles the independent variables are based on predisposing factors, enabling factors and restrictive factors. The variables derived are thus; age, marital status, and education for predisposing factors; income and occupation for enabling factors; and distance, waiting time, service cost, transport cost, frequency of transport, and attitude of health workers are the restrictive factors.

Predisposing factors: the predisposing factors were considered as those factors that affected the woman's behavior due to her current state. The woman does not have an immediate control over such factors and they are directly associated with her personal condition. These factors predispose the woman to the prevailing conditions on the choice of place of delivery and are more of internally influenced.

Enabling factors: the enabling factors were considered as those factors that could give the woman the potential ability to control the prevailing conditions. The enabling factors have the capacity to empower the woman to determine the place of delivery by overcoming most of the restrictive factors.

Restrictive factors: the restrictive factors were considered as those factors that had the potential of putting direct hindrance in the way of the woman from utilizing the health facility, but the woman does not have any direct control over these factors. These factors are more of external influences.

The operationalizations of the variables are indicated in the table below.

Table 3.1 TABLE OF VARIABLES

VARIABLES	OPERATIONAL DEFINITION/ INDICATOR	SCALE OF MEASUREMENT
Place of Delivery	Factors influencing place of delivery	Nominal:
Education	The completed level of Formal education	Ordinal: No formal education- very low Basic education -low Secondary education - moderate

		Tertiary education - high
Income	Monthly cash income of mothers	Ordinal: Less than ¢100,000 -very low Between ¢100,000-¢200,000 - low Between¢201,000-300,000 moderate Between 301,000-400,000 high Greater than400, 000 very high
Attitude of health Workers	Affective behaviour of medical staff towards client and/ or relatives	Ordinal: Poor Satisfactory Good Very good
Distance	Total distance in kilometers From home to a health Facility	Ordinal: Less than 2km - short 2km-4km - moderate 5km-7km - long Greater than 8km very long
Frequency of public transport	How often a public transport is accessed	Ordinal: Not available - Once a week Less than every two hours Between 2- 4 hours Between 5-7 hours 8 hours and above
Cost of transport	The cost of hired transport to the Health facility in case of labour	Ordinal: Below ¢20,000 low

		¢20,000- ¢40,000 moderate ¢41,000- ¢60,000 high Above ¢60,000 very high
Cost of service	The fees charged by medical staff both officially and unofficially.	Ordinal: No fees charged Below ¢50,000 low ¢50,000-¢100,000 moderate Between ¢101,000-¢150,000 high Between ¢151,000- ¢200,000 Above ¢200,000
Waiting time	Time spent waiting for a Skilled attendant at the health facility.	Ordinal: less than 1hour - short 1hour to 2 hours- moderate 2hours to 3 hours -long above 3 hours- very long
Waiting shelter	A place provided for a pregnant woman who had a false alarm and /or relative who accompanied her to wait	Nominal: Necessary Unnecessary
Traditional and religious beliefs and practices	Harmful traditional and religious practices that discourage supervised delivery and serve as a threat to the life of mother and child	Nominal: Dummy/dichotomous Yes No
Parity	No. of children delivered by a woman in her life time	Interval: 1-2 3-4 5-6

		7-8 9-10
Best facility to deliver	Mother's choice of best facility to deliver	Home TBA Health Facility
Birth Order	Order of birth at which mothers deliver at the various facilities	1 2-3 4-5 6 and above
Husband/ family Influence	Answer to question asked	Ordinal: dummy/dichotomous Yes No

3.5 SAMPLING

A systematic sampling method was used to select the child health records for mothers who have come for the CWC knowing they have delivered within the past one year. A simple random sampling was used to determine the first point of selection for the systematic sampling. The mothers were systematically selected by picking every other book of the child health records presented at the child welfare clinic (CWC) from top to bottom, and interviewed the mother when the name of the child was mentioned. In order to reduce bias in the selection, the names of the children were called, after that the selection were listed on a sheet of paper in the same order for which they were selected so that should the records get messed up at any point in time, it would not affect the order for the selection. This was done in all the three Sub-districts and 90 mothers from 35 communities participated in the study. Thirty mothers each were selected from the three Sub-districts. In each Sub-district, 10 mothers each who have delivered at home, TBA and the health facility respectively were selected. A convenient sampling method was used to select the midwives and the TBAs

3.5.1 Sample Size

A sample size of 100 was used consisting of 90 mothers and 10 health workers. The calculation for the sample size was done using the formula;

$$n = t^2 \text{ x } pq / d^2$$

Where t = 1.96 at 95% confidence; p = population proportion; q = 1-p; d = allowable error. For this study, we presumed maximum variability, hence p = 0.5; q = 0.5; d = as 20% of p i.e. 0.1 giving a power (1-d) of 80%. Sample thus yielded was of 96 informants.. The sample was drawn through systematic sampling.

3.6 PRE-TESTING

3.6.1 Questionnaire for mothers

The questionnaire was pre-tested on 10 non-participating mothers outside the study area with similarities on ethnic and language background and was modified accordingly. Both translation to Twi and back translation to English were done and supervised by the Researcher.

3.6.2 Focus Group Discussion

Open-ended questions were designed as the questionnaire guide for the FGD. The questions were tested on two people who were not part of the FGD in order to ascertain their responses and the necessary modifications were effected.

3.6.3Questionnaire for the Health Personnel and TBA

A questionnaire containing both open and close-ended questions was designed to interview the health personnel and TBAs who are involved in delivery. One midwife outside the study area was pre-tested with the questionnaire.

The instruments that were to be used to collect data were all examined to make sure they were in good condition. Especially the tape recorders were pre-tested a day before the FGD in order to make sure that they were in good condition.

3.7 DATA HANDLING

The questionnaires were sorted out into home deliveries, health facility deliveries, and TBA deliveries for the mothers, and the questionnaire for the health personnel was also grouped into midwives and TBAs.

The questionnaires were coded with numeric values in order to group them for easy analysis.

The principal investigator carefully handled and stored the data after collection to make sure they were secured.

3.8 DATA ANALYSIS

Cross-tabulation and bivariate analyses were done using statistical software known as SPSS 7.5. The results are presented in terms of correlation for the bivariate analysis (table shown at appendix 1) and Chi-Square test for the cross-tabulation analysis. These analytical programmes were employed to establish the relative influence of the independent variables on the dependent variable, place of delivery. The principal investigator performed the data analysis.

3.9 ETHICAL CONSIDERATION

The research team went to see the District Chief Executive (DCE) to inform him of their presence in the district and the purpose for the research.

Some community elders were also contacted to seek appropriate permission from them. Since the research team did most of the work with the DHMT, they rather introduced the research team to the people that the team needed to see. Respondents were assured of their confidentiality of information given. The participants for the FGD were doubly assured of the confidentiality for the information collected when the team informed them that they wanted to tape-record the discussion. The participants for the FGD were given incentives in a form of refreshment and bars of soap after the discussion.

3.10 STUDY LIMITATIONS

Naturally, a study of this nature is bound to face some limitations. Some of the limitations encountered during the period of the study are listed below.

(1) Transportation. Transportation was one of the major obstacles in the study. Public transport to villages was unavailable except during market days where the transport may go to a village only once within the day. The researcher had to join the personnel at Public Health Centre (PHC) in their Nissan pick-up when they were going for outreach programmes. The day the Principal Investigator (PI) decided to go and interview three TBAs in three different communities, he had to fuel a motor bike from the district health directorate that took him to those three villages.

(2) Financial constraint. Another most important constraint is finances. One day when the PI decided to hire a taxi cab to a village of about 5 km from Goaso, the driver charged ¢100,000 cedis. In fact, the numbers of FGD were limited to one due to lack of finances.

CHAPTER FOUR

RESULTS

4.1 INTRODUCTION

This chapter presents the findings of the study along the following headings.

* The background characteristics
  * Mothers
  * Health personnel
  * Focus Group members

* Reasons for the choice of place of delivery
  * Reasons why women deliver at home
  * Reasons why women deliver with the TBA
  * Reasons why women deliver at the health facility

* Factors affecting supervised delivery
  * Predisposing factors
  * enabling factors
  * Restrictive factors

4.2 BACKGROUND CHARACTERISTICS

Table 4.1 A cross-tabulation table showing the relationship between place of delivery and mother's demographic characteristics

Characteristics / Place of deliver	Home		TBA		Health Facility		Chi-square
	n	100%	n	100%	n	100%	
Age (years)							$X^2_8=11.537$
15-19	1	3.3	0	0.0	3	10.0	***P=0.346***
20-24	15	50.0	7	23.3	9	30.0	
25-29	11	36.7	18	60.0	15	50.0	
30-34	2	6.7	5	16.7	2	6.7	
35-39	1	3.3	0	0.0	1	3.3	
40-44	0	0.0	0	0.0	0	0.0	
Parity							
1-2	17	56.7	9	30.0	18	60.0	$X^2_8=15.293$
3-4	9	30.0	9	30.0	6	20.0	***P=0.108***
5-6	1	3.3	10	33.3	5	16.7	
7-8	3	10.0	1	3.3	1	3.3	
9-10	0	0.0	1	3.3	0	0.0	
Monthly income (¢)							
Below 100,000	13	43.3	8	26.7	16	53.3	$X^2_8=18.667$
100,000-200,000	10	33.3	10	33.3	2	6.7	***P=0.034***
201,000-300,000	1	3.3	6	20.0	8	26.7	
301,000-400,000	6	20.0	3	10.0	3	10.0	
above 400,000	0	00.0	3	10.0	1	3.3	
Marital status							
Single	1	3.3	0	00.0	0	00.0	$X^2_4=9.446$
Married	11	36.7	20	66.7	21	70.0	***P=0.102***
Co-habiting	18	60.0	10	33.3	9	30.0	

Level of education							
No formal education	11	36.7	14	46.7	10	33.3	X^2_6=7.012
Basic education	19	63.3	16	53.3	17	56.7	*P=0.640*
Secondary education	0	0.0	0	0.0	2	6.7	
Tertiary education	0	0.0	0	0.0	1	3.3	
Occupation							
Trading	5	16.7	2	6.7	6	20.0	X^2_6=12.305
Farming	11	36.7	22	73.3	11	36.7	*P=0.112*
Self employed	7	23.3	3	10.0	4	13.3	
Unemployed	7	23.3	3	10.0	9	30.0	

N= 90, one-tailed $p<0.05$

(Source: Field data collected by Researcher, Aug, 2005)

Mothers

4.2.1 Age:

The mothers, interviewed were in the fertile age group from 15 – 45 years. However, no body was above 40 years. 81.1% of them were between the ages of 20 – 29 years.

The Chi-square test showed no statistical association between the various age groups and their choice of place of delivery. Likewise the bivariate analysis did not show any significant correlation between age and place of delivery.

4.2.2 Monthly Income:

41% of the 90 mothers interviewed were having a monthly income below ¢100,000. The Chi-square test showed statistically significant relationship between monthly income and the place of delivery. However, the bivariate analysis did not show any statistically significant correlation between the monthly income and place of delivery.

4.2.3 Occupation:

The mothers that were interviewed were mostly peasant farmers. The Chi-square test showed no statistically significant relationship between the mothers' occupation and the place of delivery. Even though there is no statistically significant correlation between mothers' occupation and place of delivery, there is a highly significant negative correlation between mothers occupation and the monthly income (-0.424**).

4.2.4 Marital Status:

57.8% of the mothers who were interviewed were married compared to 41.1% co-habiting and 1.1% single. The Chi-square test showed no significant relationship between marital status and the place of delivery. However, the bivariate analysis showed a statistically significant negative correlation between marital status and place of delivery (-0.283*).

4.2.5 Parity:

The study showed that 48.9% of mothers had given birth to one or two children. But the Chi-square test showed no statistically significant relationship between parity and place of delivery.

4.2.6 Birth Order

The birth order was rather analyzed manually as displayed below.

Birth Order	Home	TBA	Health Facility
1	26	20	44
2-3	41	42	34
4-5	15	9	15
6+	10	2	4

It is obvious that the primi-gravidae is high at the health facility constituting 48.9%

4.2.7 Level of Education:

Out of the 90 mothers who were interviewed 57.8% had basic education (primary / middle / JSS) Compared to 38.9% who had no formal education.

The Chi-square test showed no statistically significant relationship between the level of education and the place of delivery. Likewise the bivariate analysis showed no significant correlation between the level of education and the place delivery.

4.2.8 Mothers Religion:

Even though 85.6% of the mothers were Christians, the Chi-square test showed no statistically significant relationship between mothers' religions and the place of birth. The bivariate analysis also showed no statistically significant correlation between the mother's religion and place of delivery.

Health Personnel and FGD Members

The background characteristics of the TBAs, Midwives and the participants of the FGD can be found in appendices 2 and 3.

4.3 REASONS WHY WOMEN DELIVER AT HOME

Mothers, health personnel and the FGD participants who were interviewed about the reasons why women deliver at home gave the following reasons that are listed in the tables below.

Mothers

Table 4.2. Frequency table showing reasons why mothers deliver at home

Reasons	Frequency	%
Quick child birth	12	35.3
Difficulty in getting transport	10	29.4
High cost of transport	3	8.8
Inability to recognise labour signs	2	5.9

Others	7	20.6
Total	34	100

(Source: Field data collected by Researcher, Aug. 2005)

Health Personnel

Table 4.3. Frequency table showing reasons why mothers deliver at home

Reasons	Frequency	%
Quick child birth	4	19.0
Difficulty in getting transport	3	14.3
Financial difficulty	7	33.3
Long distance	3	14.3
Others	4	19.0
Total	21	100

(Source: Field data collected by Researcher, Aug, 2005)

FGD

Difficulty in getting transport

High cost at the health facility

Attitude of health workers

Quick childbirth

4.4 REASONS WHY WOMEN DELIVER WITH THE TBA

Mothers

Table 4.4. Frequency table showing reasons why mothers deliver with the TBA

Reasons	Frequency	%
Quick child birth	8	21.0
Difficulty in getting transport	15	39.0

Good care	3	7.9
Competence of TBA	2	5.3
Long distance to the health facility	2	5.3
Financial problem	2	5.3
No one to take me to the hosp	2	5.3
Others	4	10.5
Total	38	

(Source: Field data collected by Researcher, Aug. 2005)

Health Personnel

Table 4.5. Frequency table showing reasons why mothers deliver with the TBA

Reasons	Frequency	%
Competence of TBA	6	30
Low fees changed at the TBA	3	15
Spiritual protection	2	10
Herbal treatment by TBA	2	10
Others	7	35
Total	20	100

(Source: Field data collected by Researcher, Aug. 2005)

FGD

Some TBAs give herbal treatment

Some have spiritual insights

The TBAs charge less compared to the health facility

One can deliver on credit and pay later

The TBA can even wash a client delivery cloth for her

Difficulty in getting transport

The midwife put fear in the women by telling them their fetus cannot be seen.

Poor attitude of health workers

4.5 REASONS WHY WOMEN DELIVER AT THE HEATH FACILTY

Mothers

Table 4.6. Frequency table showing reasons why mothers deliver at the health facility

Reasons	Frequency	%
Competent to handle complications	27	65.8
No body to assist me in delivering at home	4	9.8
Primi-gravida	2	4.8
ANC education	4	9.8
Others	4	9.8
Total	41	100

(Source: Field data collected by Researcher, Aug, 2005)

Health personnel

Table 4.7 Frequency table showing reasons why mothers deliver at the Health Facility

Reasons	Frequency	%
Competent to handle complications	12	52.2
Good attitude of health workers	2	8.7
Good medical treatment to baby	3	13.1
Some prefer to deliver with the health facility	3	13.1
Others	3	13.1
Total	23	100

(Source: Field data collected by Researcher, Aug, 2005)

FGD

To avoid complication

Some women are afraid to deliver at home

No fees charged because of the exemption policy

The child will be registered with the birth and death center and be given birth certificate.

The child will be given better treatment

4.5 FACTORS AFFECTING SUPERVISED DELIVERY

4.5.1 Predisposing factors

Table 4.8 Cross tabulation between predisposing factors and place of delivery

Predisposing Factors / Place of Delivery	**Home**		**TBA**		**Health Facility**		**Chi-square**
	N	100 %	N	100%	N	100%	
Age (years)							**X^2_8=11.537**
15-19	1	3.3	0	0.0	3	10.0	***P=0.346***
20-24	15	50.0	7	23.3	9	30.0	
25-29	11	36.7	18	60.0	15	50.0	
30-34	2	6.7	5	16.7	2	6.7	
35-39	1	3.3	0	0.0	1	3.3	
40-44	0	0.0	0	0.0	0	0.0	
Marital status							
Single	1	3.3	0	00.0	0	00.0	**X^2_4=9.446**
Married	11	36.7	20	66.7	21	70.0	***P=0.102***
Co-habiting	18	60.0	10	33.3	9	30.0	

Level of education							
No formal education	11	36.7	14	46.7	10	33.3	X^2_6=7.012
Basic education	19	63.3	16	53.3	17	56.7	*P=0.640*
Secondary education	0	0.0	0	0.0	2	6.7	
Tertiary education	0	0.0	0	0.0	1	3.3	

N= 90, one-tailed p<0.05

(Source: Field data collected by Researcher, Aug, 2005)

The predisposing factors of age, parity, level of education and mother's religion showed no statistically significant relationship with the place of delivery. However, the Chi-square test showed no statistically significant relationship between marital status and the place of delivery the bivariate analysis also showed a statistically significant negative correlation between the marital status and the place of delivery

4.5.2 Enabling factors

Table 4.9 Cross-tabulation between enabling factors and place of delivery

Enabling Factors / place of Delivery	**Home**		**TBA**		**Health Facility**		**Chi-square**
	N	%	N	%	N	%	
Monthly income (¢)							
Below 100,000	13	43.3	8	26.7	16	53.3	X^2_8=18.667
100,000-200,000	10	33.3	10	33.3	2	6.7	*P=0.034*
201,000-300,000	1	3.3	6	20.0	8	26.7	
301,000-400,000	6	20.0	3	10.0	3	10.0	
above 400,000	0	00.0	3	10.0	1	3.3	

Monthly income (¢)							
Below 100,000	13	43.3	8	26.7	16	53.3	X^2_8=18.667
100,000-200,000	10	33.3	10	33.3	2	6.7	*P=0.034*
201,000-300,000	1	3.3	6	20.0	8	26.7	
301,000-400,000	6	20.0	3	10.0	3	10.0	
above 400,000	0	00.0	3	10.0	1	3.3	
Occupation							
Trading	5	16.7	2	6.7	6	20.0	X^2_6=12.305
Farming	11	36.7	22	73.3	11	36.7	*P=0.108*
Self employed	7	23.3	3	10.0	4	13.3	
Unemployed	7	23.3	3	10.0	9	30.0	

N= 90, one-tailed, $p<0.05$

(Source: Field data collected by Researcher, Aug, 2005)

The Chi-square test showed a statistically significant relation between monthly income and the place of delivery. However, the bivariate correlation showed no statistically significant relationship between mother's monthly income and the place of delivery. The Chi-square test between mother's occupation and place of delivery showed no statistically significant relationship. Also the correlation test was not significant.

4.5.3 Restrictive factors

Table 4.10 Cross –tabulation between Restrictive Factors and Place of Delivery

Restrictive Factors / place of Delivery	**Home**		**TBA**		**Health Facility**		**Chi-square**
	N	100 %	N	100%	N	100%	

Distance							
Below 2km	5	16.7	5	16.7	21	70.0	X^2_6=25.519
2-4km	14	46.7	13	43.3	5	16.7	*P=0.000*
5-7km	10	33.3	11	36.7	4	13.3	
8km and above	1	3.3	1	3.3	0	0	
Waiting time							
Immediately	13	43.3	9	30.0	29	96.7	X^2_4=33.690
Between 1-2 hours	1	3.3	0	0.0	1	3.3	*P=0.000*
NA	16	53.3	21	70.0	0	0.0	
Fees charged							
No fees charged	22	73.3	9	30.0	9	30.0	X^2_8=27.039
Below 50,000	5	16.7	5	16.7	2	6.7	*P=0.002*
50,000-100,000	3	10.0	10	33.3	8	26.7	
101,000-150,000	0	0.0	5	16.7	11	36.7	
151,000-200,000	0	0.0	1	3.3	0	0.0	
Cost of Hired Transport							X^2_6=15.175
Below 20,000	4	13.3	3	10.0	13	43.3	*P=0.048*
20,000-40,000	3	10.0	6	20.0	5	16.7	
41,000-60,000	6	20.0	7	23.3	5	16.7	
above 60,000	17	56.7	14	46.7	7	23.3	
Attitude of health workers							
Poor	1	3.3	0	0.0	1	3.3	X^2_8=37.984
Satisfactory	2	6.7	0	0.0	1	3.3	*P=0.000*
Good	3	10.0	0	0.0	4	13.3	
Very good	8	26.7	9	30.0	24	80.0	
NA	16	53.3	21	70.0	0	0.0	

Frequency of public transport							
Unavailable	8	26.7	13	43.3	8	26.7	$X^2_{10}=13.024$
Once a week	2	6.7	8	26.7	5	16.7	***P=0.444***
Less than 2 hours	7	23.3	3	10.0	10	33.3	
2-4 hours	8	26.7	4	13.3	4	13.3	
5-7 hours	4	13.3	2	6.7	2	6.7	
8 hours and above	1	3.3	0	0.0	1	3.3	

N= 90, one-tailed, $p<0.05$

(Source: Field data collected by Researcher, Aug, 2005)

Key: NA-Not Applicable

The chi-square test showed a statistically significant relationship between the restrictive factors of distance, waiting time, fees charged at the health facility, cost of transport hired during labour and attitude of health workers, and the place of delivery. These factors again showed a highly significant correlation with the place of delivery. However, frequency of transport did not show any significant relationship with the place of delivery.

CHAPTER FIVE

DISCUSSION

5.1 INTRODUCTION:

The high maternal deaths in the developing countries have been attributed partly to unavailability of health care services and partly to the poor utilization of these services when they are available. The immediate causes of maternal mortality are similar for women all over the world: Postpartum hemorrhage, infection, toxaemia, obstructed labour and septic abortions. However, according to Figa' Talamanca (1996), these diagnostic categories conceal the underlying mechanisms and reasons for the deaths because there are other factors that may contribute to maternal deaths other than the obstetric factors.

5.2 BACKGROUND CHARACTERISTICS

5.2.1 Age:

The age of the mothers who answered the questions ranged from 15 – 39 years. The Chi-square test showed no statistically significant relationship between age and place of delivery at the Asunafo North District. This is in line with a study conducted by Rajendra et al, 2004, which noted that mother's age at marriage was not significant in determining the choice of place of delivery. Bour (2004), in his studies to examine the rural- urban disparity in the utilization of health facilities in Ghana with a case study between Kumasi Metropolis and Ahafo-Ano South District showed that the age was not a significant factor in determining the utilization.

Age was not a significant factor in the study because 81% of the 90 mothers were between the ages of 20 – 29. Out of this, 34.7% delivered at home, 33.3% delivered with the TBA and 32.0% delivered at the health facility and that does not show any significant difference among the different places of delivery.

In a study to determine the use of obstetric services in rural Nigeria, it was also found out that age of mothers was not significantly associated with the choice between home and institutional delivery (Nwakoby, 1994). However, a study conducted by Addai, 1998 put age among the factors that significantly affect the use of maternal health services in Ghana.

5.2.2 Monthly Income

According to the world Banks' economic indicator for rating poverty, a person is described as poor if she/he spends less than US $1 a day. According to the District Development Profile, 24% of the population live below the poverty line of ¢75,000 as monthly income. Of this approximately 60% are females.

The study indicated that 65.5% of mothers had a monthly income below ¢200,000. This means that there is low economic status. Even though the Chi-square test showed a significant association between the monthly income and the place of delivery, the bivariate analysis showed no significant correlation.

This is in conformity with a study conducted by Uyirworth et al. (1996), in South Africa, which indicated that lack of money was a significant factor in the use of obstetric services. The Ghana Demographic and Health Survey also shows that the place of delivery is significantly affected by the health quintile of women. Again low-income was considered a significant factor in determining the place of delivery in a study conducted by Al-Nahedh (1995) in Saudi Arabia.

5.2.3 Occupation

The district is a farming community with agriculture employing 70.1% of the labour force. The study confirmed this by indicating that almost 50% of the mothers were engaged in farming and out of that, 50% of the mothers delivered with the TBA. The chi-square showed no statistically significant relationship between the occupation and place of delivery. Surprisingly the second highest number to have utilized the health facility was

he unemployed group. This means that even though they were unemployed yet they might have been influenced by other factors such as proximity and time.

Also since most of the farmers were engaged in subsistence farming, they were also found in the low income group of below ¢200,000 therefore the Pearson correlation between occupation and monthly income showed a highly significant negative correlation (-0.424**).

According to Al-Nahedh, (1995), in a study conducted to look at factors affecting the choice of maternal and child health services in a rural area of Saudi Arabia, it was found that occupation was a significant factor in determining the choice of health services.

In another study conducted by Rajendra et al. (2004), to determine socio economic and physical distance to the maternity hospital as predictors for place of delivery, it was found out that despite high, odds radio in the bivariate analysis, the occupation of the mother was not found to be associated with the place of delivery, when adjusted for the distance from the maternity hospital. Again in the same study, husband's occupation was not statistically significant with the mothers' choice of place of delivery.

5.2.4 Marital Status

The study showed that 70% of mothers who delivered at the health facility were married compared to 36.7% who delivered at home. It was also realized that 60% of mothers who delivered at home were co-habiting. The chi-square test however, showed no significant relationship between the marital status and place of delivery. In the Akan culture, a man becomes more responsible after he has performed the necessary marital rites and paid the right bride price. When couples are co-habiting, it means the man has not yet performed the marital rites and as such he may be less committed to the relationship. In such a case, the man and the woman may or may not be living under the same roof, and the man is less responsible leaving the woman to fend for herself with a little or no support. It could therefore be explained that due to lack of support, mostly financial, greater percentage of women who are co-habiting are unable to go and deliver at the health facility.

The bivariate analysis gave a significant negative correlation between marital status and place of delivery (-0.283*).

The result is in line with a study conducted by Nwakoby BN. It was found out that marital status was not a significant factor in determining the pattern of maternal service utilization (Nwakoby, 1994)

However, a study conducted in Zimbabwe to determine the use of maternal care indicated that delivery at a location that did not conform to the existing guidelines was associated with being without a husband. (van den Heuvel, 1999) In another study to determine the factors influencing the use of maternal health care services in Ethiopia, Mekonnen and Mekonnen (2003), stated that marital status was found to be one of the independent factors influencing the use of maternal health care services.

5.2.5 Parity:

Parity is the number of children delivered including stillbirths, neonatal and perinatal mortalities. Research has shown that the first (Primi-gravida) and the second childbirths are often associated with delivery at the health facility due to fear of complications. However as the women become experienced and conversant with the techniques of child birth, they tend to deliver at home or with the TBA.

The study showed no statistically significant relationship between parity and place of delivery. However, the manual analysis of the birth order indicated that 48.9% of primi-gravida occurred at the health facility compared with 22.2%, which occurred with the TBA and 28.8% which occurred at home. From 2nd and 3rd birth orders, 70.9% occurred at home and TBA compared to 29.1%, which took place at the health facility. Again, the birth order after 6th birth also showed as much as 62.5% occurring at home alone compared to 25% at the health facility. This finding is supported by the 2003 Ghana Demographic and health survey (GSS, 2003).

In a study conducted by Rajendra et al. (2004), it was realized that multi-parity was associated with a double risk of home delivery. This is because it has been realized that

unfortunate experiences in hospital, quicker childbirth in the multi-parous or having had an uncomplicated first delivery might explain why some of the multi-parous deliver at home.

During the FGD one of the participants had this to say, *"I delivered my first child at the Komfo Anokye Teaching Hospital and I swore not to deliver at the hospital again because a nurse came with a cane to beat us in order to keep us silent. Even when the child is coming and you call her she will not mind you?"*

Similar findings have also been reported in another study conducted by Bolam et al, on factors affecting home delivery in Kathmandu Valley, Nepal in 1999.

5.2.6 Level of Education

Various studies conducted to assess the utilization of health care facilities have indicated mothers' education as one of the prime factors influencing the use of health care facilities.

In a study to determine the factors affecting the choice of maternal and child health services in a rural area of Saudi Arabia, it was shown that education of mothers was statistically significant with the choice of health services. (Al-Nahedh, 1995)

In other separate studies conducted by Nwakoby (1994); Rasheed and Khan (1990); Elo, (1992); van den Heuvel et al. (1999), Uyirwoth et al. (1996); Paul and Ramsey (2002); Bolam et al. (1998), and Addai (1998), they all confirmed that mothers' education had significant influence on the place of birth or the utilization of health facilities.

However, the result of this study showed no statistically significant relationship between mothers' level of education and the choice of place of birth. This is because even among those with no education, there was not much difference in their choice of place of birth. In a rural setting like the Asunafo North district, people are mostly influenced by culture and social pressure than the level of education. Again, basic education at the rural setting may not be significant in changing the behaviour of those who have had that education.

In a study conducted by Rajendra et al. (2004), it was realized that among the risk factors influencing home delivery, the poorly educated had a lower risk for home delivery. Low education was not associated with a high risk of home delivery within low amenity score stratum. But education was 8 times more influential only within the high amenity score stratum.

According to Bour (2004) in a study conducted to examine the rural-urban disparity in the utilization of health facilities, a case study of Kumasi Metropolis and the Ahafo Ano South district, it was realized that mothers' education made greater impact in the Kumasi Metropolis, which is an urban area than the Ahafo Ano South district, which is a rural setting.

5.2.7 Religion

The predominant religion is Christianity, which forms 85.6% of the 90 mothers who were interviewed. The chi-square test showed no statistically significant association between religion of mothers and the place of delivery.

This is because hardly would any one hear a Christian congregation embarking on health education in the rural setting. It is high time Christianity focuses as well on the physical well being of its members by promoting healthful practice and good living.

Because Christianity dominated over the other religions, the effect could not be realized. A study conducted in Ethiopia revealed that religion of mothers was a significant factor in determining the use of maternal health services. Nwakoby in his studies also realized that the probability of a Christian mother delivering at a health care institution was 2.3 times higher (Nwakoby, 1994). Addai (1998) also stated that religion is a significant factor in determining the use of maternal health services.

5.3 REASONS WHY WOMEN DELIVER AT HOME

The interviews conducted among the mothers, health personnel and during the FGD revealed numerous reasons why women deliver at home in the Asunafo North District. Among the factors, the most prominent ones are quick child birth 30.0%, transportation difficulty 23.6%, financial difficulty 14.5%, long distance to the health facility 7.2%, high cost of transport 5.5%, inability to recognize labour signs 3.6% and ability to deliver without help 3.6%. other factors are; family influence, refusal to attend ANC, allergic to hosp. scent, delay at home in order not to keep long at the hosp. wrong attitude on the part of mothers since they refuse to take advise, and also some women may feel shy of someone seeing their nakedness. All these factors contributed 2.0% each.

The finding is supported by several literatures. For example, a cross sectional cluster survey conducted in South Africa to determine obstetric service utilization gave the reasons for home delivery as lack of access to health services 19%, lack of money to pay for services 15.2%, negative staff attitude 9.8% and precipitate labour 7.2%, (Uyirworth et al, 1996). Bolam et al. (1998) also mentioned precipitate labour or lack of transport as part of the reasons for home deliveries.

In another study conducted in Nigeria, it was realized that among the factors that cause non-attendance of the available services were high cost of drugs 29%, high service charges 19%, easy access to traditional healers 39%, difficulty in getting transport to a health facility 30%, and the unfriendly attitude of the health workers 3.6%.

Concerning transportation difficulty, a participant at the FGD had this to say, *"it is very difficult to get transport to Goaso when in labour especially during the night. This is because no car stays here for the night all of them go to Goaso and sleep there. Again, a driver may refuse to take you and say, I don't have fuel, when it had just rained because when it rains, the road is not good".*

One of the mothers who delivered at home also had this to say concerning transportation difficulty, *"where I am staying, a car does not come there, so when I was in labour, I was*

walking to the next town where I could get car, so after I had walked for sometime, I could not go further therefore I delivered on the way".

5.4 REASONS WHY WOMEN DELIVER WITH THE TBA.

In the study the most prominent factors mentioned by mothers and health personnel as reasons for delivering with the TBA are; competency 17.3%, difficulty in getting transport 26.0%, quick childbirth 13.8%, low fees charged 5.2%, herbal treatment 5.2%, long distance to the health facility 5.2%, good care 5.2%, financial difficulty 3.4, high cost of transport 3.4%, and spiritual protection 3.4%. Other factors mentioned were; fear of surgical operation, one's own decision, prefer to deliver on the floor, TBAs are readily available, high fees charged at the health facility, fear of delivering alone, and wrong attitude of mothers. Each of these contributed 1.7%. A few number of midwives who were interviewed believe that some women have wrong attitude in that they will not take any advice that will be given to them.

This result is in line with the study carried out by Imogie (2001). The study revealed that among the reasons given by the FGD as why some women do patronize TBAs are high and sometimes illegal hospital fees, the distance to the hospital or maternity home, lack of good roads and lack of qualified personnel in such pubic facilities.

Martey et al. (1989) also found out that some of the inhibiting factors of usage of modern health services included: prohibitive fees, illegal fees and bribes, irregular transport and negative staff attitudes.

5.5 REASONS WHY WOMEN DELIVER AT THE HEALTH FACILITY

Childbirth is a risk-producing event and every woman who goes to the "war" of labour literally puts her life and/or that of her baby on the altar of death. Therefore the need for skilled personnel to be present during labour cannot be overemphasized. In the developed world where maternal mortality ratios are in single digits, the heights were achieved through supervised delivery with the presence of a skilled birth attendant and improved socio-economic and demographic conditions.

In spite of the many factors that militate against the use of health facility by women for delivery, some women still beat the odds and manage to use these health facilities. When asked, several reasons were given. But the prominent among these factors are; ability to handle complications 53.1%, competency of health personnel 7.7%, ANC education 6.2%, no body to assist delivery at home 6.2%, prefer to deliver at health facility 4.7%, good medical treatment to baby 4.7%, primi-gravida 3.1% and good attitude of health workers 3.1%. Other factors were; avoidance of sacrificing for a river god if she delivered at home, presence of varicose veins, family influence, good facilities at the hospistal, to have ceasarian section, you will not be allowed to push when the time is not due, and blood transfusion, which contributed 1.6% each.

Even the FGD in spite of their critical view about attitude of the health workers admitted that the health facility is the best place to deliver. This they said was due to the fact that the health personnel are able to handle complications, and give good medical treatment to both mother and child. When the mothers were asked to select the best facility for delivery irrespective of where they delivered, 86.7% selected the health facility.

This is in conformity with a study conducted by Stekelenburg et al. (2004), who found that even though 96% of respondents preferred to deliver in a clinic only 54% actually did.

This aspect of our study is very important in that it gives the health personnel the opportunity to identify what the community perceives as good about them so that they could improve upon such areas. In a study conducted by Vibhavendra et al. (2003), a hierarchical arrangement of the service related factors affecting the utilization of malaria services both in public and private sectors revealed that good medicine had the highest score followed by gets relief, then good doctor and finally good behaviour. Again, in another study on utilization of health facilities and trained birth attendants, it was realized that delivery complications was the most significant factor determining the use of modern heath care resources for childbirth, and was followed by prenatal education (Paul and Ramsey, 2002).

5.6 FACTORS AFFECTING SUPERVISED DELIVERY

The factors affecting supervised delivery have been grouped into three. They are enabling factors, predisposing factors and restrictive factors.

5.6.1 Predisposing factors:

The Chi-square test showed no statistically significant relationship between the predisposing factors of age, parity, level of education, mothers' religion, marital status and the choice of place of delivery. This means that, these factors are not determinants of place of delivery by mothers in the Asunafo North District of the Brong Ahafo Region. However, this result contradicts with the studies conducted by Bolam et al. (2002); Esimai et al. (2002); and Chakraborty et al. (2003), whose separate results revealed that factors like age, parity, religion and level of education were significant in determining the choice of place of delivery. Mekonnen and Mekonnen (2003) stated that the independent factors influencing the use of maternal health care services included education of mothers, marital status, place of residence, parity, and religion.

Other studies also confirm the results of this study. For example the studies conducted by Nwakoby (1994); Elo (1992); van den Heuvel et al. (1999); Celik and Hotchkiss (2000) and Addai (1998), also revealed that the predisposing factors of age, marital status, parity and religion were not significant in determining the place of delivery.

5.6.2 Enabling factors

The Chi-square test showed a significant relationship between the enabling factor of monthly income and the place of delivery but showed no significant relationship between mothers' occupation and the place of delivery.

In the rural settings of the developing countries, poverty levels are high. The ability to afford health care is greatly influenced by the income levels. During the study, it was realized that majority of the women were peasant farmers. They send their farm produce

to the market on market days. It is the revenue from the sale of such produce that they live on. Unfortunately, the farm produce are not available all the time, since there are off seasons. During these off seasons when no produce can be found in the farms, conditions are really difficult for them. In most cases, those whose husbands are working in cocoa farms may be working as hired labourers and are paid during the cocoa season. Others too who have their own cocoa farms might have just started and have no produce yet. So generally, about 41% had income below ¢100,000 per month.

This was confirmed by the District Development Profile, which revealed that the average annual income in the district is ¢900,000. However, it was quick to add that even though most people do not get physical cash, they do not go hungry because they are able to get produce from their farms. Of course farm produce are not received as a means of payment for transport or hospital charges in the district, which means that even though one may have farm produce but may not have money if she did not get a good market for the produce, and as such will find it difficult to pay for transport or hospital charges in case of labour.

Bolam et al. (1998) and Addai (1998), separate studies results agree with the result of this study. Rajendra et al. (2004), also declared in a study that mothers' occupation and lower yearly income are statistically associated with a higher prevalence proportion of home delivery. In a Nigerian study, 41% of mothers who did not deliver in hospital explained that they could not afford the hospital bill (Fajemilehin, 1991).

5.6.3 Restrictive factors

The restrictive factors of distance to the health facility, waiting time at the health facility, cost of fees charged, cost of hired transport during labour and attitude of health workers showed a significant association with the place of delivery.

5.6.3.1 Distance

This study showed that 67.7% of mothers who were living below 2km distance to the health facility delivered at the health facility compared with 84% of mothers who lived 5-

7km from the health facility, who delivered at home and with the TBA. No body who lived 8km and above delivered at the health facility.

This finding is consistent with a study conducted by Esimai (2002). The study revealed that distance from approved health facilities more than 5km was significantly influenced by choice of place of delivery. In a study to determine household characteristics affecting where mothers deliver in rural Kenya, it was realized that distance to the nearest maternity bed was the variable having the highest influence on delivery (Hodgkin, 1996). In a Nepal study, it was reported that distance to the maternity hospital was more important in maternity care than other general curative health services (Rajandra, 2004).

In this study, the bivariate analysis showed a highly significant negative correlation between distance and place of delivery (-0.387**)

This implies that as the distance to the health facility increases, the probability of delivering at the health facility decreases. In an economic study from the Philippines, it was reported that the elasticity coefficient suggests that a 1% decrease in the mean travel time to modern public facilities will increase the probability of choosing that option for infant delivery by 1.2 % (Schwartz et al., 1988).

During the FGD, the general consensus was that it was difficult getting a vehicle during labour most especially at night because no vehicle stays in the town during the night all of them go to the" big towns". One of the participants had this to say, *"When you are in labour, you may not get a car to take you to Goaso. In most cases, by the time my husband goes for a car, and comes, I might have already delivered"*

5.6.3.2 Waiting time

Research has shown that the time one spends at the health facility before being attended to by health personnel significantly influences one's choice of health care. In this study it was shown that 96.7% of mothers who delivered at the health facility were immediately

attended to. The bivariate analysis showed a highly significantly negative correlation between waiting time and the place of delivery (-0.445**)

This means that as the waiting time at the health facility increases, there will be a decrease in the use of the health facility for delivery. Long waiting period at the health facility contributed as much as 7.8% of the factors responsible for poor utilization of the primary health care services in rural Nigeria (Katung, 2001). In another study, waiting period was detected to be a factor in determining utilization of private and public health services (Vabhavendra et al., 2003). All these are consistent with the study.

5.6.3.3 Cost of fees charged

In this study, the Chi-square test showed a significant association between fees charged at the various facilities and the place of delivery. It was realized that more people delivered at home where no fees was charged. Actually, this variable was considered because most of the mother's who were interviewed had already delivered before the delivery exemption policy took effect in the district. It was good this variable was considered so that it could be found out whether the exemption policy in the district was going to be of any benefit as to improving supervised delivery. Some midwives that were interviewed admitted that since the exemption policy took effect, the number of women who come to deliver at the health facility has increased.

When the mothers were asked during the interviews whether they were aware of the delivery exemption policy, 86.7%, 83.3% and 96.7% respectively of those who delivered at home, TBA and health facility were aware.

It is important that this exemption policy has been put in place to relieve women from the problem of fees paid at the hospital. This is because numerous research studies have shown that fees charged at the health facility significantly influence the choice of place of delivery. (Hodgkin, 1996; Celik and Hotchkiss, 2000; Imogie, 2001; Fajemilehin, 1991)

5.6.3.4 Cost of hired transport

The study showed a significant association between the cost of hired transport during labour and the place of delivery. It was realized that women who had to pay below ¢20,000 delivered at the health facility (43.3%) compared to those who had to pay above ¢60,000, in which (81.5%) delivered at home and with the TBA.

In deed, because of long distance and unavailability of transport in most places, the cost of hired transport is very high. There was a situation where a driver charged ¢100,000, when asked to take the RCH team to a nearby village of about 3km. Also, during the FGD, it came to light that some of the drivers charged high when they had to convey a person to the hospital. A participant had this to say, *"because of the bad nature of the roads, the drivers refuse to move their cars even when you are in labour. In addition they may also charge higher. The government should make sure that the road is good and also they should get vehicle so that any one who is going to deliver can be sent to the health facility"*.

The bivariate analysis showed a highly significant negative correlation between the cost of hired transport and the place of delivery (-0.294**). This means that those who delivered at the health facility may have had to pay less for their transport cost.

5.6.3.5 Attitude of health workers

The study showed a significant association between the attitude of the health workers and the place of delivery. This is in line with a study conducted by Esimai et al., 2002. It was found out that attitude of health workers was among the factors that significantly influenced the choice of place of delivery. A study in northern Transvaal on obstetric service utilization revealed that negative staff attitude contributed 9.8% of the reasons for home delivery (Uyirwoth, 1996). In another study on socio-economic factors responsible for poor utilization of the primary health care in rural Nigeria, Katung found out that unfriendly attitude of the health workers contributed 3.6% of the major factors that cause non-attendance (Katung, 2001).

The data analyzed from the health personnel questionnaire also showed significant relationship between the health personnel and the attitude of health workers.

Surprisingly, contrary to most of the responses given by the mothers during the questionnaire administration about the attitude of the health workers; everybody at the focus group discussion lamented pathetically about the poor attitude of the health personnel at the health facilities (NB: it was realized that the comments were more on experience outside the district than within the district).

Some of the comments went this way, "*At the health facility, they shout at us, they quarrel with us, they beat us and molest us*".
"*I delivered my first born at Komfo Anokye Teaching Hospital (KATH). The way I was treated, I swore not to deliver at the health facility again. One nurse brought Cane to beat us in order to keep us in silence*". At this point emotions were heightened.

5.6.4 Opinion Factors

Apart from the major factors that were considered the study tried to find out the importance of some other factors in order to determine if they could have any impact on the place of delivery. These factors which include; the relevance of waiting shelter, the availability of waiting shelter, and comfortability at the health facility proved significant, whiles cultural/religious beliefs that hinder the use of health facility, and permission to deliver at the health facility were not statistically significant.

In answering the questions on waiting shelter and comfortability, some of the women were not eligible to answer (NA) because they had never delivered before at the health facility and that constituted about 40%. The study found out that 98.9% of mothers did not have any cultural/religious beliefs that hinder the use of the health facility. Likewise, 93.3% did not have to ask for permission from husband or relative before choosing the health facility as a place to deliver.

During the FGD, some opinions were expressed based on the questions asked (appendix 6). Below are some of the questions and the answers that were given.

Where Should One Deliver?

There were dissenting views as to where one should deliver. Some think it is okay to deliver with the TBA since the TBA can refer you when there is complication and they can also treat other ailments apart from taking care of the delivery. Others also think it is better to go to the health facility. However even those who said it was okay to deliver with the TBA cautioned that one should consider the level of competency of the TBA before deciding to deliver with her. One of the participants (participant No.1 appendix 2) had this to say,

"If one delivers at the health facility, I like it because it is modern. Now the government wants us to deliver at the health facility. If you deliver at the health facility it is free. The child will be registered with the birth and death center and be given a birth certificate. The child will be given better treatment. Even though it is true that some nurses maltreat others, I think that should be considered as individual differences".

Why Do Some People Deliver at The Health Facility?

Some people encounter complications during delivery so they are afraid to deliver at home. Also if you do not have a competent person (TBA) to deliver you at home, then you have to go the health facility. (Participant No.4 appendix 2)

Why Do Some Women Attend ANC but Deliver at Home?

There were various reasons given which include quick childbirth, preference of the person and the inability of the health personnel to give the exact time that the women will deliver. One of the participants had this to say, *"Somebody was told that she will deliver in a week's time but she delivered immediately she reached home from the hospital".* (Participant No.6 appendix 2)

Some also think that the women go for the ANC not with the intension of delivering at the health facility but should there be any complication and she is sent to the hospital, she will not be driven away.

How Can We Improve Supervised Delivery

The following suggestions were given for improving the supervised delivery.

a). that the midwives should improve their human relations since people patronize a facility based on the recommendations given by other women as to how they were treated

b). the community needs to be educated as to the importance of delivering at the health facility.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 CONCLUSION

The Brong Ahafo Regional Director of Health Services Alhaj Dr. Mohammed Ibn Ibrahim has declared a zero maternal mortality in the region. Therefore, the percentage supervised delivery of 59% with a maternal mortality ratio of 123/100,000 live births in the district give a good reason to worry.

6.1.1 Reasons for Low Supervised Delivery

The study found out reasons why mothers delivered at home, reasons why mothers deliver with the TBA and the reasons why mothers deliver at the health facility.

It was realized that mothers delivered at home mostly because of quick child birth 30.0%, transportation difficulty 23.6%, financial difficulty 14.5%, long distance to the health facility 7.2%, high cost of transport 5.5%, inability to recognize labour signs 3.6% and ability to deliver without help 3.6%. Other factors are; family influence, refusal to attend ANC, allergic to hosp. scent, delay at home in order not to keep long at the hosp, wrong attitude on the part of mothers since they refuse to take advise, and also some women may feel shy of someone seeing their nakedness. All these factors contributed 2.0% each.

The reasons why mothers delivered with the TBA were; competency 17.3%, difficulty in getting transport 26.0%, quick childbirth 13.8%, low fees charged 5.2%, herbal treatment 5.2%, long distance to the health facility 5.2%, good care 5.2%, financial difficulty 3.4, high cost of transport 3.4%, and spiritual protection 3.4%. Other factors mentioned were; fear of surgical operation, one's own decision, prefer to deliver on the floor, TBAs are readily available, high fees charged at the health facility, fear of delivering alone, and wrong attitude of mothers. Each of these contributed 1.7%. In fact, most mothers desired

to deliver at the health facility (86.7%) but some ended up delivering at home or with the TBA because they are not able to get transport quickly.

The reasons given for delivering at the health facility were; ability to handle complications 53.1%, competency of health personnel 7.7%, ANC education 6.2%, no body to assist delivery at home 6.2%, prefer to deliver at health facility 4.7%, good medical treatment to baby 4.7%, primi-gravida 3.1% and good attitude of health workers 3.1%. Other factors were; avoidance of sacrificing for a river god if she delivered at home, presence of varicose veins, family influence, good facilities at the hospital, to have caesarean section, you will not be allowed to push when the time is not due, and blood transfusion, which contributed 1.6% each.

The common complications that were mentioned were, post-partum haemorrhage, placenta previa, and obstructed labour. The treatments were also in the form of injections, drugs, and intravenous infusions

6.1.2 Predisposing Factors

None of the predisposing factors of age, education, religion, marital status and parity showed any statistical association with the place of delivery. This support the null hypothesis, that there is no association between the predisposing factors and the place of delivery. The null hypothesis is then not rejected but the alternate hypothesis is rejected.

6.1.3 Enabling Factors

Income level of mothers was statistically significant with the place of delivery but occupation of mothers was not significant. This means that the null hypothesis may be said to be true for occupation, but the alternate hypothesis is true for the income level.

6.1.4 Restrictive Factors

With the exception of frequency of transport, all the restrictive factors of distance, fees charged, attitude of health workers, waiting time and the cost of transport were significantly associated with the place of delivery. This confirms that the alternate

hypothesis is true for the restrictive factors except frequency of transport, and the null hypothesis rejected.

It is therefore imperative that attention would be focused on income levels of mothers since it affects their ability to afford transport and hospital charges; distance, waiting time and attitude of health workers should also be given adequate attention.

6.2 RECOMMENDATIONS

RHMT

- In the Asunafo District, neither the north nor the south has ambulance. It is high time the region makes it a priority to provide ambulance for the district. As a short term measure therefore, the region should provide ambulance to each of the sub-districts

- Even though nothing was said about communication system in the project, yet I believe that if there is no communication between the remote communities and the health centers, the ambulance system will not be efficient. There is therefore the need for the region to consider providing some communication networks to enhance the performance of the ambulance system.

- Some part of the district has the areeba communication network so the region should support the district in acquiring a Motorola communication system to cover the places where the areeba network cannot reach.

DHMT

- Generally, the attitude of midwives in the district was considered better compared to other health workers, and they attend promptly to women in labour. However, in

specific places like Ayomso and Asumura where complains were received about the attitude of some midwives should be critically looked at.

- As a short-term measure, the necessary training and supervision should be provided to those midwives in the above-mentioned places. If all efforts to improve their attitude fail, I suggest they should be transferred because they shall end up doing the health directorate and the entire district much harm than good. Frequent orientation should also be given to all the other midwives in order to see to it that their relationship with mothers and their relatives during labour is good all the time.

- Since ANC attendance is generally good in the district, the health directorate should take advantage of it and intensify education during the ANC not only on how women should keep themselves healthy but also to help them plan and make arrangements for delivery. The midwives should develop warm relationship with pregnant women prior to delivery.

- In order to solve the issue of quick labour, the expectant mothers should be given enough education on the signs of labour during their antenatal visits and even during community durbars so that the rest of the community could also learn.
- With time, as the number of midwives posted to the district increases, the district health directorate can establish community-based delivery units to be run by midwives. This could help reduce unplanned home deliveries.

- Instead of training more TBAs, the community health nurses in the CHPS compounds could be given midwifery training so that they could rather assist.

D/A, DHMT, Community and Other Organizations

- The District Health Directorate should work in collaboration with The District Assembly, The Community Leaders, The GPRTU, NGOs, Religious groups and other associations to deal with the problem of transportation. Funds could be raised

to procure vehicles for the various health centers and the hospital. The GPRTU can also assist by allowing some vehicles to stay in villages during the evenings. The GPRTU should give priority to women who are in labour. An agreement could be reached between the GPRTU and the other stakeholders so that when a pregnant woman is standing along the road with a specially made card, she would be given priority and treated as emergency situation by the drivers and the passengers.

- Because of the exemption policy, the problem of delivering at home due to lack of money is solved. However, if transport charges to the health facility during labour are high, it will still serve as a hindrance to the use of the health facility. It is therefore imperative that the GPRTU considerably reduces the fares charged when taking a woman to the health center for delivery.
- The assembly should also improve the road network.
- Provision of a waiting shelter at the health facilities could go a long way to assist such individuals, as indicated by the result on the relevance of a waiting shelter. Therefore the collaborative body could help put up such waiting shelters in places where there are health care facilities
- NGOs that are into micro-project financing and capacity building should help introduce the women into soap and cream making as well as tie and dye and batik making. This would help to empower them financially especially during the off farming seasons.

Individual and Family

- In situations where a pregnant woman may be leaving in a remote area, the family should make arrangements to bring her to stay in a place where there is a health care facility prior to the time of delivery.

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APPENDICES

Appendix 1

Bivariate Correlation for all variables

	PD	AGE	ATT	BE	BEF	COM	COT	DIS	EXE	FEES	EDU	INC	MAST	OCC	PAR	PER	FRE	REL	WSH
Place of delivery	1.00																		
Age	0.34	1.00																	
Attitude	-0.231*	-0.44	1.00																
Beliefs	-0.130	-0.39	0.024	1.00															
Best facility	0.057	0.075	-0.052	0.430**	1.00														
Comfortable	-0.451**	0.017	0.612**	0.109	0.021	1.00													
Cost of hired transport	-0.341**	0.110	0.128	-0.016	0.060	0.252*	1.00												
Distance	-0.387**	0.207	0.259*	-0.003	-0.085	0.351**	0.403**	1.00											
Exemption	-.0130	0.129	0.240*	0.037	0.115	0.277**	0.141	0.219*	1.00										
Fees charged	0.451**	0.077	-0.169	-0.160	-0.002	-0.191	-0.093	-0214*	-0.286**	1.00									
Education	0.117	-0.047	-0.147	0.1200	0.131	-0.062	-0.136	-0.084	-0.156	-0.039	1.00								
Income	0.011	0.242*	0.043	0.100	-0.023	-0.064	-0.034	-0.061	-0.190	0.132	0.076	1.00							
Marital status	-0.283*	-0.313**	-0.017	0.087	0.079	0.045	0.047	-0.155	-0.077	-0.189	0.294**	-0.264*	1.00						
Occupation	-0.010	-0.327**	-0.004	0.060	-0.016	0.045	-0.027	-0.022	-0.050	-0.199	0.186	-0.424**	-0.309**	1.00					
Parity	-0.014	0.467**	0.090	-0.018	0.075	-0.006	0.126	0.063	0.060	0.063	-0.316**	0.291**	0.355**	-0.366**	1.00				
Permission	-0.109	0.127	0.161	0.397**	0.248*	0.276**	0.146	0.204	0.094	-0.293**	0.072	0.107	0.040	-0.069	-0.045	1.00			
Frequency	-0.105	-0.001	-0.018	0.120	0.098	-0.134	-0.105	-0.044	-0.127	-0.140	0.147	0.054	0.312**	0.175	-0.253*	0.083	1.00		
Religion	-0.051	-0.264*	0.061	0.037	0.084	-0.54	0.000	-0.015	-0.059	-0.018	-0.077	-0.198	0.170	0.254*	-0.173	-0.155	0.038	1.00	
Waiting shelter	-0.370**	0.054	0.682**	0.092	0.052	0.812**	0.197	0.285**	0.209*	-0.147	-0.203	0.013	0.081	0.016	0.030	0.235*	-0.023	0.018	1.00
Waiting time	-0.445**	-0.012	0.733**	0.090	-0.043	0.886**	0.164	0.380**	0.277**	-0.248**	-0.150	-0.020	0.018	0.036	-0.062	0.229*	-0.074	-0.004	0.873**

(Two-tailed ** significant at 0.01, * significant at 0.05)

Appendix 2. Background Characteristics of FGD Members

Participant Number	Community/ Place of residence	Sex	Occupation	Level of Education	No. of children	Length of stay in community.	Age	Marital status	Religion	Ethnicity	Role in community
1	Ayomso	Male	Business	MDC	7	43 Years	43	Married	Christianity	Asante	Assemblyman
2	Ayomso	Female	Unemployed	JSS	1	19year	19	Single	Christianity	Asante	None
3	Kumasi	Female	Unemployed	None	10				Christianity	Asante	None
4	Ayomso	Female	Farming	MDC	6	16 Years	33	Married	Christianity	Asante	None
5	Ayomso	Female	Farming	None	8	16	40	Married	Islam	Asante	None
6	Ayomso	Male	Farming	Primary	9	40 Years	58	Married	Christianity	Adaa	None
7	Ayomso	Male	Farming	Primary	7	40	52	Married	Islam	Fante	Fire Volunteer
8	Ayomso	Female	Trading	Primary	5	26	31	Married	Islam	Mose	Fire Volunteer
9	Ayomso	Female	TBA	MDC	6	20	38	Married	Christianity	Asante	TBA
10	Ayomso	Female	Trading	JSS	1	25	25	Married	Christianity	Krobo	None

Appendix 3 Background Characteristics of Health Personnel

Profession	facility	Age	Sex	Marital status	Religion	No. of year in practice	No. of deliveries in a year	Encountered complication before
TBA	TBA at Asukese	50	Female	Married	Christianity	Between 5-10 years	Between 10-20 deliveries	Yes
TBA	TBA at Bediakokrom	54	Female	Married	Christianity	Between 5-10 years	Between 20-50 deliveries	Yes
TBA	TBA at Ayomsu	32	Female	Married	Christianity	Between 10-20 years	More than 50 deliveries	Yes
TBA	TBA at Nyamebekyere	62	Female	Married	Christianity	More than 20 years	Less than 10 deliveries	No
TBA	TBA at Ampenkro	65	Female	Single	Traditional	More than 20 years	More than 50 deliveries	Yes
Midwife	Asumura Rural Clinic	52	Female	Divorced	Christianity	More than 20 years	More than 50 deliveries	Yes
Midwife	Fawohoyeden Rural Clinic	60	Female	Widowed	Christianity	More than 20 years	More than 50 deliveries	Yes
Midwife	Dankwa Maternity Home	54	Female	Married	Christianity	More than 20 years	More than 50 deliveries	Yes
Midwife	Goaso District Hospital	40	Female	Married	Christianity	Less than 5 years	Between 20-50 deliveries	Yes
Midwife	Kwapong Rural Clinic	47	Female	Married	Christianity	Between 10-20 years	More than 50 deliveries	Yes

Appendix 4

No. .....

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF MEDICAL SCIENCES

DEPARTMENT OF COMMUNITY HEALTH

QUESTIONNAIRE FOR MOTHERS
ON LOW SUPERVISED DELIVERY AT THE ASUNAFO NORTH DISTRICT.

INTRODUCTION AND CONSENT

Hello, I am Francis Asante a student pursuing a Msc. Programme in health education and promotion at the department of community health, KNUST, Kumasi. I am carrying out a research on supervised delivery in order to help improve maternal health care in the district. Your help is being sought in this research. I would be grateful if you could answer the questionnaire below

All information provided will be treated very confidential. You may decline to answer any individual question or all the questions. This exercise may take between 5 to 10 minutes.

At this time, do you want to ask me anything about the study? May I begin the interview now?
Thank you.

Signature of interviewer----------Date----------

BACKGROUND INFORMATION

Circle the letter in front of the option you will choose

1. PLACE OF RESIDENCE .....
2. Place of delivery.....
3. AGE: What is your estimated age?
    a. below 15-19 years
    b. between 20 – 24 years
    c. between 25-29 years
    d. between 30-34 years
    e. between 35-39
    f. between 40-44
    g. 45 and above
4. SEX
    a. male b. female
5. MARITAL STATUS
    a. married b. single c. divorced d. widow e. co-habiting

6. Religion Ethnicity.....
   a. Christianity
   b. Islam
   c. Traditional
   d. Others (specify).....

SOCIO-DEMOGRAPHIC INFORMATION

7. What is your level of formal education?
   a. No formal education
   b. Basic education (primary/middle sch./J.S.S)
   c. Secondary education
   d. Tertiary education
8. What is your main source of income?
   a. Trading
   b. Farming
   c. Paid job
   d. Self employment
   e. Unemployed
   f. Others (specify).....
9. What is your monthly income in Ghanaian Cedis?
   a. below ¢100,000
   b. between ¢100,000-200,000
   c. between ¢201,000- 300,000
   d. between ¢301,000 – 400,000
   e. above ¢400,000

SOCIO-CULTURAL & HEALTH INFORMATION

10. How many children have you delivered? .....
11. Which of the births took place at the following facilities?
    a. Home .....
    b. TBA.....
    c. Health facility (gov't, private, mission).....
12. What is the estimated distance from your home to the health facility?
    a. less than 2km
    b. between 2km-4km
    c. between 5km-7km
    d. 8km and above
13. How easily can you get access to transport when going to deliver?
    a. Is private transport accessible?
       (i) not at all
       (ii) some times
       (iii) most of the time
       (iv) all the time
    b. How frequent does the public transport come to this place?

(i) unavailable
(ii) once a week
(iii) less than every two hours
(iv) between 2 – 4 hours
(v) between 5 – 7 hours
(vi) 8 hours and above

14. What is the cost of transportation to the health facility in case of labour?
    a. less than 20,000
    b. between 20,000 – 40,000
    c. between 41,000 – 60,000
    d. greater than 60,000
15. What is the amount of money spent at the health facility, officially and unofficially during delivery?

    a. no fees paid
    b. below ¢50,000
    c. between ¢50,000 – 100,000
    d. between ¢100,000 – 150,000
    e. between ¢150,000- 200,000
    f. above ¢ 200,000
16. What is the amount of money spent when you deliver at home?
    a. no fees paid
    b below ¢50,000
    c. between ¢50,000 – 100,000
    d. between ¢100,000 – 150,000
    e. between ¢150,000- 200,000
    f. above ¢ 200,000
17. What is the amount of money spent when you deliver with the TBA?
    a. no fees paid
    b below ¢50,000
    c. between ¢50,000 – 100,000
    d. between ¢100,000 – 150,000
    e. between ¢150,000- 200,000
    f. above ¢ 200,000
18. Are you aware of the exemption policy for delivery at the health facility?
    a. yes b. no
19. How long do you have to wait before you are attended to during labour?
    a. immediately
    b. between 1 – 2 hours
    c. between 2 – 3 hours
    d. more than 3 hours
    e. NA
20. What can you say about the attitude of the health workers?
    a) poor
    b) satisfactory
    c) good

d) very good

21. Do you feel comfortable in delivering in an open space at the health facility and with people all over the place?

a. yes b. no c. NA

22. If no, what do you think should be done?.....

23. Do you think it is relevant to have a waiting shelter at the health facility where relatives who come from long distances will stay and wait for the woman who is to deliver to be discharged?

a. yes b. no c. NA

24. Do you have any cultural and / or religious belief(s)/practice(s) that discourage you from delivering at the health facility?

a. yes b. no

If yes specify .....

25. Do you need permission from your husband or relative before going to health facility to deliver so that if the person refuses to give you permission you will not be able to go?

a. yes b. no

26. Which of these facilities do you think it is best place to deliver and why? Give reasons.

a. Home

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b. TBA

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c. Health facility

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FACTORS AFFECTING PLACE OF DELIVERY

MOTHERS WHO DELIVERED AT HOME

27. What are your reasons for delivering at home?

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28. What are your reasons for not delivering at the health facility?

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29. What are your reasons for not delivering with the TBA?

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MOTHERS WHO DELIVERED AT THE HEALTH FACILITY

30. What are your reasons for delivering at the health facility?

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31. What are your reasons for not delivering at home?

32. What are your reasons for not delivering with the TBA?

MOTHERS WHO DELIVERED WITH THE TBA

33. What are your reasons for delivering with the TBA?

34. What are your reasons for not delivering at the health facility?

35. What are your reasons for not delivering at home?

Thank you for your time and patience. God bless you!

Appendix 5

No. .....

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF MEDICAL SCIENCES

DEPARTMENT OF COMMUNITY HEALTH

QUESTIONNAIRE FOR HEALTH PERSONNEL
ON LOW SUPERVISED DELIVERY AT THE ASUNAFO NORTH DISTRICT.

INTRODUCTION AND CONSENT

Hello, I am Francis Asante a student pursuing a Msc. Programme in health education and promotion at the department of community health, KNUST, Kumasi. I am carrying out a research on supervised delivery in order to help improve maternal health care in the district. Your help is being sought in this research. I would be grateful if you could answer the questionnaire below

All information provided will be treated very confidential. You may decline to answer any individual question or all the questions. This exercise may take between 5 to 10 minutes.

At this time, do you want to ask me anything about the study? May I begin the interview now?
Thank you.

Signature of interviewer----------Date----------

BACKGROUND INFORMATION
Circle the letter in front of the option you will choose

1. FACILITY.....
2. PROFESSION .....
3. AGE: .....
4. SEX : a. male b. female
5. MARITAL STATUS
   a. married b. single c. divorced d. widow e. co-habiting
6. Religion
   a. Christianity
   b. Islam
   c. Traditional
   d. Others (specify).....
7. How long have you been in practice?
   a. less than 5 years
   b. between 5 - 10 years
   c. between 10 – 20 years

d. more than 20 years

8. On average how many women do you personally overseen their delivery in a year?
   a. less than 10 women
   b. between 10 – 20 women
   c. between 20 – 50 women
   d. more than 50 women
9. Have you ever encountered a woman who had complication during and /or after delivery?
   a. yes b. no
10. If yes what did you do?
   a. provided treatment
   b. b. called for assistance
   c. referred to a higher level of care
   d. others
   e. NA
11. Did the woman eventually die?
   a. yes b. no
12. What do you think was the cause of death?
   a. delay in deciding to come to the facility by the mother
   b. delay in referring to the next level of care
   c. lack of drug and equipment for treatment at the facility
   d. Others (specify) .....
13. Has any woman died in your hands during delivery?
   a. yes b. no
14. If yes what did you do? .....
15. How much does a woman spend for delivering at your facility
   a. no fees collected
   b below ¢50,000
   c. between ¢50,000 – 100,000
   d. between ¢100,000 – 150,000
   e. between ¢150,000- 200,000
   f. above ¢ 200,000
16. How long does a woman have to wait before she is attended to when in labour?
   a. immediately
   b. between 1 – 2 hours
   c. between 2 – 3 hours
   d. more than 3 hours
17. Do you have enough beds to accommodate all who come to deliver?
   a. yes b. no
18. If no, what do you do?
   a. referred to higher care
   b. allow them to sleep on the floor
   c. Others (specify) .....
19. Do clients complain when they are allowed to sleep on the floor or are referred?
   a. yes b. no

20. In your opinion what can you say about the attitude of health personnel in your facility towards clients and / or their relatives?

a. very poor
b. poor
c. satisfactory
d. good
e. very good

21. Where in your facility do women deliver?

a. a large room with an open space and no partitions
b. a large room with an open space with screens as partitions.
c. a large room which has been partitioned with plywood into smaller rooms
d. a special delivery room which has concrete wall and privacy is high

22. If your answer is any of the above options a, b, and c. what do you think is the level of satisfaction of mothers who come to deliver?

a. not satisfied
b. somewhat satisfied
c. satisfied
d. very satisfied.

23. Do women make any complains (officially and / or unofficially) after delivering at your facility?

a. yes b. no

24. If yes state.....

25. Does your facility has a waiting shelter for the relatives of a woman who have come from a far distance and is in need of accommodation?

a. yes b. no

26. If no, in your opinion do you think it is relevant to have such a facility?

a. yes b. no

27. What do you think are the reasons why women deliver at home

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28. What do you think are the reasons why women deliver with the TBA?

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29. What do you think are the reasons why women deliver at the health facility

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30. In your opinion what are the reasons for the low percentage of supervised delivery in the district

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Thank you for your time and patience. God bless you!

Appendix 6

DATA COLLECTION TOOLS

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, SCHOOL OF MEDICAL SCIENCE. DEPARTMENT OF COMMUNITY HEALTH.

FACTORS INFLUENCING LOW SUPERVISED DELIVERY IN THE ASUNAFO NORTH DISTRICT.

FOCUS GROUP DISCUSSION GUIDE WITH MOTHERS, FATHERS, OPINION LEADERS, AND HEALTH PERSONNEL.

Target Group: (CBS volunteers, mothers, fathers, queen mother, religious leaders assembly man, health personnel etc.)

INTRODUCTION:

Good afternoon/ evening and thank you all for coming. We are with the Kwame Nkrumah University of Science of Technology (KNUST), Kumasi. My name is..... .....and these are my colleagues.....(let them introduce themselves). We are conducting several meetings with people like you to find out views about the factors responsible for the low supervised delivery in the district. Your opinions are very important and they will help us to identify the reasons for the low supervised delivery. There are no rights or wrong answers and you do not have to agree with what someone else says. Everyone's contribution is valuable. In order not to lose any important information, we would like to tape record the discussion. What ever you say will be confidential so feel at ease to express your opinion. But you talk one at a time. You may listen to the recorded discussion at the end of the session if you wish.

(NB: take the background information of respondents before starting the interview)

BACKGROUND INFORMATION

(Give each participant identification no. Don't record their names)

Community:

Date:

Sex:

Age:

Occupation:

Marital status:

Highest level of education:

Religion

No. of Children:

Ethnicity

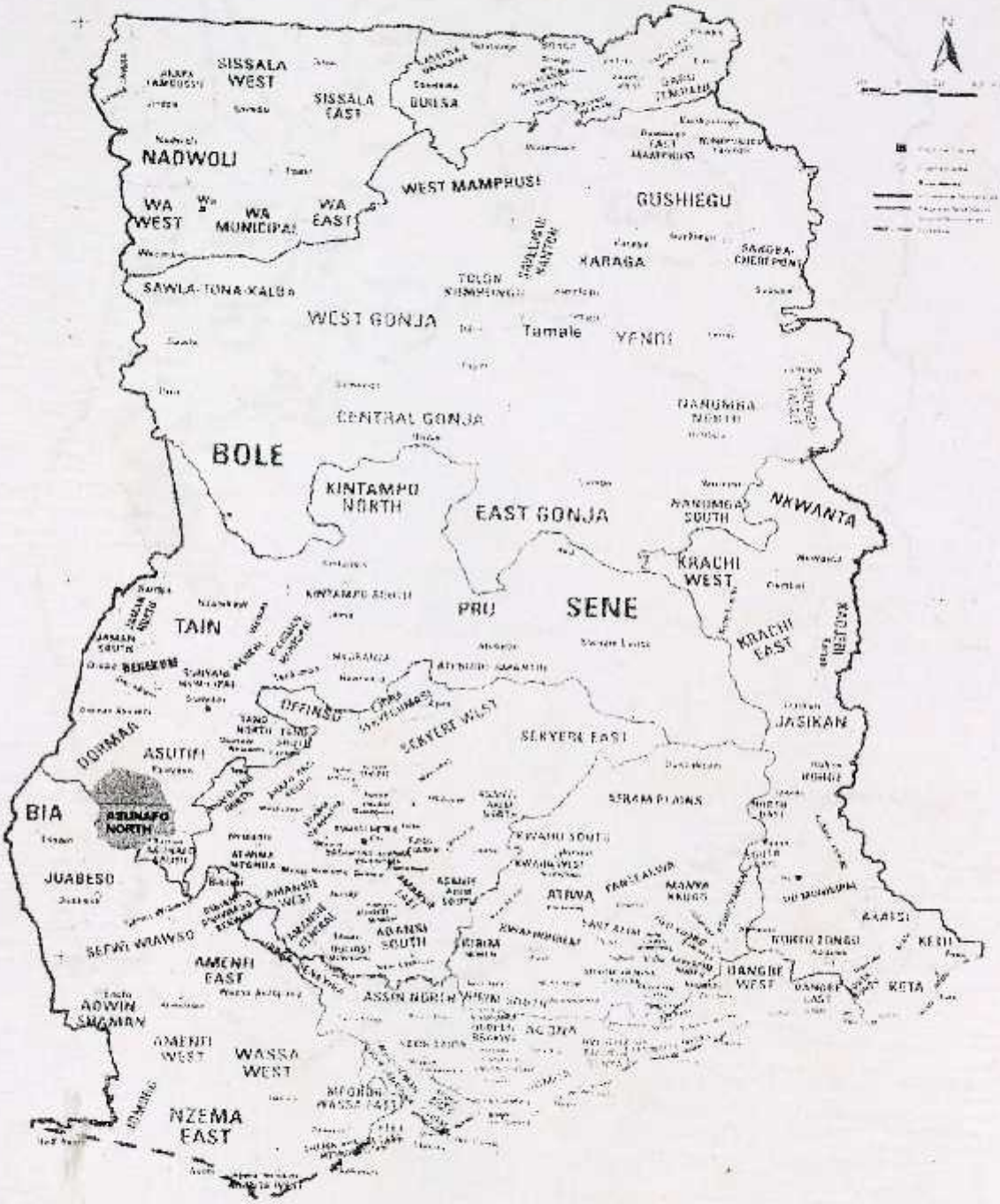
Length of stay in community:

Role in community

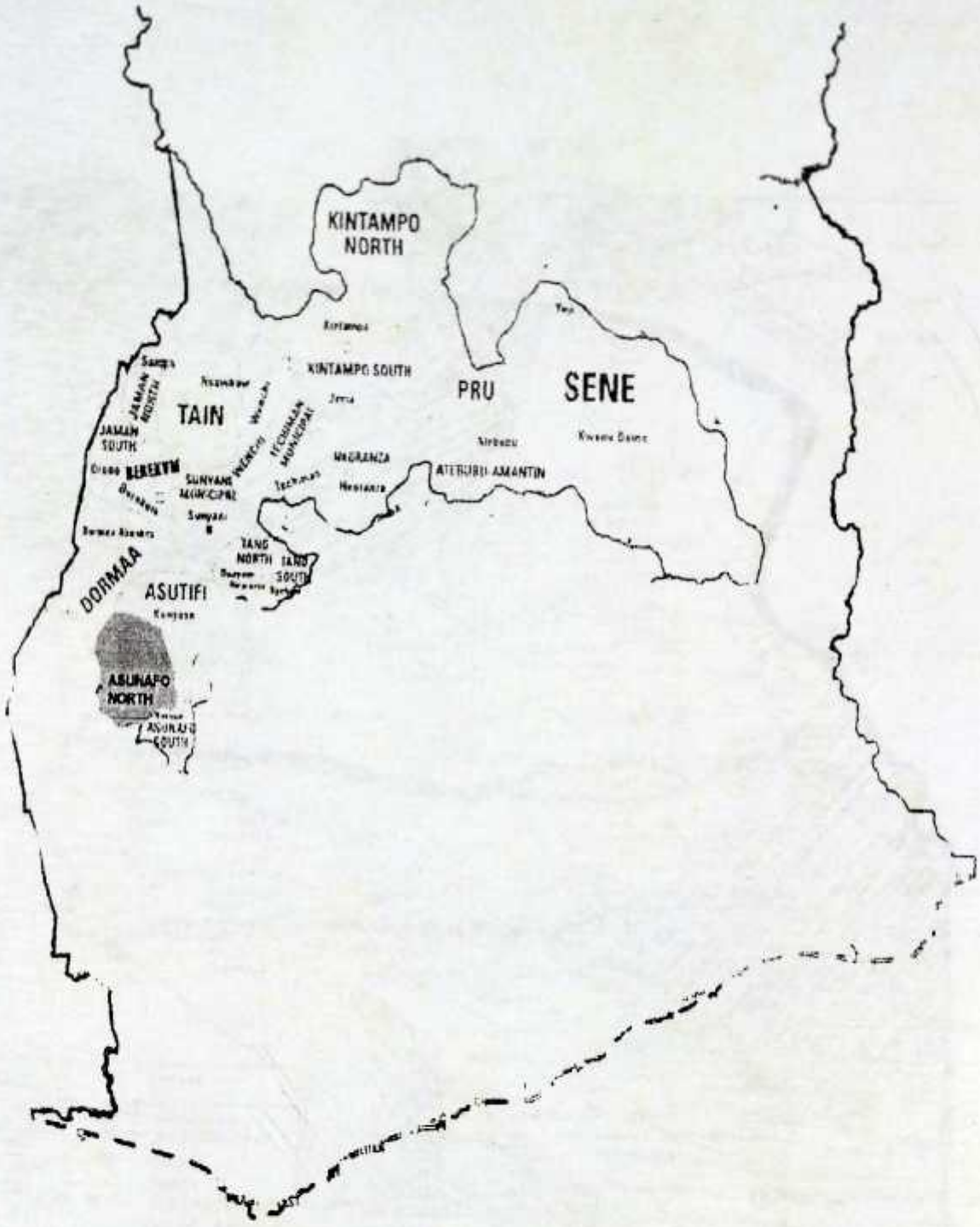
SOCIO-CULTURAL AND HEALTH INFORMATION

1. Is transportation a problem in case of labour?
2. What do you think can be done to get easy access to transportation for women who are due for labour?
3. Where does it cost high to deliver? TBA OR HEALTH CENTER
4. To what extent do you think supervised delivery is affected by the attitude of health workers
5. Where should a woman deliver when her time is due and why?
6. What do you think are the reasons why some women do not deliver at the health facilities?
7. Some women after attending the ANC do not deliver at the health facility. What do you think are the reasons for this?
8. What do you suggest should be done to get pregnant women to patronize supervised
   delivery?

Appendix 7: Map of Ghana



Appendix 8: Regional Map of Brong Ahafo



Appendix 9: Map of Asunafo District