

SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA

FACTORS INFLUENCING THE UTILIZATION OF HEALTH SERVICES
FOR SUPERVISED DELIVERY BY MOTHERS IN LOWER MANYA
KROBO DISTRICT

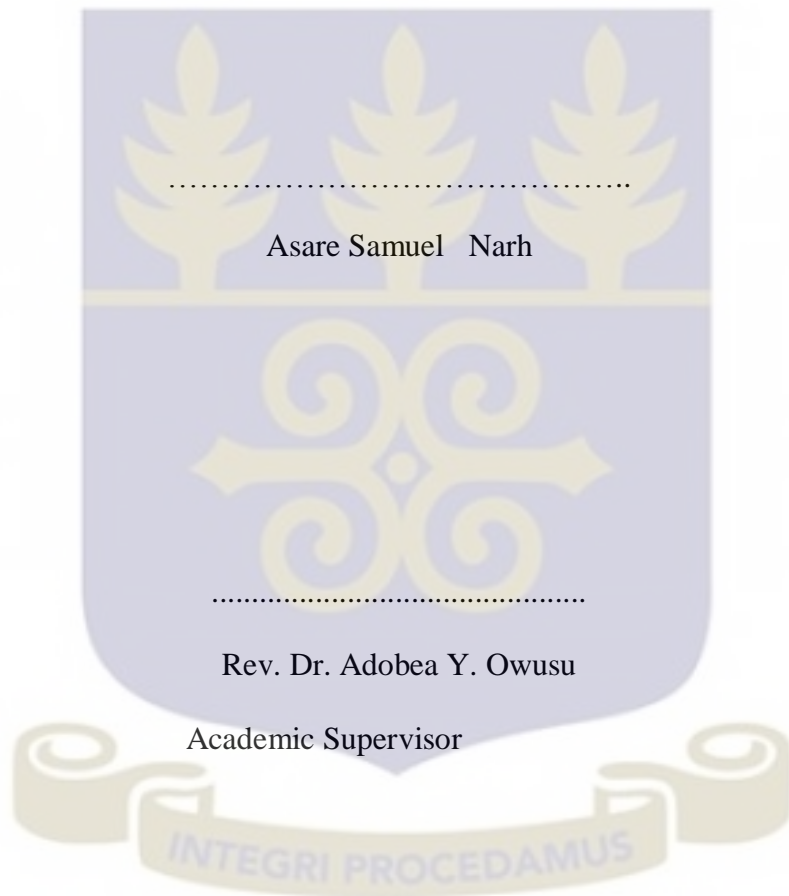
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THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF
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FOR THE AWARD OF MSc APPLIED HEALTH SOCIAL SCIENCE
DEGREE

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DECLARATION

I hereby declare that with the exception of references to other people's work which have been duly acknowledged, this work is the result of my own original research and that this dissertation neither in part nor whole has been presented elsewhere for another degree.



DEDICATION

I dedicate this dissertation to Auntie May and my good friend Mahmoud Ibrahim. I say God richly bless you all.



ACKNOWLEDGEMENT

A work of this kind would not have been easy to undertake without the technical and moral support of some individuals.

I am full of commendation for the School of Public health, Faculty members and the entire Social and Behavioural Science Department for their role in assisting me to achieve my dream.

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ABSTRACT

The objective of the study was to investigate the factors that influence mothers' utilization of health services for supervised delivery in the Lower Manya Krobo District.

A cross-sectional study was made. The study involved the administration of structured questionnaires to collect information from 350 women with children under one year in the Lower Manya Krobo district. In-depth interviews were carried out with service managers (Midwives) and community leaders. A combined multi-staged, stratified and purposive sampling was used to select the respondents for this study. Cross tabulation and Chi-square test were the main instruments used in presenting and analysing the relationships between variables. Logistic regression analysis using SPSS was done to describe the nature of underlying relationship between variables.

The result demonstrated the impact of antenatal attendance on mothers' delivery behaviour. Mothers who attended antenatal services three or more were seen to deliver more at the health facilities than those who attended antenatal twice or less (chi-square = 6.5, df= 2, $p < 0.03$). Chi-square test of independence between who takes decision and place of delivery was significant (chi-square = 1.7, df = 5, $p < 0.05$). Evidently, percentage delivery at health facility was highest among the women who had the autonomy to decide where to deliver. Economic and physical factors such as cost of hiring a car and long distance to health facilities respectively also played significant roles in influencing mothers' delivery behaviour. Cultural norms and traditional practices, attitude of health care staff, ethnicity and religion did not statistically play any significant role in mothers' delivery behaviour.

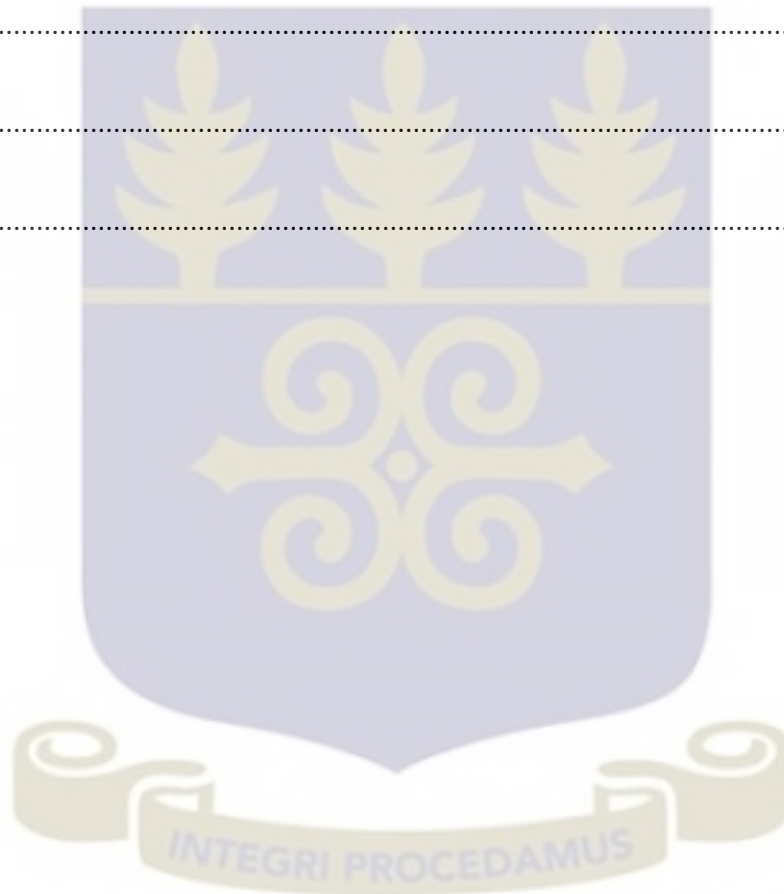
Recommendation: There is the need for full adoption of WHO goal oriented ANC package and the design of individual birth plans by the district as well as social policies to address maternal health issues.

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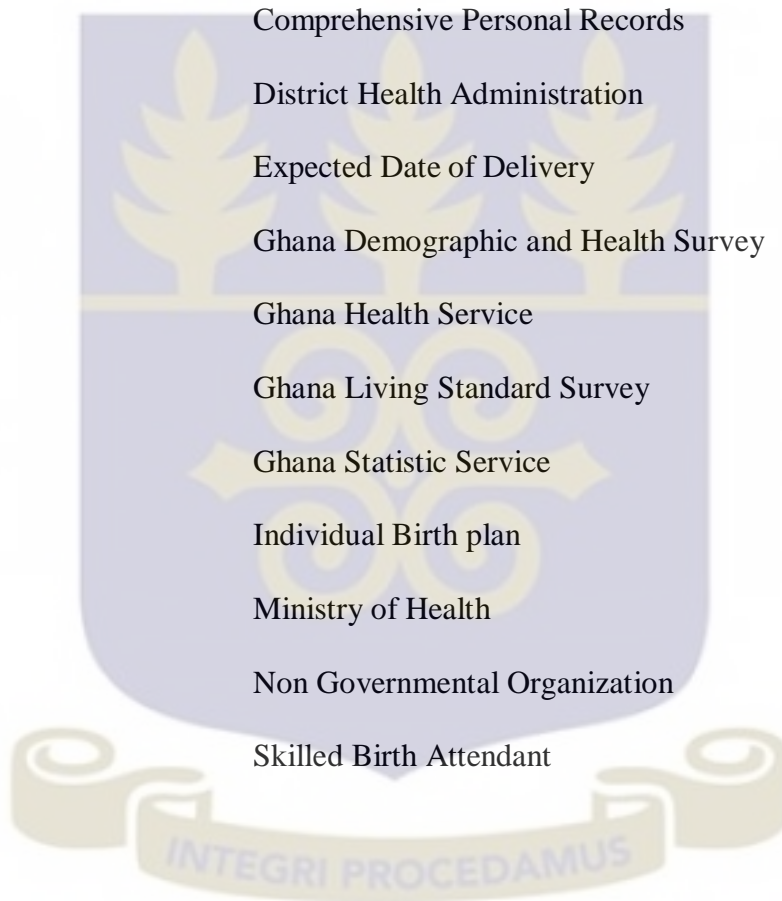
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LIST OF ABBREVIATIONS

ANC	Antenatal Care
CBS	Community-based Surveillance Volunteer
CHPS	Community-based Health Planning and Services
CI	Confidence Interval
CPR	Comprehensive Personal Records
DHA	District Health Administration
EDD	Expected Date of Delivery
GDHS	Ghana Demographic and Health Survey
GHS	Ghana Health Service
GLSS	Ghana Living Standard Survey
GSS	Ghana Statistic Service
IBP	Individual Birth plan
MOH	Ministry of Health
NGO	Non Governmental Organization
SBA	Skilled Birth Attendant



CHAPTER ONE

1.0 INTRODUCTION

Health is a fundamental human right, hence the World Health Organization's call for "HEALTH FOR ALL" (WHO's DECLARATION, ALMA ATA, 1978). Ghana and several other nations have adopted the Primary Health Care concept as a means to reach the goal of Alma Ata.

Comprehensive health care centres are primary health care facilities providing promotive, preventive, curative and rehabilitative services to a community. They may be well built and equipped with adequate resources (human and material), but grossly underutilized by community members due to several factors that may be economic, education, geographical, socio-cultural, political, legal or religious (Adetokunbo et al. 2003; Baltussen et al. 2005). The attitude of health workers, availability of doctors, irregular supplies and commodities and inefficient service delivery are other strong factors affecting utilization of health services (Adetokunbo et al. 2003; Baltussen et al. 2005).

In Africa, up to 80% of the population uses traditional medicine for primary health care. Eighty-five percent of Nigerians use and consult traditional medicine for health care, social and psychological benefits. About 60-85% per cent of births delivered in Nigeria and other sub Saharan Africa countries and especially in rural areas are by traditional birth attendants and these take place outside the health facilities (Okonkwo et al. 2004). Many patients prefer to seek care at the drug stores or with the traditional medicine operators instead of the formal health sector (Baltussen et al. 2005).

It was estimated that more than 99% of maternal deaths occur in poor countries where human run lifetime risk from a pregnancy-related complication, about 250 fold higher than woman in developed countries. Of the 210 million women who become pregnant each year, some 30

million or 15% developed complications which are fatal in 1.7 of cases giving 529,000 maternal deaths per year (Bernis et al. 1998).

On daily bases, WHO estimated more than 1,000 women die from child bearing related problem with 99% of each deaths occurring in developing countries including South Saharan African countries of which Ghana is included. Tragically 50% of most deaths are avoidable through proven effective and affordable action even in resource poor countries. These women died from a variety of factors with commonest being lack of regular contact with health service. Clinically, the main direct causes of maternal deaths are hemorrhage, sepsis, eclampsia, obstructed labour and unsafe abortion.

Ghana's long term vision for growth and development as captured in the document, Ghana Vision 2020, defines five main areas for priority attention in the medium to long term. These are: maximizing the healthy and productive lives of Ghanaians: fair distribution of the benefits of development: attainment of a national economic growth rate of 8%; reduction of the population growth rate from 3% to 2% and the promotion of science and improved technology as tools for growth and development (MOH, 1997).

There has been some improvement in health status for Ghanaians since independence in 1957. People now live longer and more children are surviving. According to Ministry Of Health, Ghana's infant mortality rate was 133/1000 in 1957. Life expectancy which was 45 years in 1957 increased to 55 years in 1996 and in 2009 it is 56.9 for females and 55 for males. The number of health facilities and health workers has increased by leap and bounds since independence. The

health sector also receives, on average about 8-10% of the total government budget (MOH, 1997; GDHS, 2008).

Despite government's enormous investment of resources (Human, material and money) and the introduction of the National Health Insurance Scheme (NHIS) women continue to suffer from a heavy burden of infectious diseases, malnutrition, poor reproductive health and non-communicable diseases. Relative to other countries, especially in East and Southern Africa, health status in Ghana is still poor. This is because the determinants of health have not improved significantly: sanitation coverage in the entire nation is 50% and the population growth rate remains 3%. Female literacy is 42% and one-third of the population fall under the poverty line. In addition to the above setbacks in the health sector, access, quality and utilization of primary health services are still too low (WHO, 2002; MOH, 2004).

Over half a million women from the developing world die each year of causes related to pregnancy and childbirth. There are about 500 maternal deaths for every 100,000 live births, and around 10 per cent of the pregnancies are at high-risk (UNFPA, 2002). An important proximate determinant of maternal mortality is access to and use of quality health services (Fauveau et al. 1991; McCarthy and Maine, 1992; Bhatia, 1993). Access to and utilization of quality reproductive health services is also crucial for improved maternal and child survival and increased contraceptive use and consequent fertility decline in the developing countries (Ramachandran, 1989; Phillips, 1986).

Utilization of health services is in turn related to their availability and socio-economic, demographical and cultural factors such as women's age, education, employment and autonomy

(Stewart and Sommerfelt, 1991; Elo, 1992; Becker et al, 1993; Obermeyer, 1993; Pebley et al. 1996; Raghupathy, 1996; Acharya and Cleland, 2000; Addai 2000).

In Ghana, children are traditionally delivered at home (53%) with the assistance of Traditional birth attendants (TBA), an elderly woman of the community or no one at all compared to 46 percent of deliveries that take place in health care facilities where there are skilled medical attendants (GSS, NMIMR, & ORC Macro, 2004).

In Ghana 64% of women who died of pregnancy complications sought help from traditional healers before going to the health facility (Odoi Agyarko et al. 1993). Similarly, research shows that 72% of maternal mortality and morbidity occur around the period of child birth. Significant levels of prenatal mortalities are also associated with deliveries (WHO, 1997). In Ghana once again, more than half all birth are home deliveries unattended by trained health staff. Most of these women do not appreciate the importance of delivering their babies in health facilities staffed by qualified personnel. This attitude is most observed among women who live in rural areas and such deliveries occur in the preserve of traditional midwife (Ayivor, 1998).

Generally, quality of antenatal care is being improved through the introduction of individual maternity care. Coverage of supervised delivery though is rising, it is still too low at 44% with marked regional variation in Ghana. Supervised delivery coverage for both skilled attendants and trained TBAs for the year 2004 was 53.4% indicating an increase over 2003 coverage of 52.1%. This could be attributed to the implementation of the exemption for supervised delivery nationwide (MOH, 2004).

In Ghana, the antenatal care coverage is about 95%. However, high antenatal attendance does not reflect into high institutional delivery rates. Of this high antenatal attendance, only 57% are delivered in health facilities and 59% birth assisted by skilled provider (GDHS, 2008).

To improve the health status, two main things must be done:

- I. Improve the determinants of health
- II. Improve the performance of the health sector

The current reforms taking place in the health sector which include the introduction of the national health insurance scheme, free antenatal, delivery and postnatal cares for women, etc, are all aimed at increasing access to maternal health services. The reform is to improve child birth and reduce child and maternal mortality.

1.1 STATEMENT OF THE PROBLEM

Raising the number of births attended by Skilled Birth Attendants (SBA) is an internationally agreed health and development goal. In September 2000, members of the U. N System adopted the millennium Development goals that include goal four & five which among other things seek to achieve reduction of maternal death by 75 percent between 1990 and 2015. Identifying the proportion of births attended by SBAs is an indicator for achieving this goal. The Global target for skilled birth attendance at all births was set at 80, 85 and 90 percent by 2005, 2010 and 2015 respectively (United Nations, 2005).

Though antenatal attendance is over 80%, there is still low maternal health service utilization for child birth in Ghana. Yet the underlying causes of these are poorly understood. The Ghana Demographic and health survey result indicate that, a significant proportion of pregnant women (53%) do not go through supervised deliveries (GSS, 2004). This is in spite of governmental introduction of exemption policy for child deliveries at health facilities across the country, Ghana (MOH, 2004).

Though there is growing literature on factors influencing access and utilization of maternal health services in Ghana (Ofori-Yeboah, 2000 and Gyamfi, 2001) few studies focused on the specific roles these factors play especially in rural areas and no such a study has been done in Lower Manya Krobo district. The study was therefore designed to investigate the factors influencing access and utilization of supervised delivery services by mothers in the lower Manya Krobo district in order to establish the need for community-based interventions.

1.2 MAIN OBJECTIVE

To investigate the factors that influence mothers' access and utilization of health services for supervised delivery by mothers in Lower Manya Krobo district.

1.3 SPECIFIC OBJECTIVES

- Identify psychosocial factors influencing utilization of health services by mothers in Lower Manya Krobo district for supervised delivery.
- Determine the role of cultural factors in influencing utilization of health services for supervised delivery by the mothers.

- Determine the role of economic factors influencing utilization of supervised delivery services by mothers in the Lower Manya Krobo district.
- Identify physical factors influencing utilization of health services by mothers in the Lower Manya Krobo district for supervised delivery.

1.4 RESEARCH QUESTIONS

The study sought to answer the following questions.

- What are the psychosocial factors influencing the utilization of health services for supervised delivery by mothers in Lower Manya Krobo district?
- What role does cultural factors play in influencing access and utilization of supervised delivery services by mothers in Lower Manya Krobo?
- Do economic factors play a significant role in influencing the utilization of health services for supervised delivery by mothers in Lower Manya Krobo district?
- What physical factors significantly influence access and utilization of supervised delivery services by mothers in Lower Manya Krobo district?

1.5 JUSTIFICATION

The low utilization of maternal health services for child delivery in Ghana in general and the Lower Manya Krobo district in particular has significant impact on maternal and neonatal health. Specific determinants of low utilization of maternal health services vary from one socio-cultural setting to the other because these determining factors mediate through several pathways.

This study is therefore deemed significant in many respects. First, knowledge of influencing factors will assist in understanding the world view of the people which could translate in designing community based interventions that are culturally sensitive and relevant to the needs of the district. Second, the finding, will highlight the need to strengthen existing structures and programmes aimed at achieving the millennium development Goal four and five of attaining 90 percent supervised delivery by 2015. Third, the study will also contribute to knowledge on determinants of maternal health services utilization in the district since no such a study has been carried out in the Lower Manya Krobo district.



CHAPTER TWO

REVIEW OF RELEVANT LITERATURE

2.1 INTRODUCTION

Empirical studies on utilization of maternal health services have identified psychosocial, physical availability of health facilities, economic cost of services, transportation, cultural beliefs as well as personal characteristics of mothers as significant influencing factors. This chapter reviews previous studies on the extent to which these factors influence mothers; access and utilization of health services in the context of child birth across the developing world with particular reference to Africa and Ghana. A conceptual Framework based on Health-Seeking Behavior Models is also being discussed to help examine the theoretical perspective within which these factors mediate to explain mothers' delivery behavior.

2.2 Demographic and Psychosocial factors

2.2.1 Maternal Age

Maternal age has been found in many researches to be significantly related to the utilization of maternal health services in several parts of Africa. Analysis of some African countries' Demographic and Health Surveys by Stephenson et al (2006) showed that the age of the mother was a significant factor in Malawi, Tanzania, and Kenya. In Tanzania and Malawi women of all age groups relative to age group 20 to 29 years were more likely to have delivered their last children in a health facility. In Kenya women aged 20 to 39 years and those aged 40 to 49 were more likely than women aged 20 to 29 years to have done so. These findings were however, inconsistent with those found in Burkina Faso, Ivory Coast and Ghana (Stephenson et al. 2006). In Ghana, the 2003 DHS showed that mothers' age was not significantly related to their delivery behavior (GSS, NMIMR, & ORC Macro, 2004).

2.2.2. Marital Status

Results of the 2003 Ghana Demographic Health Survey, suggested that marital status was a factor significantly associated with mothers' delivery behavior. Married women were shown to be more likely than unmarried women to deliver at health facilities. Polygamy also played a significant role in explaining mothers' delivery behavior with women from polygamous homes having more risk of delivering at home than those in monogamous relationships (GSS, NMIMR, ORC Macro, 2004).

2.2.3. Maternal Education

There is empirical evidence showing positive relationships between maternal education and utilization of maternal health services. A study in India by Pavalavalli Govindasamy and Ramesh (1997) indicated that only 12 percent of births of illiterate women delivered in health institutions compared with 67 percent of births of women who had at least a middle school education. Similarly, only one-fifth of births to illiterate women were attended to by a health professional compared with three-fourths of births to women who had completed middle school. In Peru, Vogle (2004) demonstrated that although both maternal and paternal education exerted a significant force on the probability of use of maternal health care services, the effect of women's education was greater than that of their husbands.

Analysis of Demographic Health Survey results in six African countries Stephenson et al. 2006) indicated significant relationships between respondents' educational level and their choice of delivery place. Women with a secondary education or higher were more likely than women with no education to have delivered in a health facility in Malawi, Kenya, Burkina Faso and Ghana. However, in Tanzania only women with primary education were more likely than those with no

education to have done so whilst in Ivory Coast there was no association with maternal education and health service utilization for supervised delivery. The strong influence of maternal education on the utilization of maternal health services for child delivery is consistent with several studies across other countries. A study in India by Pavalavalli et al (1997) demonstrated a positive relation between maternal health service utilization and maternal age whilst Ensor & Cooper (2004) cited other studies that showed maternal health services utilization linearly with mothers' education.

2.2.4. Antenatal Attendance

Several studies have illustrated the importance of antenatal visits to the overall utilization of maternal health services for child delivery. In India findings by Mishra et al. (2001) on maternal and child health showed that antenatal care utilization was an important determinant of safe delivery care. Another study in Kenya by Magadi et al (2000) of the Southampton statistical research institute showed significant relationship between number of antenatal attendance and mother's choice of delivery place. Most respondents in that study were aware of the importance of antenatal care and sought antenatal care services but did so late in pregnancy as well as made few of such visits. Subsequently most of the child birth of such mothers took place at home.

In Ghana, antenatal coverage registers a downward trend over the last five years from a 2001 value of 93.6% to a 2005 figure of 88.7%. The average number of ANC visits was

3.4 with all regions registering an increase except Brong Ahafo region (MOH, 2004). Liyobe (2005) in a study of factors influencing choice of delivery place in a Ghanaian community

identified number of antenatal visits per mother as significantly reducing their risk of home delivery by about 30% for every antenatal visit.

2.2.5. Household Structure and Family Resources

Empirical evidence has linked maternal health service utilization with household structure and family resources. A study in India suggested that variation in utilization of maternal health services are explained by variations in household and individual level socio-economic factors. Also, because illness necessitates re-allocation of time and resources within a household, a person's position in the household will determine the re-allocations made towards that person's health care (Sonalde et al. 2004).

Women's autonomy and decision making power in the household is another significant factor affecting utilization of health services for supervised delivery. Majority of women in rural Nepal would consult family members, usually the head of the household and / or whoever controlled the cash/family finances before seeking care. In that same study, approximately half (51.2 percent) of women consulted their husbands. Another 44.5 percent consulted family members such as their mother-in-law or sister-in-law whilst 3 percent consulted their neighbors and friends (Wagle et al. 2005).

The household structure and control of family resources in Ghana suggests a gloomy picture for women. This is likely to impose serious implications for women's access and utilization of maternal services for child delivery. According to the Ghana Living Standard Survey (GSS, 2000) the average household size is 4.3. Whilst six out of the ten administrative regions in the country namely, the Greater Accra, Brong Ahafo, Central, Eastern, Western and Ashanti Regions have average household sizes which are equal to or less than the national average, the averages

for the Volta, Northern, Uppers East, and Upper West Regions are higher than that for the whole country. Again, one out of every three households in Ghana has a female as the head. The proportion of female-headed households is higher in rural coastal areas (40%) and other urban areas (39%), with the exception of Accra, than all other areas. Females head only 20% of the household in the rural savannah zones. A report on early childhood diseases in Ghana stated the situation of women in relation to access to household resources that could affect their reproductive rights in the country this way:

“Values and standards in our traditional society relegate women into a subordinate and subservient position to the extent that they depend on husbands and kin for access to land and other productive activities. Participation of women in decision-making is also limited at all levels because of the traditional and in decision-making is also limited at all levels because of the traditional and perhaps the religious underpinnings of the Subordinate position of the Ghanaian woman. Women’s human rights are often infringed upon. In the northern part of Ghana, for example, there are hardly any reproductive rights given to women” (Agorsah et al. 2002).

The literature also suggests that marriage and kinship patterns affect health outcomes in two ways in India. First, Marriage patterns characterized by village endogamy and consanguinity increase parental connections with their daughters resulting in social norms whereby women are valued more in the community as a whole. Second, Village endogamy and consanguinity increase individual women’s contact with their parents and social support networks and thus add to the resources women are able to draw upon to obtain maternity care (Desai & Wu, 2004). Also, Jansel (2006) found in a rural community in Ghana that, the responsible person in the

household for making of decision relating to delivery was the older female relatives rather than the mothers themselves. However, Wagle et al (2005) indicated that in Nepal the internal family structure such as type and size of family or head of household did not significantly influence mothers' delivery behavior.

2.2.6 Attitude of Professional Health Staff

One important factor patients passionately attach great importance to and which influence their choice of health care is the behavior of service providers towards them. Mwabu (1986) noted that the majority of patients in his Kenyan study sought health care from outside the “free” government health care systems due to the poor attitude of health care providers, among many other reasons. Indeed, it sometimes seems that improved quality of care and presentation of care can be more important than improving both economic and physical accessibility, as research in Guatemala and Chile suggest (Bailey and Philip, 1990)

In many parts of the world, women describe health care providers as unkind, rude, brusque, unsympathetic, and uncaring (Ogunlesi, 2005). In the face of such treatment, the use of formal health services may be the last resort. A study in Tanzania for example, revealed that a significant number of women delivered at home although they believed it was safer to do so in a health facility. Twenty-one percent (21%) said they stayed home because health centre staffs were “unkind” (Muela et al. 2000).

Other studies cited in Muela et al (2000) have also found that health workers can be harsher with client who have little or no education or who are from a different ethnic group. However, they concluded that, in many cases health workers' reactions and attitudes reflect their own frustrations with their work. Thus:

Shortages of supplies, non-functioning equipment, excessive workloads, and poor infrastructure can make it difficult for them to provide what they perceive as good quality care. Late or non-payment of salaries and lack of supervision can also make health workers resentful and unmotivated. Studies in Ghana cited poor attitudes of health staff as perceived by mothers to be significant factor that influence the choice of delivery site. For example, D'Ambruso et al. (2005) identified a significant proportion of women who cited poor staff attitude as an influencing factor. Jansen (2006) also found health care providers' behavior as significant factor influencing mothers' access and utilization of maternal health services for delivery in a Ghanaian rural community.

2.3 Physical Factors

Surveys in a range of countries confirm that many women would like to deliver in a health facility, but are unable to do so due to the distance and lack of transport. In Malawi, for example, 90 percent of women in one survey wanted to deliver in a health facility, but only 25 percent actually did so because of long distance and transportation difficulties (Muela et al. 2000). Wagle et al. (2005) also showed that women who could use a distance of more than one hour to the maternity hospital were almost eight times more likely to deliver at home than those who could do so less an hour. Distance is one variable that has received extensive investigation. Most studies collapse the distance, time and transportation into one variable namely accessibility. The assumption in modeling access is that (a) the nearer one is to the service, the greater is the access and (b) people living in areas with more services have greater access to health care. These assumptions, however, have been found not to be tenable in a fee-

for-service environment (Gish, 1990). Most studies have found that distance is a barrier to utilization (Philip, 1990; Poland et al. 1990).

Interestingly, a study done in Kintampo, Ghana, found that though health facilities were near, clients did not use them (Blay, 1996). This indicates that access though desirable is not an end in itself but has to be complimented by other factors like quality of care.

2.4 Economic Factors

The economic polarization within the society and lack of social security system make the poor mothers more vulnerable in terms of affordability and choice of maternal health services. Poverty not only excludes mothers from the benefits of health care system but could also restrict them from participating in decisions that affect their health, resulting in greater health inequalities. For example, several studies by the World Bank (2001); Ogulensi (2005) all attribute none-use care services to socio-cultural factors. In Illesa, Nigeria, Ogulensi (2005) found among lower social class women that financial difficulties significantly influenced their delivery behaviors. Among this group a significant number had delivered at home.

Economic ability to utilize health services for supervised delivery has not been very different in Ghana and this is evidently shown in the 2003 Ghana Demographic and Health Survey in which only 19 percent of mothers in the lowest wealth quintile delivered in health facilities compared with 89 percent of mothers in the highest wealth quintile who did so (GSS, NMIMR, & ORC Macro, 2004). In addition to distance, cost of health service such as user fees and transport fares

can be a major obstacle to women's use of supervised delivery health services. Mrs Carla AbouZahr of the World Health Organization's Maternal and Newborn Health/Safe Motherhood Programme noted that:

“for poorer women imposing or raising fees almost always deters them from using services. Even when formal fees are low or nonexistent, there can be other costs that deter women from seeking care. These costs may include transport, accommodation, drugs, and supplies, as well as informal or under the table fees that may be imposed by health staff. When women lack control over resources and are dependent on others to provide funds, fees of any kind can be a serious obstacle to their use of services (The Safe Motherhood Action Agenda 2005).

2.5 Cultural Factors

Ensor & Cooper (2004) contended that in some communities in Bangladesh, the restrictions of purdah especially, may prevent mothers from accessing medical treatment for themselves or their children. Ensor and Cooper further maintained that cultural conventions on modesty are important factors discouraging mothers from obtaining maternal health services, citing a study in Guatemala which showed that rural women were put off attending a hospital for obstetric care because they were required to remove their skirts for medical examination purposes without proper regard to patient privacy.

Demographic and socioeconomic determinants of maternal health care access and utilization are mediated by cultural influences on health-seeking behavior that shape the way individuals perceive their own health and health services available. These cultural beliefs, norms and practices are widely documented by several evidence based studies across nations. Besides

economic, socio-demographic and geographical factors, Mckinlay (1972) identified Socio-cultural factors as being of major influence in the use of health services for supervised delivery. Research in the area of safe motherhood has also identified that certain cultural attitudes and practices, like perception of women's roles block the ability of women to get health care for themselves, hence impeding their use of available health services (Lesile and Gupta, 1989). In some cases decisions about where to seek care are often made by the husband, mother-in-law or other relations (Thaddeus and Maine, 1990).

These studies linking traditions and culture to maternal health service utilization are consistent with many others in Africa. One paper reports that the women of the Alur people of Uganda may be though weak if they receive help during delivery (Kyomuhendo, 2003). It further reported similar findings for the Bariba tribe in Benin and that in Bolivia women were put off by well-ventilated delivery rooms when their own understanding required warm conditions for the delivery to progress.

In Ghana, there is a significant variation affiliations and place of delivery as revealed from the 2003 DHS results where Catholics were more likely than Moslems and other religious beliefs to deliver at hospitals (GSS, NMIMR, & ORC Macro, 2004). Jansen (2006) identified in a rural community in Ghana that the presence of male practitioners for child delivery was an important factor influencing mothers' choice of delivery place. A study by Afful (2004) in Navrongo, northern Ghana, identified traditional practices and beliefs systems exerting significant influence on mothers' delivery behavior.

2.6 Conceptual Framework

Perhaps the most highly influential and widely used theory of why people practice health behavior is the Health Belief Model (Taylor, 1995). According to this model whether or not a person practices a particular health behavior can be understood by knowing two factors. First is the degree to which the person perceives the health condition as a threat to him or her, and the second is the perception that a particular health behavior or practice expected of him or her is effective in reducing that threat.

This study, however, adopts the theory of Planned Behavior Model in view of its relevance to the research questions. According to this model, in addition to knowing a person's attitudes, subjective norms, and behavioral intentions with respect to a given health behavior, one needs to know the person's perceived behavioral control and the decision making autonomy over that action which in this case, is either to deliver at the health facility or deliver at home. For example factors such as attitudes towards orthodox health care, subjective norms regarding delivery and perceived behavioral control all have the potential to influence mothers' delivery behavioral intentions which eventually could either lead to supervised delivery service utilization or home delivery.

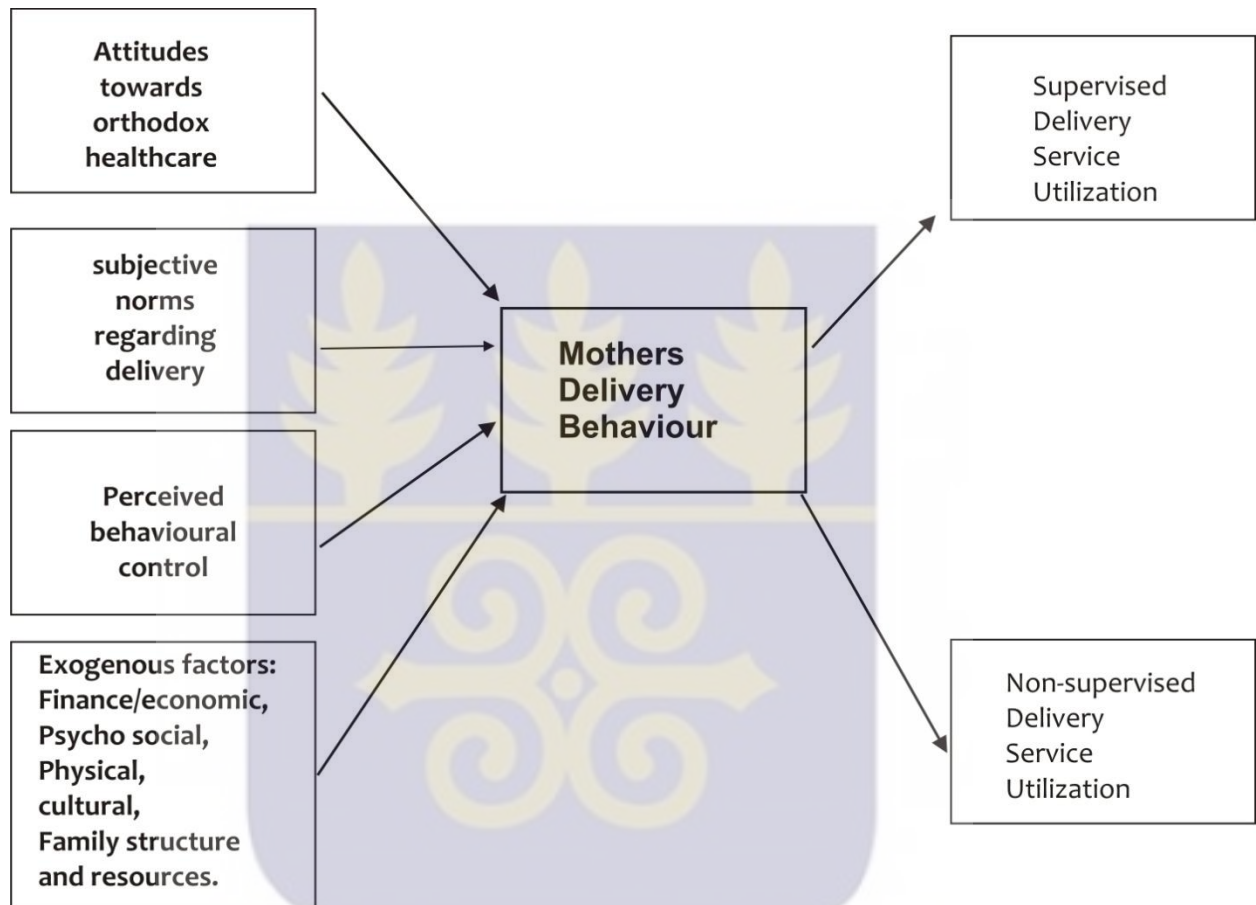
Attitude of mothers here, is determined by the individual's belief about the outcomes or attributes of performing the behaviour (behavioural belief) weighted by evaluation of those outcomes or attributes. Thus, mothers will utilize supervised delivery services if they believe that advantages of success of delivery at the health facility outweigh the disadvantages. Similarly, a person's subjective norm which is the belief about whether most people approve a behaviour or not is determined by his or her normative beliefs, which is whether important referent individuals approve or disapprove of the performance of the behaviour, weighted by his or her motivation to

comply with those referents. Mothers will therefore, deliver at the health facility if they believe that other people such as spouse, mother-in-law or the household head who may have influence over them, think that they should deliver at a the health facility. Perceived behavioural control is looked at or determined in terms of overall measure of the perceived control over the behaviour (home or supervised delivery), the perceived likelihood of occurrence of each facilitating or constraining conditions (control belief) and the perceived effect of each condition in making behavioural performance easy or difficult (perceived power).

Quite a number of studies have shown several factors that tend to influence mothers delivery behavior (home or supervised delivery). Among these factors, a number of socio-demographic characteristics of the individual affect the underlying tendency to seek maternal health care (Addai, 2000). Maternal education for instance, has been found to be positively associated with the utilization of maternal health care services (Stewart and Sommerfelt, 1991).

The decision to deliver at home or deliver in a supervised or institutional setting is also influenced by a vector of exogenous variables including psychosocial, physical, economic and cultural factors. Perceived attitude of health workers towards mothers during antenatal and delivery services, economic power with particular reference to financial independence of women and for that matter an expectant mother, availability and the distance to the health facility, family structure and household resources with regards to women's decision making autonomy over choice of delivery place and issues of polygamous marriages, and cultural norms and traditional practices regarding child delivery in a particular community all play important role in influencing mother's delivery behavior. This can be simplified in the diagram shown in Figure 1.0.

Figure 1.0 - Relationship between attitude, subjective norms, perceived behavioral control, exogenous factors and mothers delivery behavior – An application of the theory of Planned Behavior .



Source: Adopted from Taylor (1995) with modification.

CHAPTER THREE

3.0 RESEARCH METHOD

The issues with regards to methods are discussed in this chapter. These include the study area, study design, the sample size and sampling procedure as well as the study population. The description of research instruments to be used and the data collection procedure as well as data management were discussed.

THE STUDY AREA

3.1 Location

The Lower Manya Krobo District is one of the seven districts in the Eastern Region located in the Eastern part of the Region along the South-West corner of the Volta River. It lies between Latitude 6.05s and 6.30n and longitude 0.08E and 0.20W.

It is bordered to the North-East by Kwahu West Municipal, to the North-West by Fanteakwa, to the South-West by Dangme West, to the East and West by Asuogyaman and Yilo Krobo districts respectively and to the South-East by North Tongu district.

The District covers an area of 1,476 km, constituting about 8.1% of the total land area within the Eastern region (18,310 km). The major towns in the lower Manya Krobo district include Odumase township (which covers Atua, Agormanya and Nuaso), Akuse and Kpong.

3.2 Demographic Background

With an annual population growth of 1.0%, the population of the district for the year 2009 according to the Statistical services (Lower Manya Krobo District) was 83938.

The total number of people in the district per square kilometer (population density) by the year 2000 was 114 square kilometers. This figure is greater than the regional figure of 109 for various census years, giving an indication of higher pressure on the land use in the district.

Table 1.0 – Population of Lower Manya Krobo District.

Sub-District(s)	Population(s)	Percentage(s)
Odumase	37166	44.3%
Kpong	22845	27.2%
Asitey	7138	8.5%
Akuse	8631	10.3%
Oborpah	8157	9.7%
District Total Population	83938	100%

Source: DHA and Statistical Service, 2009.

3.2.1 The Age-sex Structure

The age-sex structure of the people of Manya Krobo district provides or affords the opportunity to know the numerical strength of each sex and age group. This in turn helps to determine what needs to be done to improve the well being of the people of Manya Krobo district.

Table 2.0 shows the male-female split within each age group in the year 2000 for the Lower Manya Krobo district as well as the Eastern region and the nation.

Table 2.0: Age-Sex Structure for Manya Krobo District Compared to Eastern Regional and national Data.

Age Group	Lower Manya Krobo District			Eastern Region			National		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
	%	%	%	%	%	%	%	%	%
0 – 14	18.5	19.6	38.1	21.2	20.5	41.7	22.9	22.1	45.0
15 – 64	29.3	29.2	58.5	25.4	27.2	52.6	25.1	25.9	45.0
65 +	1.6	1.9	3.5	2.5	3.2	5.7	1.7	2.3	4.0
Total	49.3	50.7	100.0	49.1	50.9	100	49.7	50.3	100

Source: Statistical Service, 2000.

Like in the national and regional situations where there are more females than males, this is the case of the sex composition of Lower Manya Krobo District (refer to Table 2.0). The economically active population (ages 15 to 64) constitutes 58.5% of the total population, resulting in an age dependency ratio of 1:07 (i.e. one active person to 0.7 inactive persons) this means that there is more of the active persons in the population and that if the active population is effectively utilized for income generating activities, the standard of living of the people in the district will be enhanced.

3.2.2 Ethnicity and Religion

The Manya Krobo district population is made up of various ethnic groups having different religious background as shown in Table 3.0.

Table 3.0: Ethnic Origin of the People of Manya Krobo District.

Ethnicity	Percentage
Krobos	70.5
Ewes	18.2
Akans	7.7
Others	3.6
Total	100.00

Source: Statistical Service, 2000.

As discussed by table 3.0 above, the people in the district are predominantly Krobos. Ewes who constitute 18.2% are mainly fishermen and farmers living along the Volta Lake.

Table 4.0: Religious Denomination, Manya Krobo District

Religion	Percentage
Christians	76.4
Moslems	17.5
Traditionalists	6.1
Others	-
Total	100.00

Source: Statistical Services, 2000.

Religion is described as one of the unifying forces or factors in society. It is thought that when people are grouped under various religious bodies, it is a force to be reckoned with as far as development is concerned. This description of religion however, can not be said to be always

true in all cases since in Nigeria for instance, religion had bred conflict between Christians and Moslems that had caused many people to visit their early graves. Table 4.0 revealed that as many as 76.4% of the people are Christians and 17.5% are Moslems. Traditionalists form 6.1% of the population in the Manya Krobo district.

3.2.3 Household Characteristics

A household is defined as a person or group of persons who live together in the same house or compound, share the same housekeeping arrangements or are catered for as one unit (Ghana statistical service, 2002)

The average household size in the district is 7.5. This figure is higher than both the regional and national averages of 4.6 and 5.1 respectively.

Socio-economic data from the field reveals that women head 40% of the households in the Lower Manya Krobo district. These calls for women- specific projects or programmes for acceleration of their socio-economic improvement to enable them respond positively to their increasing responsibilities.

3.2.4 Main Socio-economic Activities

Most people in the Lower Manya Krobo district engage in farming. The abundant rich soil and adequate rainfall makes the cultivation of maize and cassava attractive and the district is one of the producers of maize. Cassava and maize are produced both for local consumption in the district and for sale to the markets outside the district.

Many farmers supplement their income by hunting, palm wine tapping and *akpeteshie* distilling. Many women are engaged in selling food products and trading activities. Animals such as goats, sheep and chicken are also reared but on subsistence basis mostly.

3.2.5 Health Services

There are five sub districts in Lower Manya Krobo District and these are Odumase, Kpong, Akuse, Asitey and Oborpah. Hospitals in these sub-districts provide mainly preventive services. They are supposed to be the first point of contact to the community with the health delivery system. There are two government hospitals and one mission hospital in the district.

There are three Hospitals which serve as the first referral points namely: Atua Government hospital, Akuse Government Hospital, St. Martin's hospital (Catholic). There are nine (9) private clinics and maternity homes. Chemical sellers, traditional healers, traditional birth attendants and community-based volunteers as well provide health services in the district.

3.3 Study Type

The study is cross-sectional. The techniques that were employed to achieve the research objectives consisted of the collection and collation of qualitative and quantitative data. Questionnaires and in-depth interviews were used to solicit information from respondents.

3.4 Study Population

The study population was women in their reproductive age (15-49 years) with a child under one year.

3.5 VARIABLES

The dependent variable was utilization of health services for supervised delivery. The independent variables were:

3.5.1 Demographic Variables

- Age
- Educational Level
- Marital status
- Parity
- Religious Affiliation
- Ethnicity
- Occupation

3.5.2 Psychosocial Variables

- Perceived attitude of professional health staff
- Experiences had from visits to health facilities for antenatal cares
- Preferred delivery position
- Position used for delivery

3.5.3 Family Structure and Household Resources

Decision making autonomy of mothers regarding delivery place

- Polygamy and its influence on mothers delivery place
- Items possessed and the total social wellbeing of households

3.5.4 Physical Variables

- Distance to the health facility
- Availability of health facility equipment
- Availability of professional health staff

3.5.5 Economic Variables

- Delivery charges
- Cost of transportation

3.5.6 Cultural Variables

- Traditional practices in the community with regards child delivery.

3.6 Data Collection Techniques and Tools

Data collection techniques used were questionnaire administration and scheduled in-depth interviews with key informants.

3.6.1 Sampling Techniques

A combined Multi-staged, Stratified and Purposive sampling was used to select the houses and respondents for this study. The five sub-districts in the Lower Manya Krobo district were first stratified into two, rural and urban areas of the district. The Odumase sub-district with 45 communities, Kpong 39 and Akuse 18 formed the urban while Asitey with 23 communities and Oborpah with 25 constituted the rural areas of the district. The division of the district was done so that data obtained will reflect both rural and urban areas of the Lower Manya Krobo district. The communities were scattered over a large area of the lower Manya Krobo district.

All the communities constituting the rural part of the district were clustered together and the same was also done for the urban communities. The communities in their respective sub-groupings (urban and rural) were numbered, mixed together within their group and given equal chance of being selected through a simple random sampling method. Seven communities from each of the sub-groups were selected. In each of the selected communities, a study house and a mother in each house were selected purposively based on surveillance activities undertaken by the research assistants in the communities to identify mothers with children under one year for interviewing.

In houses where two or more mothers qualify for interviewing, a simple random sampling was used to select a mother. The midwives were selected by purposive sampling from the Atua government hospital, Akuse government hospital, St Martins's hospital and Lydia maternity home and clinic. Community leaders were also selected from the communities by purposive sampling. In each health facility, simple random sampling method was used to select a senior midwife from the many senior midwives in each health facility. Simple random sampling was also used to select a community leader in areas where two or more leaders qualify to be interviewed. The midwives from these health facilities were selected as key informants due to their in-depth knowledge regarding women's health and delivery activities at the health facilities. Community leaders were also selected as key informants due to their vast knowledge in socio-cultural and economic activities of the district.

3.6.2 Sample size

Being an exploratory study, the sample size needs to be large enough to reflect important variations in the population, but small enough to allow for intensive study methods. By virtue of

the available resources (time, manpower, money and transport) and the reported prevalence for supervised delivery being 44% in the district, the sample size was 342 and rounded up to 350 mothers for convenience. Sample was calculated using Epi Info stat calc. with the following data:

Estimated district population	=	83938
Population of mothers with Children under one year (Using MCH Indices of 4% of the population)	=	3357
Prevalence	=	44%
Confidence interval	=	95%
Error	=	5%

3.6.3 Questionnaire Administration

A questionnaire was administered to three hundred and fifty mothers, one each from a household in seven selected communities of each of the two sub-groupings of the district. The questionnaire was divided into five sections and used to capture information on demographic, psychosocial, physical, economic and cultural variables with regards to the underlying reasons why mothers will or will not utilize the public health services for supervised delivery in the district, and the contribution of service factors to the problem.

3.6.4 Scheduled In-depth Interviews

In-depth interviews were used mainly to explore cultural, physical, economical and the contribution of service factors to the problem of underutilization of health facilities for

supervised delivery by mothers in the lower Manya Krobo district. The in-depth interview was conducted on a community leader, and the senior midwives of Atua government hospital, Akuse government hospital, St Martin's hospital and Lydia Maternity home and clinic. The In-depth Interview was used to explore Key Informants' view on cultural norms, traditional practices regarding delivery as influencing factor for mothers' choice of delivery place, as well as physical and economic factors regarding delivery. The interviews were audio recorded and transcribed for analysis.

3.6.5 Tools

Data Collection tools were structured questionnaire, in-depth interview guides, audio recorders, pen and papers

3.6.6 Ethical consideration

Before the research took off in the communities, permission was sought from the Ghana Health Service Ethical review committee, District Director of Health Services, (DDHS), the District Assembly, chiefs of the various communities after meeting with them to explain the purpose of the research. Clearance was also sought from the various individuals that were covered by the research.

3.3.7 Quality Assurance

Five research assistants selected from Peer Education and Friendly Organization (PEAFO), a local non governmental organization (NGO) in the district were trained in questionnaire

administration. Experienced field supervisors were also trained and appointed to ensure that all study procedures were properly followed. Data collection tools were pre-tested.

3.3.8 Data Analysis

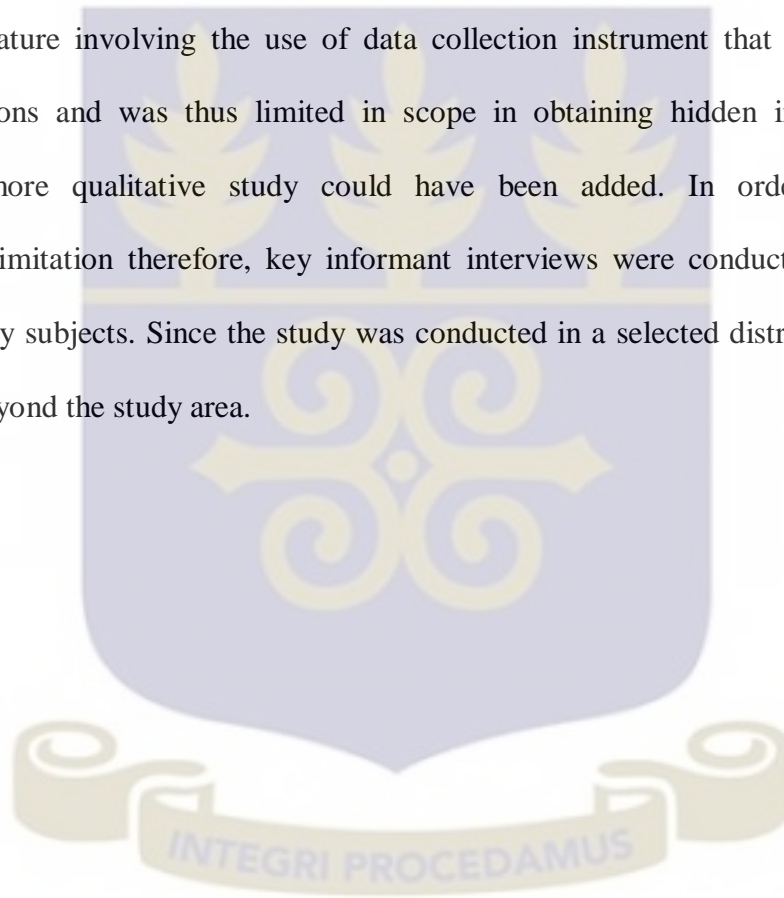
The data were entered into epi info (version 5.3.1) and exported to SPSS for analysis. Responses to questions were coded into numeric form for data entry. The findings of this study were interpreted and conclusion drawn by identifying the relevant variables and associations between the variables. Data were presented in the form of frequency distribution tables and graphs such as pie-charts and bar graphs. Cross tabulation and chi-square test were the main instruments used in presenting and analyzing the relationships between variables. As the dependent variable for this study (mothers' delivery behavior) is dichotomous, and also for the purpose of determining the relationship between variables, the logistic regression which describes the nature of underlying relationship between variables under study (dependent and independent variables) was used. This was to help predict the outcome (supervised or home delivery) based on values of the predictable (independent) variables such as the demographic, economic, physical, psychosocial and cultural factors. However, in many of the cases, the Logistic Regression could not be employed due to limited number of cases in one arm of the dichotomous dependent variable. All tests were carried out at the 5% level of significance.

The qualitative data from key informant interviews were transcribed from tapes and reviewed together with field notes that were taken. The data were coded by identifying the major themes that run through and summarized. Views of key informants interviewed were used to support data obtained from the questionnaires administered.

LIMITATIONS

Time and Financial resources were the major constraints. In addition, communities could not be visited several times due to these constraints. Also, the sample size could have been increased to cover more people.

Another limitation was that data collection instrument used involved a 12-month recall questions which stretched the demand made in respondent's memory. The study was also mostly quantitative in nature involving the use of data collection instrument that comprised mainly structured questions and was thus limited in scope in obtaining hidden information to the researcher. A more qualitative study could have been added. In order to reduce the aforementioned limitation therefore, key informant interviews were conducted to support the views of the study subjects. Since the study was conducted in a selected district, it is limited in generalization beyond the study area.



CHAPTER FOUR

RESULTS

4.0 Introduction

This chapter presents the findings of the study and an analysis of it in line with the objectives of the study. In all, all 350 questionnaires distributed were returned in satisfactory condition,

representing 100% response rate. The chapter begins with a presentation of the background characteristics of the respondents, and then continues with their behaviour and attitudes with their last pregnancy and delivery.

4.1 Background Characteristics of Respondents

4.1.1 Age

Age of a woman is one of the background variables that can affect their attitudes and utilization of maternal health care services. While young girls might feel shy to access maternal care services due to fear of being stigmatized, older women might also feel reluctant because they might have had previous births and would feel complacent about the importance of accessing maternal health care. Additionally, many of the young girls often get pregnant out of marriage and financially unprepared and this could further affect their ability to access maternal health care services especially if the services are not being provided free of charge.

The distribution of the respondents by age is shown in Table 4.1. About 6% of them were aged between 15 and 19 years, 21% were aged between 20 and 24 years, 37% were aged 25-29 years and only 2% were 40 years or older. This distribution shows that there were at least enough women in all the reproductive age group categories to be able to do the comparison.

Table 4.1: Age Distribution of Respondents

Age group (years)	Frequency	Percent
15-19	22	6.3

20-24	73	20.9
25-29	129	36.9
30-34	79	22.6
35-39	40	11.4
40+	7	2.0
Total	350	100.0

Source: Field Data, 2010

4.1.2 Educational Attainments of Respondents and their Partners

A woman's education is also a key determinant to her life's choices and for that matter, her attitudes towards accessing maternal health care. Education links to empowerment, both in terms of financial independence and in terms of decision making ability within the household. Similar arguments could be made of the husband/partners educational level. It is for this reason that it is considered important to incorporate woman's education in this analysis. Table 4.2a shows the distribution of the highest educational attainments of the respondents while Table 4.2b shows the educational level of their partners.

Among the women, 15.5% have no formal educational at all, 20.4% have only up to primary education and 51.7% went up to Middle/JSS level. Only 2.9% reported having tertiary level education and 9.5% have Secondary level education.

Table 4.2a: Highest Educational Attainments of Respondents

Educational level	Frequency	Percent
None	54	15.5
Primary	71	20.4

Middle/JSS	180	51.7
Secondary/SHS	33	9.5
Tertiary Level	10	2.9
Total	348*	100.0

Source: Field Data, 2010

***2 people did not respond**

The partners of respondents were generally more educated than the women. Up to 11.5% of the partners have tertiary level education with additional 27.6% having Secondary level education while only 3.4% have no formal education compared to 15.5% among the women.

Table 4.2b: Highest Educational Qualifications of Respondents' Partners

Educational level	Frequency	Percent
None	12	3.4
Primary	29	8.3
Middle/JSS	171	49.1
Secondary/SHS	96	27.6
Tertiary Level	40	11.5
Total	348*	100.0

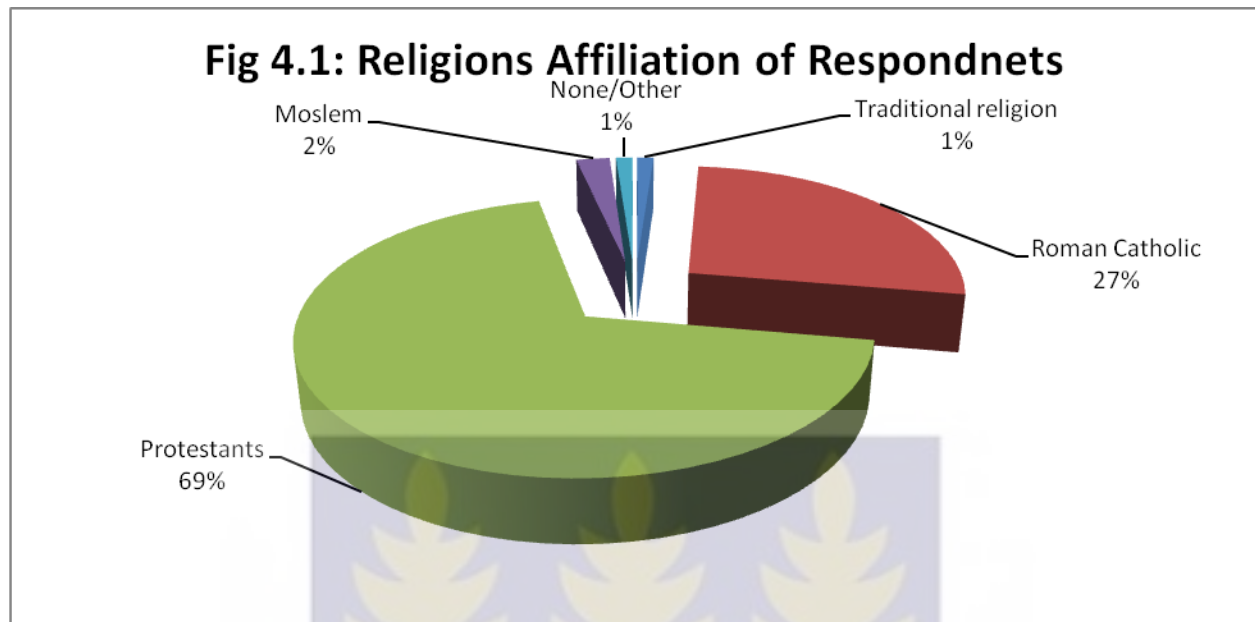
Source: Field Data, 2010

***2 people did not respond**

The impact of both the women and partners education on their utilization of maternal health services would be examined later.

4.1.3 Religion

The religious distribution of the respondents is shown in Fig 4.1. The community sample is found to be predominantly Christians, with 69% being Protestants while an additional 27% are Catholics. Moslems make up only 2% and traditional worshippers make up just 1%.



4.1.4 Marital Status

The distribution of the respondents by their marital status is shown in Table 4.3. About 7% of them indicated they were never married, 79% were married or cohabiting with a partner, 13% were divorced or separated and 0.6% were widowed. The impact of marital status on the utilization of maternal health care services would be examined later.

Table 4.3: Marital Status of Respondents

Response	Frequency	Percent
Never Married	24	6.8
Married/Cohabiting	276	78.9
Divorced/Separated	46	13.1
Widowed	2	0.6
Missing	2	0.6
Total	350	100.0

Source: Field Data, 2010

4.1.5 Ethnic Group

A woman's ethnic background can also affect her beliefs and attitudes towards pregnancy and motherhood, and therefore influence her utilization of maternal health care services.

The indigenous people of the area (the *Dangme*) made up about 70% of the population and this is followed by the Ewes who make up 19% of the sample and the *Akans* make up about 7%. The remainder of the sample is made up of people of Northern descent, including the *Grussi*, *Mole/Dagbani* and the *Sissala*. The distribution is shown in Table 4.4.

Table 4.4: Ethnicity of Respondents

Ethnicity	Frequency	Percent
Dangme	244	69.7
Ewe	66	18.9
Akan	24	6.9

Northerners	10	2.9
Other/Missing	6	1.7
Total	350	100.0

Source: Field Data, 2010

4.1.6 Employment Status

Employment status is another background variable that can affect a woman's income and autonomy within the household, and consequently her decision making ability when it comes to accessing maternal health care services. The distribution of the responses on employment status shows that except for 26 of them (about 7%), all the rest were employed. About 49% of them were traders, 12% were farmers while 5% were public/civil servants. The distribution of the responses on employment status is as shown in Fig. 4.2.

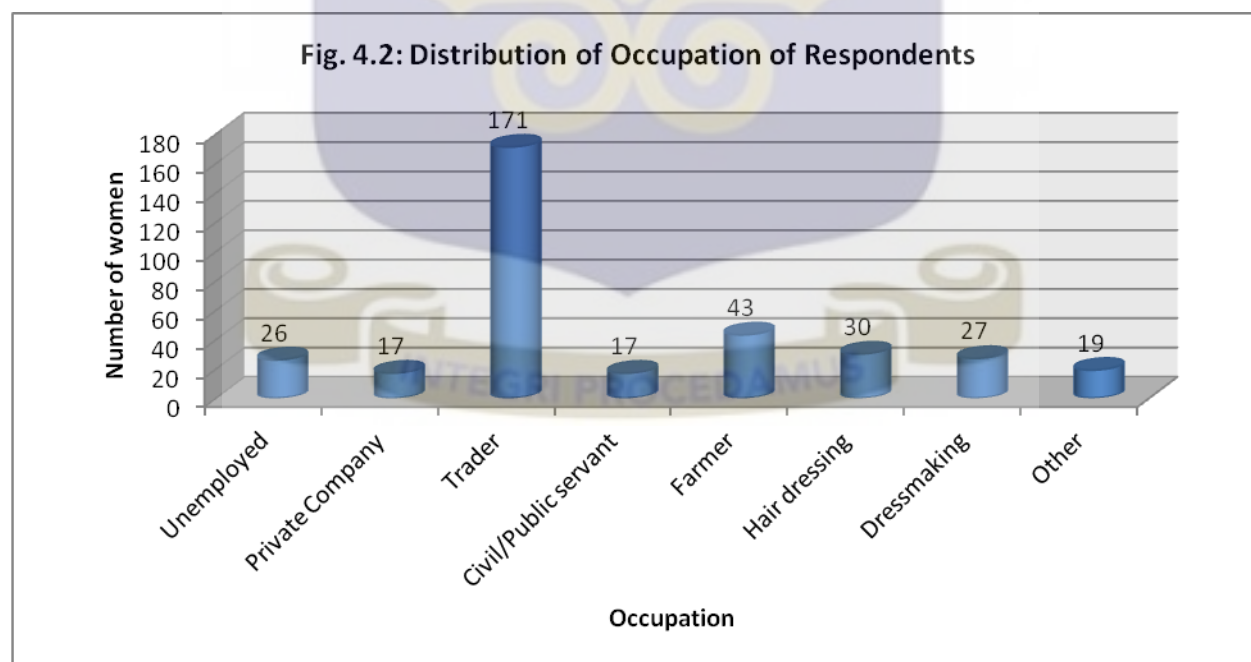


Table 4.5: Gestation of pregnancy at time of first antenatal visit

Gestation at first antenatal visit	Frequency	Percent
1-3months	157	46.3
4-6months	159	46.9
7-9months	20	5.9
Don't know	3	0.9
Total	339	100.0

Source: Field Data, 2010

It was also of interest to examine the total number of antenatal visits during the last pregnancy. Only 2% of those who had some antenatal visit had just one visit, 13% had two visits, 17% had three visits and 68% had the recommended four or more antenatal visits. As can be expected, 81% of those who started the antenatal visit in the first trimester had four or more antenatal visits while only 30% of those who started their antenatal visits in the third trimester attained four or more antenatal visits.

A chi-square test of independence showed that the association between gestation of pregnancy at first antenatal visit and the total number of antenatal visits is significant at the 5% (chi-square = 45, df= 4, $p < 0.001$). The distribution of the total number of antenatal visits by the gestation at first visit is shown in Table 4.6, and the results showed that women who commenced the antenatal visits within the first trimester are more likely to four or more antenatal visits before delivery.

Table 4.6: Total number of antenatal visits by gestation at first antenatal visit

Gestation at first antenatal visit	Total number of antenatal visits				Total
	One	Two	Three	Four and above	
1-3months	0.0	3.2	16.0	80.8	100.0
4-6months	2.5	20.1	15.7	61.6	100.0
7-9months	10.0	35.0	25.0	30.0	100.0
Total	1.8	13.1	16.4	68.7	100.0

Source: Field Data, 2010.

Table 4.7 shows the relationship between the attendances of antenatal by the background characteristics of interest in this study. Independent chi-squares are used to examine the significance or otherwise of the background variables but the logistic regression was not used because the case of non-attendance to antenatal are too few compared to the number of people who attended the antenatal (11 versus 339 respectively).

Although there are age differentials in the percentage attendance of antenatal care, the chi-square test shows that the differences are not statistically significant (Chi-square = 5.24, df = 5, P = 0.338). Similarly, the woman's education (Chi-square = 3.75, df = 4, P = 0.441), the partner's education (Chi-square = 8.085, df = 4, p = 0.089) and employment status (Chi-square = 0.911, df = 1, P = 0.340) are not statistically significant determinants of whether the woman attended antenatal or not, but marital status (Chi-square = 7.60, df = 1, p = 0.006), ethnicity (Chi-square = 51.33, df = 4, p = 0.000) and religion (Chi-square = 32.29, df = 4, p = 0.001) are shown to be statistically significant in terms of attendance of antenatal.

Table 4.7: Antenatal visit by Background Characteristics

		Did you attend any antenatal care during the pregnancy of your last child			Chi-square p-value
		Yes	No	Total	
		%	%	%	
Age groups	15-19	95.2	4.8	100.0	0.338
	20-24	94.4	5.6	100.0	
	25-29	99.2	.8	100.0	
	30-34	94.9	5.1	100.0	
	35-39	97.5	2.5	100.0	
	40+	100.0	.0	100.0	
What was your last completed educational level	No Education	94.4	5.6	100.0	0.441
	Primary	97.2	2.8	100.0	
	Middle/JSS	97.2	2.8	100.0	
	Secondary/SHS	100.0	.0	100.0	
	Tertiary Level	90.0	10.0	100.0	
What was your husband/partner last completed educational level?	No Education	91.7	8.3	100.0	0.089
	Primary	93.1	6.9	100.0	
	Middle/JSS	95.3	4.7	100.0	
	Secondary/SHS	100.0	.0	100.0	
	Tertiary Level	100.0	.0	100.0	
To what religion did you belong?	Traditional religion	50.0	50.0	100.0	0.001**
	Roman Catholic	100.0	.0	100.0	

	Protestants	96.3	3.7	100.0	
	Moslem	100.0	.0	100.0	

	None	100.0	.0	100.0	
Ethnicity Groups	Akan	95.8	4.2	100.0	0.000**
	Ga-Dangme	98.4	1.6	100.0	
	Ewe	98.5	1.5	100.0	
	Northerners	64.3	35.7	100.0	
	Other/Missing	100.0	.0	100.0	
Employment Status	Employed	96.6	3.4	100.0	0.340
	Unemployed	100.0	.0	100.0	
Marital Status	Married	98.2	1.8	100.0	0.006**
	Single	91.9	8.1	100.0	

Source: Field Data, 2010.

The next issue of concern was the place of delivery of the women for the last child. About 79% of them indicated they delivered their last child at a health facility while 21% did not. A cross-tabulation of the place of delivery and whether the respondent attended antenatal care or not is shown in Table 4.8. Of those who attended antenatal care at least once, 80% went ahead to deliver at a health facility but 20% did not. Also, those who never attended any antenatal care, 36% went ahead to deliver in a health facility while 64% did not. The chi-square test of independence was significant (chi-square value = 6.5, df = 2, p = 0.03) which implies that

women who attend antenatal care during pregnancy were more likely to deliver at a health facility

Table 4.8: Place of delivery of last child by antenatal visit during last pregnancy

Did you attend any antenatal care during the pregnancy of your last child?	Place of Delivery					
	Non-Health Facility		Health Facility		Total	
	Freq	%	Freq	%	Freq	%
Yes	68	20.1	271	79.9	339	100.0
No	7	63.6	4	36.4	11	100.0
Total	75	21.4	275	78.6	350	100.0

Source: Field Data, 2010.

Reasons given for non-delivery at the health facility include long distance to the health facility/high cost of hiring a car, lack of money, lack of transportation at the time of labour, poor attitude of health workers at the health facility, and only one respondent mentioned traditional beliefs as the reason for not delivering at the health facility. The distribution of the responses is as shown in Table 4.9.

Table 4.9: Reasons given for not giving birth at the Health Facility

Response	Frequency	Percent
Long distance to/high cost of chartering car to the health facility	35	46.7
I have no money to deliver at health facility	22	29.3
There was no transportation	9	12.0
Poor attitude of health workers at the health facility	8	10.7
My traditions and beliefs would not allow delivery at the health facility	1	1.3
Total	75	100.0

Source: Field Data, 2010.

Analysis of the place of delivery by the background variables is shown in Table 4.10b and binary logistic analysis is used to examine the significance of each variable by controlling for all the others. The overall regression is found to be significant with an R-square of 34% and correct classification rate of about 80% as shown in Table 4.10a.

Table 4.10a: Classification Table of Logistic Regression Model

Observed		Predicted		
		Place of Delivery		Percentage Correct
		Non-Health Facility	Health Facility	
Place of Delivery	Non-Health Facility	21	53	28.4
	Health Facility	17	255	93.8
Overall Percentage				79.8

From Table 4.10b, there exist some differentials in the place of delivery by the selected background characteristics but the logistic regression model revealed that the woman's education and the partner's education are the only statistically significant variables when all the others are controlled for. Age (Chi-square = 7.93, df = 5, p = 0.160), ethnic group (Chi-square = 12.42, df = 4, p = 0.014), religion (Chi-square = 8.46, df = 4, p = 0.076), marital status (Chi-square = 1.01, df = 1, p = 0.316), and occupational status (Chi-square = 1.46, df = 1, p = 0.228), are shown not to be statistically significant at the 5% level of significance.

Table 4.10b: Place of delivery of last child by background characteristics

		Place of Delivery		
		Non-Health Facility	Health facility	Total
		%	%	%
Age groups	15-19	28.6	71.4	100.0
	20-24	19.4	80.6	100.0
	25-29	27.1	72.9	100.0
	30-34	19.0	81.0	100.0
	35-39	12.5	87.5	100.0
	40+	.0	100.0	100.0
What was your last completed educational level	No Education	37.0	63.0	100.0
	Primary	38.0	62.0	100.0
	Middle/JSS	13.3	86.7	100.0
	Secondary/SHS	9.1	90.9	100.0
	Tertiary Level	10.0	90.0	100.0

What was your husband/partner last completed educational level?	No Education	33.3	66.7	100.0
	Primary	55.2	44.8	100.0
	Middle/JSS	23.3	76.7	100.0
	Secondary/SHS	12.5	87.5	100.0
	Tertiary Level	5.0	95.0	100.0
To what religion did you belong?	Traditional religion	.0	100.0	100.0
	Roman Catholic	21.5	78.5	100.0
	Protestants	21.2	78.8	100.0
	Moslem	25.0	75.0	100.0

	None	100.0	.0	100.0
Ethnicity Groups	Akan	12.5	87.5	100.0
	Ga-Dangme	25.8	74.2	100.0
	Ewe	7.6	92.4	100.0
	Northerners	21.4	78.6	100.0
	Other/Missing	50.0	50.0	100.0
Employment Status	Employed	20.7	79.3	100.0
	Unemployed	30.8	69.2	100.0
Marital Status	Married	20.3	79.7	100.0
	Single	25.7	74.3	100.0

Source: Field Data, 2010.

The study also explored the relationship between antenatal visits, place of delivery and the outcome of the delivery. In total, 22 of the birth (6%) of children resulted in deaths while 328 (94%) of the children resulted in live births. Thirteen of the deaths took place out of the births in

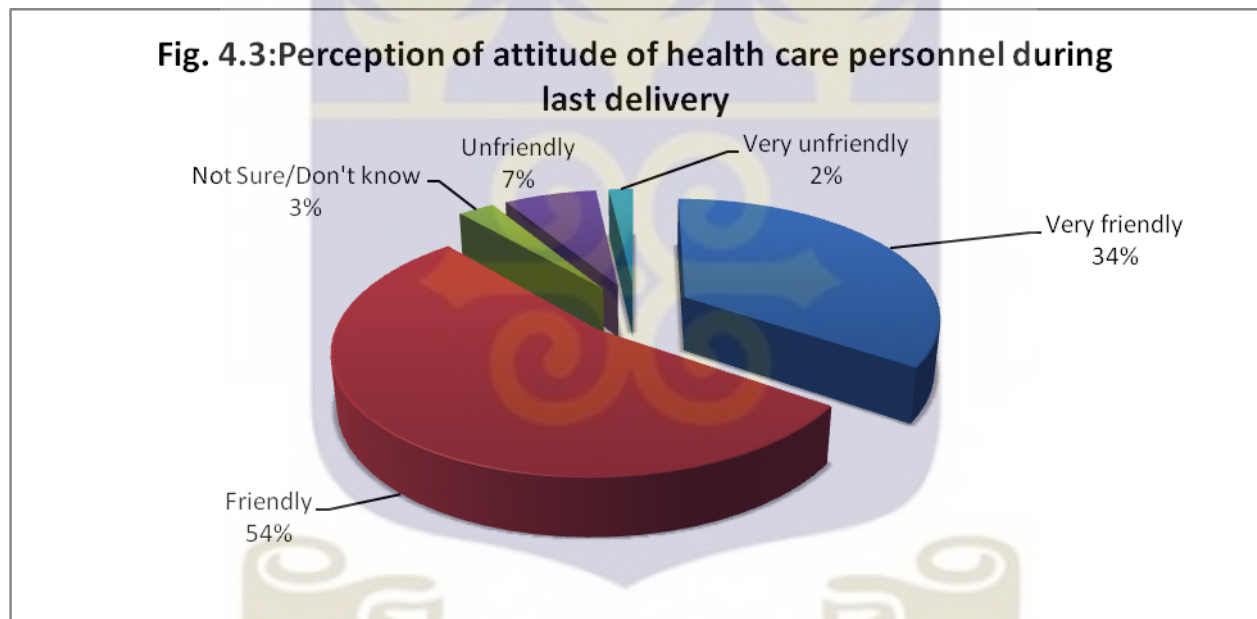
a non-health facility while 9 took place out of the births in a health facility. A chi-square test shows that the association between place of delivery and outcome of the delivery is significant (chi-square = 5.29; df = 1, $p < 0.05$), thus implying that the likelihood of infant mortality is significantly higher if delivery takes place out of the health facility as compared to deliveries at the facility. It was however interesting to note that all the women who had no antenatal visits at all had live births, but the impact of antenatal visits on the outcome of the delivery was not significant (chi-square = 0.76; df = 1, $p = 0.383$).

Table 4.11: Outcome of delivery by place of delivery and antenatal visits

		Outcome of Delivery				Chi-square
		Baby Delivered Alive		Baby Delivered Dead		
		Freq	%	Freq	%	
Place of Delivery	Non-Health Facility	66	88.0	9	12.0	0.021*
	Health Facility	262	95.3	13	4.7	
	Total	328	93.7	22	6.3	
Did you attend any antenatal care	Yes	317	93.5	22	6.5	0.383
	No	11	100.0	0	.0	
	Total	328	93.7	22	6.3	

Source: Field Data, 2010.

To further explore the truth or otherwise of the negative perception about the attitude of the health care personnel towards expectant mothers, those who delivered at the health facility were asked to indicate the attitude/behaviour of health care staff at the time they went to deliver and the responses are shown in Fig. 4.3. Up to 34% of them considered the attitude of the staff at the last delivery as very friendly; 54% considered the attitude of the staff at their last delivery as friendly; and only 9% ranked the attitude of the health care staff as unfriendly or very unfriendly. This finding suggests that the respondents who cite the attitude of health care personnel as being a barrier to their delivery at the health care facility might be missing the true state of affairs.



It was considered important to examine the woman's decision making autonomy in the house and how it affects her reproductive health seeking behaviour. Asked about who was the head of their household, only 9% indicated they were the heads of their household, 69% had their husband/partner as the head of their household, 11% had their father-in-law as the head of their household and 1% had their mother-in-law as the head of their household.

Further, the women were asked to indicate who mainly decides in their household where women should deliver and the summary of the results is shown in Table 4.13. In the case where the woman herself took the decisions, 81% of them choose to deliver at the health facility while 19% delivered at a non-health facility. In the case where the husband was the main decision maker, 67% delivered at the health facility while 33% delivered in a non-health facility. A chi-square test of independence between who takes the decision and place of delivery shows that the association is significant (chi-square = 17.01; df = 5, $p < 0.05$). Evidently, percentage delivery at the health facility was highest among the women who had the autonomy to decide where they should deliver

Table 4.13: Decision making autonomy and place of delivery of last child

Who mainly decides in your household where women should deliver	Place of Delivery			
	Non-Health Facility		Health Facility	
	Freq.	%	Freq.	%
The pregnant woman herself	47	19	205	81
Husband	2	33	4	67
Mother-in-law	11	46	13	54
Father-in-law	1	17	5	83
Other family member	10	24	32	76
My pastor	2	67	1	33
Total	73		260	

Source: Field Data, 2010.

Concerning traditional/cultural practices performed on the mother before or after delivery, about 91% of the women indicate that they did not undergo any traditional/cultural treatment when they last delivered.

Table 4.14: Experience of traditional/cultural practice during/after last pregnancy

Responses	Frequency	Percent
Yes	28	8.0
No	317	90.6
Don't remember/Can't tell	5	1.5
Total	350	100.0

Source:

In the case of the child, about 93% said no traditional/cultural practice was performed on the child following their last delivery. These responses showed that there is a gradual weakening of traditional and cultural practices for pregnant women and new born children, some of which were often described as obnoxious and inimical to the wellbeing of the mother and children.

Table 4.15: Experience of traditional/cultural practice on child after last delivery

Responses	Frequency	Percent
Yes	17	4.9
No	325	92.9
Don't remember/Can't tell	8	2.2
Total	350	100.0

Source: Field Data, 2010.

CHAPTER FIVE

DISCUSSIONS

5.1 Introduction

This chapter discusses the results of the study. Attempts were made to relate these findings to the literature reviewed. Emphasis was placed on factors that showed significant relationships with mother's maternal health care and delivery behavior. Equal importance is given to those that run contrary to major findings.

5.2 Maternal Age

The results of the analysis of individual background variables with mother's delivery behavior showed no significant relationship between mother's age and behavior regarding delivery. This confirms the 2003 Demographic and Health Survey (DHS), which indicated consistent insignificant relationship between mother's age and utilization of health services for supervised delivery in Ghana (GSS, NMIMR, ORC Macro, 2004). However, this finding contradicts a similar analysis of results of DHS in Kenya and Malawi (Stephenson et al. 2006).

The fact that questions about age could generate difficulties with data reliability cannot be over emphasized due to several factors including ignorance of date of birth, lack of proper records of individual demographic variables and preference of people to mention their year of birth rather than the year and the month. This problem was encountered during the data collection when quite a number of mothers interviewed could not produce their birth certificates to confirm their ages. The sample size was large enough to reduce or buffer any effect of the aforementioned difficulties.

Choosing the place of delivery by mothers is based on choice and the financial independence of the individual in general and since these factors affect both old and young alike, there is not much suspicion to believe that one age group in the Lower Manya Krobo district could behave differently from the other. It is also important to note that individual behaviors vary across a multiple of factors and since these studies were conducted at different geographical and socio-cultural backgrounds, the variations in the relationship between mothers age and utilization of health services for supervised delivery in Ghana as against Malawi and Kenya as reported by the Ghana Demographic Health Survey (2003) and Stephenson et al (2006) respectively, should be expected.

5.3 Maternal and Paternal Education

Taking into consideration the individual factor level, the results showed significant relationship between maternal education and the utilization of delivery services confirming the findings in GSS, NMIMR & ORC Macro (2004) in Ghana, and in Burkina Faso, Kenya, and Malawi by Stephenson et al (2006), all of which showed significant relationship between maternal education and the seeking of health services for delivery. The result, however, contradicted similar study in the Bangladesh (Ensor and Stephanie, 2004).

The husbands/partners of respondents (paternal) education also did show significant relationship with mothers utilization of delivery services confirming a similar study in Peru (Vogle, 2004) in which paternal education played significant role though not as much as that of maternal education in the utilization of health services for supervised delivery. In Ghana, males are almost always the household heads as indicated by the 2000 Ghana Living Standard Survey Report (GSS, 2000). The males have control over wealth and power including the power to take

decisions for themselves and their partners as well. The influence exerted by paternal education is therefore with no surprise since they may be more enlightened than partners with lower or no education at all.

The results have useful implications on policy formulation and programme designs. In the first place, it reinforces the importance of girl child education and secondly, the fact that not much have been achieved with regards to higher level of female education taking into consideration the whole country, Ghana. The result also showed that the importance of maternal education in promoting supervised delivery service utilization cannot be overemphasized. Even though tertiary education is not a pre-requisite for utilizing supervised delivery, it is worth mentioning that of all the mothers who indicated that they have had tertiary education, ninety percent delivered at the health facility at the time they gave birth to their last child. This shows a positive relationship between higher educational levels and enhanced reproductive health decisions by women.

5.4 Marital Status

Marriage is suggestive of a strong enabling and protective factors from respondent's partners. Since married women are more likely to be supported by their partners both physically, economically and emotionally, they are more likely to be able to attend antenatal care services. Mothers' marital status for instance, was found to be significantly related to antenatal visit. This finding confirms the results of the 2003 Ghana Demographic and Health Survey (GSS, NMIMR, ORC Macro, 2004). Since two heads are usually better than one and due to the fact that married couples are more likely to pull their resources together to complement each other efforts, both physically, economically or financially and emotionally, it came with no surprise that married

mothers in the Lower Manya krobo district were found more to patronize maternal health services for antenatal care than their counterparts that were not married.

5.5. Antenatal Experience

Antenatal attendance does not only play a significant role in influencing mothers' delivery behavior but the number of times mothers undertake such visits was indicative of the confidence they have built in the health providers. Number of antenatal visits showed strong significant relationship with delivery at the health facility among mothers who had three or more such visits than those with less than two visits. These findings confirm similar studies conducted by Liyobe (2005) at Atwima-Kwanwoma district in Ghana, which found number of antenatal visit per mother as significantly reducing their risk of home delivery by 30% for every visit. Other significant factors related to antenatal experience include the gestation of the pregnancy during the last visit and ultrasound scan examination on the expectant mother to determine the expected date of delivery and communicating this date to expectant mothers. Frequenting antenatal services offer numerous ranges of opportunities for mothers that could have positive influence on their delivery behavior. These include frequent interactions with health care providers, counseling and education on progress of fetal growth, among others.

5.6 Attitude of Health Staff

The result on the attitude and behavior of health workers showed no significant relationship with regards to mothers' choice of delivery place. This is contrary to a similar study in Ghana by

D'Ambruoso et al. 2001. Public outcry on attitude and behavior of health workers in the country might have played a significant role in reversing the trend. It is also worth mentioning that the Atua government hospital which is the district hospital and main referral hospital in the district and beyond do run regular workshop and in-service training on customer care and other health services with the view to providing and improving satisfactory health services in Atua government hospital and all the sub district health centers. It was also explained in one of the researcher's in-depth interview with senior midwives that mothers are always educated to know that shouting on them sometimes during labour are aimed at preventing neonatal deaths and such education and other services could have positive effects in reducing perceptions on attitude of midwives.

5.7 Physical Factors

Distance to the nearest health facility was one of the factors mentioned by mothers interviewed as reason for not delivering at the health facility. This statistically support similar findings reported by the world bank (2002) that brought out the fact that at least one third of rural women in developing countries live more than five kilometers from the nearest health facility. It also supports the studies conducted by D'Ambruoso et al (2002) and Jansen (2006).

While roads and means of transport may be readily available in the urban part of the district, the situation is different in the rural and the remotest part of the district where due to the poor nature of the roads, means of transport were scarcely available. This could impede easy access and prompt referral of women to health facilities for child delivery. In a Key informants interview, one respondent remarked:

“One important fact is that issues concerning child delivery are sometimes not seen as urgent matters that needs prompt attention but rather normal natural phenomena hence little preparations are made towards delivery events by most of mothers that came here to deliver. It stands therefore, that those who may not get readily available vehicle when in labour may resort to deliver outside the health facility”

5.8 Household Structure and Family Resources

Variations in household structure and resource have not been seen to play any significant role in influencing women’s choice of delivery place. The husband / partners of most respondents was almost universally mentioned as head of the household, and so also was the pregnant woman mentioned as the decision maker regarding the choice of place for delivery. Few of the respondents however, mentioned that their decisions could not materialize at the end as their husbands thought otherwise. It is well known that among the Krobo, the women in general contribute little at the household level with regards to decision making perhaps due to the fact that hardly were the women accorded the right and power to become household heads and also to be involved in decision making.

It is however interesting to note that in the case where the women in this study themselves took the decision with regards to their delivery place, eighty one percent of them chose to deliver at the health facility. Where the husbands were the decision makers, sixty-seven percent delivered at the health facility. These results have useful implications for policy formulation. First, it reinforces the significance of empowering and involving women in decision making and second, the contribution of women themselves in promoting supervised delivery in the district cannot be overemphasized.

The possession of some household and family resources such as TV set, Mobile phone and refrigerators were found not to be a major contributing factor in women's choice of delivery place. It must, however, be noted that although there might not be a direct link between a mere possession of items and mothers choice of delivery place, one must not loose sight of the communicative roles played by TV and Mobile phones. The role played by media cannot be ruled out since it is very educative on many health issues and such an important role could have significance influence in promoting maternal health in the Lower Manya Krobo district and the country as a whole.

5.9 Economic factor

It is obvious from this study that a major factor deterring the women from delivering at the health facility is economic in nature. Respondents preferred hospital services for most of their maternal heath care, however, they were forced to deliver outside the health facility due to financial difficulties. Poverty was extreme, as could be observed in the district. Petty trading and farming were the main occupation of respondents. The result of this was that most of the respondents either have insufficient or non-regular income. The cost of using health service for supervised delivery is most often considered to be the immediate user charges, however it has been suggested that a better assessment of cost of using health service should be the money paid out of charges, drugs, transport cost and the value of time involved in travelling and waiting at the health facility (Philip, 1990)

Government policies aimed at increasing the proportions of health facility deliveries and reducing maternal mortality in Ghana have yielded desired result. One such policy is the free

delivery exemption policy introduced in 2004. This policy has helped to take the burden of delivery charges off the chest of mothers who deliver at the health facility. According to the head of maternity ward in one of the health facilities that the researcher interviewed, provision has even been made for mothers who do not have national health insurance card to enjoy the exemption to deliver without delivery charges.

Transport fares in general are regulated by the appropriate transport agencies in the country. However, during emergencies especially in the night, hiring a taxi to the nearest health facility could be costly. Key informants interviewed in Akuse and Lydia maternity home at Odumase revealed that when a woman is in labour, taxi drivers take advantage of the situation and charge exorbitant fees.

5.10 Cultural Factors

The result of this study revealed that there seem to be a decline in knowledge and practice of traditional norms and values related to child birth. The situation is even worse in urban settlements. This finding is in contrast with a similar study by Afful (2005) in Navrongo in the northern Ghana in which traditional norms and practices played significant roles in influencing mother's choice of delivery place.

Rapid urbanization perhaps has created a more heterogeneous society which seems to have diluted indigenous cultural norms and practices. It perhaps also offers an open door for cultural adulteration. With recent increased affinity for religious activities, it is not surprising for the waning interest in deep rooted traditions whose continuous presence could have serious religious connotations. Similar views were expressed by all key informants who the researcher

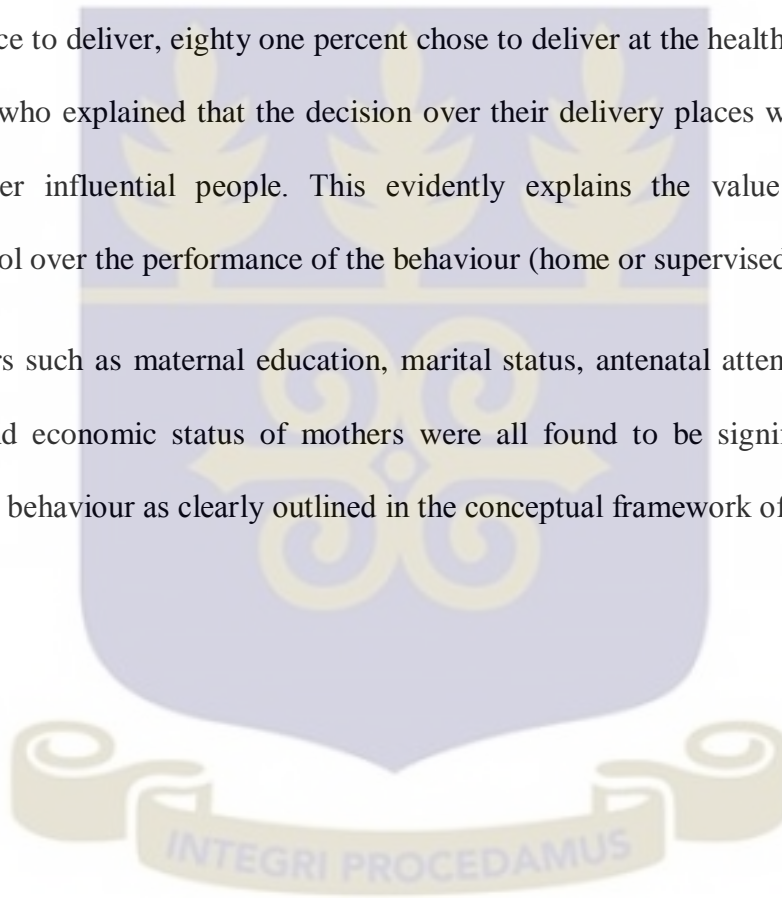
interviewed. It can be said that what matters most in a rapidly growing settlement like Odumase, Kpong and Akuse is peoples' livelihood which is characterized by individual businesses and group religious activism rather than thoughts of rapidly fading traditions of little economic importance. Thus, though tradition and culture are still relevant, their significance in shaping peoples' decisions regarding life threatening events are most often neglected.

The use of the Theory of Planned Behaviour (TPB) model in this study provided an organising framework for studying and explaining mothers' delivery behaviour (home or supervised delivery). The framework provided a structure for the interviews that identified attitude, subjective norms regarding delivery, control beliefs and exogenous factors relevant to the study of the mothers' behaviour (home or supervised delivery) under investigation. Findings from data analysed suggested a benefit for including exogenous factors such as finance, psychosocial, physical, etc as separate components in addition to the three TPB components, which are attitudes, subjective norms and perceived behavioural control.

All the three TPB components as well as some of the exogenous components were seen to be significantly associated with mothers' delivery behaviour. All four components independently contributed to predicting the mothers' delivery behaviour (home or supervised delivery). Evidently mothers who held strong beliefs that the merits of delivering at the health facilities far outweigh home deliveries, attended antenatal care up to the required number of four times and above and went ahead to deliver at the health facilities. This confirms the women's belief about the outcome of performing a behaviour (behavioural belief) weighted by the evaluation of the outcome which in this case is safe delivery.

Similarly, the findings revealed that even though, majority of the respondents (mothers) explained having had the opportunity to choose their delivery place, there were instances where the influence over the mothers delivery places were based on decisions taken by either husbands, mother, mother in-law, father in-law or other influential personalities in their family or community. This is consistent with the prediction of the subjective norm regarding the women's delivery behaviour. Also, in this study, where the women themselves took the decision with regards to the place to deliver, eighty one percent chose to deliver at the health facility as against nineteen percent who explained that the decision over their delivery places were taken by their husbands or other influential people. This evidently explains the value of the mothers' behavioural control over the performance of the behaviour (home or supervised delivery).

Exogenous factors such as maternal education, marital status, antenatal attendance, distance to health facility and economic status of mothers were all found to be significantly related to mothers' delivery behaviour as clearly outlined in the conceptual framework of this study.



CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 INTRODUCTION:

This study focused on investigating and identifying the factors that influence utilization of health services for supervised delivery by mothers in the Lower Manya Krobo District. A cross-sectional survey study with a sample size of 350 was designed to address the specific objectives of the study. In-depth interviews were also conducted on community leaders and midwives selected from four health facilities in the district to support data obtained from the questionnaires administered. Quite a number of important and significant findings were unraveled. This chapter comes out with the conclusions drawn from the study and gives specific recommendations to those who have a stake in policy making for appropriate public health action that could lead to an overall enhancement of supervised delivery in the Lower Manya Krobo district.

6.2 CONCLUSIONS ON SPECIFIC FINDINGS

1. Higher Maternal and Paternal education plays an important and positive role in shaping mothers' decision on choice of delivery place and also have the capability to mediate through other significant factors in reducing mothers' risk of domiciliary delivery.
2. Marriage is a strong enabling and protective factor in supervised delivery in the district. By virtue of support that married women enjoy from their partners, both physically economically and emotionally, the married women were able to attend antenatal cares regularly and met other costs of delivery. The married women therefore visited the health facilities for antenatal care more than the unmarried women.

3. Antenatal attendance is a significant determinant of supervised delivery services utilization in the Lower Manya Krobo District. Pregnant women who had up to three (3) or more antenatal visits have reduced risk of home delivery than expectant mothers who do so only once or had not attended antenatal visits at all. Additionally, continual antenatal visits beyond six months or the second trimester reduced the expectant mother's risk of home delivery.
4. Improved antenatal care services such as determining women's expected date of delivery (EDD) are protective factors that could reduce expectant mothers' risk of home delivery.
5. Distance of more than an hour walk to the nearest health facility is a disincentive and hindrance to supervised delivery in the district. This increases the risk of domiciliary delivery.
6. Long distance to and high cost of hiring a car during emergency also posed a threat to supervised delivery in the district.
7. Supervised delivery service utilization in the district is largely influenced by economic status and social well-being. One of the reasons given by the mothers who delivered outside the health facility was lack of money for either hiring a car to the health facility or meet other costs that has to do with delivery at the health facility apart from delivery charges.

8. Decision making autonomy of mothers on matters concerning their health and choice of place of delivery is a significant determinant of supervised delivery utilization in the district. Eighty one percent of mothers' who had the autonomy over the choice of delivery place, chose to deliver at the health facility.
9. Behavioural, normative and control beliefs were relevant and constituted major determinants of the mothers' delivery behaviour (supervised or home delivery).

6.3 RECOMMENDATIONS

1. Even though the overall antenatal attendance is generally high, the number of visit is a major challenge to the utilization of health services for supervised delivery services in the district. There is therefore the need for the Ghana Health Service to fully adapt and strengthen the World Health Organization's goal oriented Antenatal Care (ANC) package termed as focused ANC. Antenatal attendance should be used as an entry point for number of other health services for expectant mothers thereby promoting a comprehensive integrated service delivery in order to scale up supervised delivery coverage in the district.
2. The District Health Administration (DHA) should come out with an individual Birth Plan (IBP) to respond to the pertinent health needs of mothers in the district. The IBP should include a Comprehensive Personal Record (CPR) of expectant mothers and their husbands or partners educational background and distance to the nearest health facility. This will help identify those that are at risk for whom special attention should be given. This may include counseling, defaulter tracing, home visits and others. There is the need to co-opt

other critical actors especially partners of mothers in the preparation for birth and readiness for possible complications.

3. The district Assembly should identify realistic and sustainable poverty alleviation programmes to help build capacity and engage, especially, poor women in profit making ventures. This will help provide a tool for empowerment that could raise the income levels of women in the district to be financially independent and be able to meet their health and delivery needs.
4. The district Assembly should advocate for improvement of the road net work especially to the health facilities. This will help increase and provide easy accessibility of expectant mothers to the health facilities and reduce the high cost incurred through hiring of car, distance and transportation.
5. The District Health Administration needs to be provided with sufficient vehicles to enable them to carry out comprehensive health education programmes, especially on issues in the district. Assistance could be offered from the district Assembly or from the government.
6. 6. There is the need for involvement of women in decision making in the households especially issues of maternal health and delivery. Evidently from this study, percentage delivery at the health facility was highest among women who had the autonomy to decide where they should deliver.

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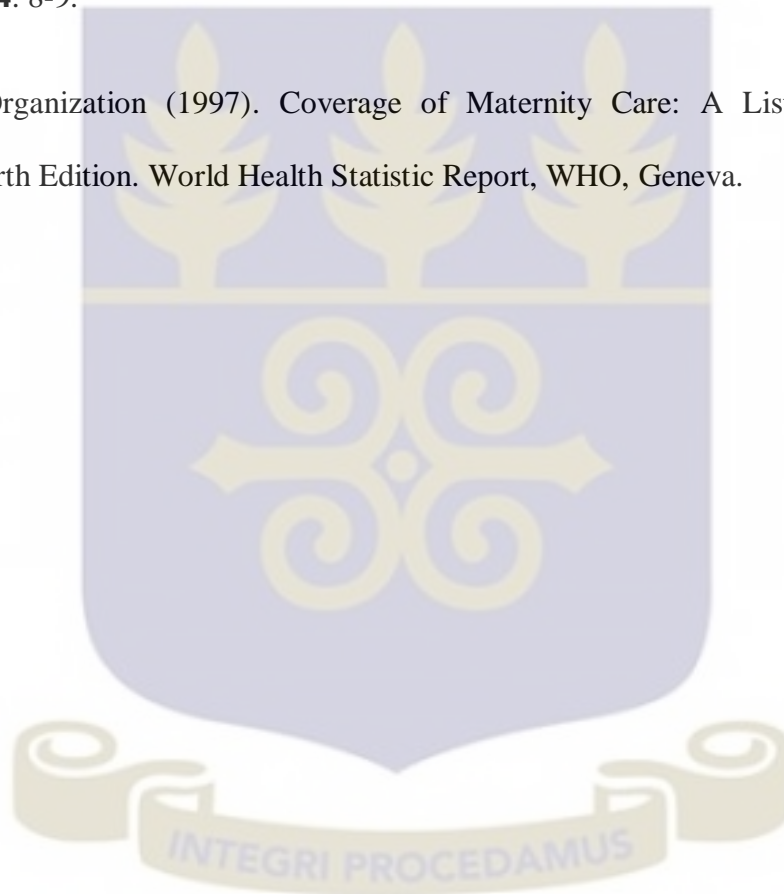
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APPENDIX A

FACTORS INFLUENCING UTILIZATION OF SUPERVISED DELIVERY SERVICES BY MOTHER'S IN LOWER MANYA KROBO DISTRICT

QUESTIONNAIRE FOR MOTHERS

INTRODUCTION

I/we are conducting a study about mother's last delivery and wish to ask for your participation. I/we will like to ask you about antenatal and delivery services you received before you gave birth to your last child. The information that you will give will assist to understand how mothers in this community receive antenatal and delivery services.

INSTRUCTIONS

Provide the necessary information in the dotted lines and indicate the correct response(s) where applicable by ticking () in the box (es) provided. The questions relate to the time you gave birth to your last child.

SECTION A DEMOGRAPHIC PROFILE

1. Community
2. House Name/No.
3. Age of mother
4. What was your last completed educational level?

(a) No education	[]
(b) Primary	[]
(c) Middle/ JSS	[]
(d) Secondary/JSS	[]
(e) Tertiary level	[]
5. What was your husband/partner last completed educational level?

(a) No education	[]
(b) Primary	[]
(c) Middle/JSS	[]
(d) Secondary/SS	[]
(e) Tertiary level	[]

6. To what religion did you belong?
- (a) Traditional religion ☐
 - (b) Roman catholic ☐
 - (c) Protestants ☐
 - (d) Moslem ☐
 - (e) None ☐
7. What was your marital status by the time you were pregnant with and delivered this baby?
- (a) Single ☐
 - (b) Never Married ☐
 - (c) Married ☐
 - (d) Divorced / Separated ☐
 - (e) Widowed ☐
8. To which ethnic group do you belong?
- (a) Akan ☐
 - (b) Ga/Dangbe ☐
 - (c) Ewe ☐
 - (d) Grussi ☐
 - (e) Mole Dagbani ☐
 - (f) Sisala ☐
 - (g) Other{Specify}..... ☐
9. What work did you mainly do?
- (a) Government worker ☐
 - (b) Private Company worker ☐
 - (c) Trader ☐
 - (d) Farmer ☐
 - (e) Hair dressing ☐
 - (f) Dressmaking ☐
 - (g) None ☐
 - (h) Other{Specify}..... ☐
10. What work did your husband/partner mainly do?
- (a) Government worker ☐
 - (b) Private Company worker ☐
 - (c) Trader ☐
 - (d) Farmer ☐
 - (e) None ☐
 - (f) Other ...{Specify}..... ☐

SECTION B PSYCHOSOCIAL FACTORS

A. Antenatal Experience

11. Did you attend any antenatal care during the pregnancy of your last child?
- (a) Yes []
- (b) No []
- (c) Don't know / Don't remember []
12. How many times did you attend antenatal care?
- One []
- (a) Two []
- (b) Three []
- (c) Four and above []
13. How many months pregnant were you when you attended your first antenatal care?
- (a) 1 – 3 months []
- (b) 4 – 6 months []
- (c) 7 – 9 months []
- (d) Don't know []
14. How many months pregnant were you at your antenatal care for the last child?
- (a) 1 – 3 months []
- (b) 4 – 6 months []
- (c) 7 – 9 months []
15. During your antenatal visits was an ultrasound scan done on you?
- (a) Yes []
- (b) No []
- (c) Don't know []
16. During your antenatal visits were you ever told of the date on which you were expected to deliver?
- (a) Yes []
- (b) No []
17. Did you remember this date on the day before you deliver?
- (a) Yes []
- (b) No []
- B Delivery Experience**
18. How many children have you ever delivered?
- (a) One []

- (b) Two ☐
- (c) Three ☐
- (d) Four ☐
- (e) Five ☐
- More than Five ☐
19. Where did you give birth to your last child?
- (a) Your home/TBA home ☐
- (b) Health facility ☐
- (c) Other....(Specify).....
20. Why did you choose to deliver at where you delivered?
- (a) Because of the long distance to the health facility ☐
- (b) Because I have no money to deliver at health facility ☐
- (c) Because there was no transportation ☐
- (d) Because of poor attitude of health workers at the health facility ☐
- (e) Because my traditions, and beliefs would not allow delivery at the health facility ☐
- (f) Others ...(Specify).....
21. At what time of the day did you give birth?
- (a) Morning ☐
- (b) Afternoon ☐
- (c) Evening ☐
- (d) Night ☐
22. Who accompanied you to where you gave birth?
- (a) Husband/partner ☐
- (b) Father in law ☐
- (c) Mother in law ☐
- (d) Mother ☐
- (e) Sister ☐
- (f) Other... (Specify).....
23. What can you say about delivery at the facility where you delivered your last child.
- (a) Easy ☐
- (b) Difficult ☐
- (c) Can't tell ☐
- (d) Other....(Specify).....
24. What was the outcome of your delivery at the facility where you delivered your last child?

- (a) Child is delivered alive []
 (b) Child died []
 (c) Other....(Specify).....

C Mothers' Opinion on Attitude of Health Staff and TBAs

25. At the time you gave birth to your last child what opinion did you hold about the attitude/behavior of midwives and other health staff towards mothers during delivery in the health facility?
- (a) Very friendly []
 (b) Friendly []
 (c) Not Sure / Don't know []
 (d) Unfriendly []
 (e) Very unfriendly []
26. Which of the following attitudes/behaviors in your candid opinion did you think midwives and other health staff do exhibit?
- (a) They do not greet mothers []
 (b) They shout at mothers []
 (c) They insult mothers []
 (d) They beat mothers []
 (e) They attend to mothers late []
 (f) They do not listen to mothers complaints []
 (g) Other.... (Specify).....

D Mothers' Past Experience with Health Workers' Attitudes And Behaviors

27. At the time you gave birth to your last child what were the attitudes/behaviors of the midwives and other health workers towards you or your relatives?
- (a) Very friendly []
 (b) Friendly []
 (c) Not sure / Don't know []
 (d) Unfriendly []
 (e) Very unfriendly []
28. Which of the following attitudes/behaviors did health staff exhibit towards you and/or your relatives?
- (a) They did not greet mothers []
 (b) They shouted at mothers []
 (c) They insulted mothers []

- (d) They beat mothers ☐
- (e) They attend to mothers late ☐
- (f) They do not listen to mothers complaints ☐

29. In general, how would you rank the experiences of health staff with regards to delivery at the health facilities.

- (a) Highly experienced ☐
- (b) Moderately experienced ☐
- (c) Highly inexperienced ☐
- (d) Inexperienced ☐
- (e) Don't know / Can't tell ☐

30. What perception do you hold about health workers at the health facilities nearest to you.

- (a) Caring ☐
- (a) Not caring ☐
- (b) Patient ☐
- (c) Not Patient ☐
- (d) Don't know ☐
- (e) Others..... (Specify)..... ☐

E Family Structure and Household Resources

31. Who is the head of your household?

- (a) Husband / Partner ☐
- (b) Myself ☐
- (c) Father-in-law ☐
- (d) Mother-in-law ☐
- (e) Others.....(Specify)..... ☐

32. Did your husband/partner have any other wives besides yourself at the time you gave birth to your last child? (If your answer is no skip question 33 to 36)

- (a) Yes ☐
- (b) No ☐
- (c) Don't know ☐

33. How many other wives did he have?

- (a) 1 ☐
- (b) 2 ☐
- (c) 3 ☐
- (d) 4 ☐
- (e) More than 4 ☐
- (f) Don't know ☐

34. What position were you to these other wives in terms of commencement of marriage?
- (a) First []
 - (b) Last []
 - (c) Other.....(Specify)..... []
35. Did you think your position in the marriage influenced your choice of delivery place where you gave birth to your last child?
- (a) Yes []
 - (b) No []
36. In what way did your position in the marriage influence your choice of delivery place?
- (a) I received enough support from husband/partner []
 - (b) I received little support from my husband/partner []
 - (c) I received no support at all from my husband/partner []
 - (d) Don't know / Can't Tell []
 - (e) No influence []
37. Indicate the item(s) listed below that belong to your house hold at the time you gave birth to your last child
- (a) Access to media**
- 1. Radio []
 - 2. Television []
 - 3. Other..... (Specify)..... []
- (b) Access to means of communication**
- 1. Land line phone []
 - 2. Mobile phone []
 - 3. Other..... (Specify)..... []
- (c) Access to food storage**
- 1. Refrigerator []
 - 2. Freezer []
 - 3. Other..... (Specify)..... []
- (d) Modes of transport**
- 1. Bicycle []
 - 2. Motor cycle []
 - 3. Car/Truck []
- (e) Access to entertainment**
- 1. Video deck []
 - 2. TV []

(f) Access to other modern household goods

- | | |
|------------------------------|--------------------------|
| 1. Computer | <input type="checkbox"/> |
| 2. Microwave | <input type="checkbox"/> |
| 3. Other..... (Specify)..... | |



SECTION D PHYSICAL FACTORS

38. What is the distance to the nearest health facility from your home?
- (a) Less than 30 minutes walk []
 - (b) About 30 minutes walk []
 - (c) 1 hour walk []
 - (d) More than 1 hour walk []
39. What would you say about transport availability to the nearest health facility?
- (a) Not always available []
 - (b) Sometimes available []
 - (c) Always available []
 - (d) Other..... (Specify)..... []
40. What is the nature of the road to the health facility nearest to you?
- (a) Motorable []
 - (b) Not Motorable []
41. What would you say about availability of health staff at the nearest health facility?
- (a) Very inadequate []
 - (b) Inadequate []
 - (c) Very adequate []
 - (d) Don't know []
42. What would you say about the availability of working equipment at the nearest health facility?
- (a) Not adequate []
 - (b) Very inadequate []
 - (c) Adequate []
 - (d) Very adequate []
 - (e) Don't know []
43. What is the distance to the nearest facility where you delivered if you did not use the health facility closest to you?
- (a) Less than 30 minutes walk []
 - (b) About 30 minutes walk []
 - (c) 1 hour walk []
 - (d) More than 1 hour []
44. What will you say about transport availability to the nearest facility where you delivered if you did not use the health facility?
- (a) Not always available []
 - (b) Sometimes available []

- (c) Always available []
 (d) Other..... (Specify).....

45. What will you say about availability of health staff at the facility where you delivered?

- (a) Very inadequate []
 (b) Inadequate []
 (c) Very adequate []
 (d) Don't know / Can't tell []

46. What will you say about the availability of working equipment the place you delivered if you did not use the health facility nearest to you?

- (a) Not adequate []
 (b) Very inadequate []
 (c) Adequate []
 (d) Very adequate []
 (e) Don't know / Can't tell []

SECTION E ECONOMIC FACTORS

47. What opinion did you hold about delivery charges at the nearest health facility?

- (a) Absolutely free []
 (b) Partially free []
 (c) Affordable []
 (d) Costly []
 (e) Very costly []

48. What opinion did you hold about transport fares to the nearest health facility in your community?

- (a) Affordable []
 (b) Not affordable []
 (c) Can't tell / No sure []

49. How would you describe the cost to chartering a taxi to the nearest health facility?

- (a) Low []
 (b) High []
 (c) Very high []
 (d) Can't tell / Not Sure []

50. What can you say about your household income

- (a) Regular []
- (b) Not regular []
- (c) Sufficient []
- (d) Not Sufficient []

Others.....(Specify).....

51. How many people do you have in your household.
- (a) One []
 - (b) Two []
 - (c) Three []
 - (d) Four []
 - (e) Five []
 - (f) More than five []

SECTION F CULTURAL FACTORS

52. Who mainly decides in your household where women should deliver?
- (a) The pregnant woman herself []
 - (b) Husband-in-law []
 - (c) Mother-in-law []
 - (d) Father-in-law []
 - (e) Other family member []
 - (f) My pastor []
 - (g) Other..... (Specify)..... []

53. What was the level of influence of this person's decision on your choice of delivery place when you gave birth to your last child?
- (a) Very low []
 - (b) Low []
 - (c) High []
 - (d) Very high []
 - (e) Not sure / Can't tell []

54. In which of the following household decisions do you have a final say?
- (a) Own health care []
 - (b) Large household purchases []
 - (c) Household purchases []
 - (d) Visits to family or relative []
 - (e) What food to eat each day []

55. What delivery position do you prefer during childbirth?
- (a) Squatting []

- (b) Lying ☐
- (c) Sitting ☐
- (d) Other (Specify) ☐

56. During the time you gave birth to your last child was your preferred delivery position allowed?

- (a) Yes ☐
- (b) No ☐
- (c) Don't remember ☐

57. What cultural practices/Traditional norms exist in your community about child birth?

.....

.....

.....

.....

58. What cultural practice(s) Traditional norms exist in your community about the treatment/care given to mothers immediately after delivery?

- (a) She is bathed with hot water ☐
- (b) She is bathed with warm water ☐
- (c) She is bathed with tepid water ☐
- (d) Other(Specify)..... ☐

59. What cultural practice(s)/Traditional norms exist in your community about the treatment/care given to the baby immediately after delivery?

- (a) She is bathed with hot water ☐
- (b) She is bathed with warm water ☐
- (c) She is bathed with tepid water ☐
- (d) Other(Specify)..... ☐

60. Did you receive any traditional/cultural treatment when you last delivered?

- (a) Yes ☐
- (b) No ☐
- (c) Don't remember / Can't tell ☐

61. Did your child receive any traditional/cultural treatment after delivering him/her?

- (a) Yes ☐
- (b) No ☐
- (c) Don't remember / Can't tell ☐

APPENDIX B
FACTORS INFLUENCING UTILIZATION
OF SUPERVISED DELIVERY SERVICES BY MOTHERS IN LOWER
MANYA KROBO DISTRICT

INTERVIEW GUIDE FOR KEY INFORMANTS
INSTRUCTIONS

SECTION A: BACKGROUND INFORMATION

1. Community
2. Occupation/Position of key informant
 - (a) Senior Midwife []
 - (b) Community leader []
 - (c) Other(Specify).....
3. For how long have you remained in active service in relation to child delivery?
 - (a) Less than 5 years []
 - (b) 5-10 years []
 - (c) More than 10 years []

SECTION B: GENERAL INFORMATION

4. How do people of the communities in this district in general, view delivery at health facilities? (summarize key points here but record all what respondent says)
.....
.....
.....
.....
.....
5. How do people of the communities in this district in general, view home deliveries (summarize key points here but record all what respondent says)
.....
.....
.....
.....
.....
6. Why do you think few mothers in this district deliver at health facilities?
.....
.....

.....
.....

7. Why do you think most mothers in this district deliver at home or by TBAs?

.....
.....
.....
.....

SECTION C: CULTURAL FACTORS

8. What cultural norms/traditional practices exist in the communities in this district regarding deliveries?

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.....
.....

9. In General, how would you describe the attitude and concerns of mothers about delivery position prescribe by the health facilities in this district.

.....
.....
.....
.....

SECTION D: ATTITUDE OF BIRTH ATTENDANTS

10. How would you describe in general, the attitudes and behaviors of midwives and other health staff towards mothers and their relatives during delivery at a health facility?

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.....
.....
.....
.....

11. How would you describe in general, the attitudes and behaviors of Traditional Birth Attendants in this district towards mothers during delivery at home?

.....
.....
.....
.....
.....

12. In general terms, what would you say about the experiences of health staff with regards to delivery at the health facilities closest to you?

.....
.....
.....
.....
.....

PHYSICAL FACTORS

13. Do you consider distance as a contributing factor towards utilization of health services for supervised delivery by the mothers in this community?

.....
.....
.....
.....

14. What will you say about transport availability to the nearest health facilities?

.....
.....
.....
.....

15. What is the nature of the road to the health facilities in this district?

.....
.....
.....
.....

ECONOMIC FACTORS

16. Will you say the transportation fares to a health facility can influence mothers decision on where to deliver?

.....

.....

.....

.....

1. Do you consider household income as an influencing factor in mothers decision on where to deliver?

.....

.....

.....

.....

.....

FAMILY STRUCTURE AND HOUSEHOLD RESOURCES

2. Does polygamous marriages influence decisions on mothers place of delivery.

.....

.....

.....

.....

.....

SECTION E: COMMENTS AND SUGGESTIONS

3. What comments and suggestions do you have to improve utilization of supervised delivery services in the district?

.....

.....

.....

.....

.....

APPENDIX C
CONSENT FORM FOR HOUSEHOLD HEADS

Hello, My name is and I am working with a master of Public Health student from the School of Public Health, University of Ghana, on mothers with children under one (1) year. The exercise is in connection with a study we intend to conduct on women's antenatal and delivery services in the community. I will therefore ask for your permission to conduct the exercise.

What ever information you will give will be kept strictly confidential and will not be given to any other person.

Participation in this study is voluntary and you can choose not to answer any individual question or all the questions. I however, wish you will participate fully in the study since your views are important. The interview will usually last for about 15 to 20 minutes to complete.

At this time do you want to ask me any question about the study?

May I now begin the interview?

Signature of interviewer..... Date

Signature/Thumbprint of respondent..... Date

Household Head agrees to be interview ☐
Household Head does not agree to be interviewed ☐

APPENDIX D
INFORMED CONSENT FORM FOR MOTHERS

Hello, My name is and I am working with a master of Public Health Student From the School of Public Health, University of Ghana, Legon.

We are conducting a study about mothers' last delivery and wish to ask for your participation. I will like to ask you about the antenatal and delivery services you received before you gave birth to your last child. The information that you will give will assist the student to understand how mothers in this community receive antenatal and delivery services. Your objective information will enable him offer useful suggestions for possible community interventions by your district health and local government authorities in the area of maternal health. What ever information you will provide will be kept strictly confidential and will not be given to any other person.

Participation in this study is voluntary and you can choose not to answer any individual question or all the questions. I, however, wish you will participate fully in the study since your views are important. The interview will usually last for about 15 to 20 minutes to complete.

At this time do you want to ask me any question about the study?

May I now begin the interview?

Signature of interviewer Date

Signature/Thumbprint of respondent Date

Respondent agrees to be interviewed ☐

Respondent does not agree to be interviewed ☐

NB. Tick which ever is applicable.

APPENDIX E

INFORMED CONSENT FORM FOR KEY INFORMANTS

Hello, My name is and I am working with a master of Public Health Student From the School of Public Health, University of Ghana, Legon.

We are conducting a study about mothers' last delivery and wish to ask for your participation. I will like to ask you about the antenatal and delivery services you received before you gave birth to your last child. The information that you will give will assist the student to understand how mothers in this community receive antenatal and delivery services. Your objective information will enable him offer useful suggestions for possible community interventions by your district health and local government authorities in the area of maternal health. What ever information you will provide will be kept strictly confidential and will not be given to any other person.

Participation in this study is voluntary and you can choose not to answer any individual question or all the questions. I, however, wish you will participate fully in the study since your views are important. The interview will usually last for about 15 to 20 minutes to complete.

At this time do you want to ask me any question about the study?

May I now begin the interview?

Signature of interviewer Date

Signature/Thumbprint of respondent Date

Respondent agrees to be interviewed ☐

Respondent does not agree to be interviewed ☐

NB. Tick which ever is applicable.

