UTILIZATION OF SKILLED DELIVERY SERVICES IN WA MUNICIPALITY

BY

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DECLARATION

I, Culbert Nuolabong hereby declare that this thesis is my own original work. With the exception of specific references to other people's works and publications which have been duly acknowledged, this thesis report was the result of my own independent research work. I also declare that, this work had not been presented, either wholly or in part for any degree or other academic honors anywhere else.

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DEDICATION

This piece of work is dedicated to the Most High God by whose grace, wisdom and guidance has seen me through this project.

To my wife Mrs. Patience Nuolabong and family whose commitment, encouragement and endurance during my absence from home brought this work to a successful end

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ANC	Antenatal Care
AOR	Adjusted Odds Ratios
CHPS	Community based Health and Planning Services
CHO	Community Health Officer
CI	Confidence Interval
COR	Crude Odds Ratios
DCE	District Chief Executive
DHA	District Health Administration
DHD	District Health Directorate
DHMT	District Health Management Team
EOC	Essential Obstetric Care
GHS	Ghana Health Service
HIV	Human Immune Deficiency Virus
MDGs	Millennium Development Goals
MOH	Ministry of Health
NHIS	National Health Insurance Scheme
RCH	Reproductive and Child Health
SBA	Skilled Birth Attendance
TBA	Traditional Birth Attendant
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization
WIFA	Women in Fertile Age group

DEFINITION OF TERMS

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

Antenatal care: Care given to women during pregnancy that provides an important opportunity for discussion between a pregnant woman and a health care provider about health behavior during pregnancy, recognizing complications that may arise during pregnancy, and delivery plans that will meet the needs of the individual woman.

Antenatal care coverage: Percentage of women who attended at least once during pregnancy by skilled health personnel for reasons related to pregnancy.

Deliveries attended by skilled health personnel: Percentage of deliveries attended by skilled health personnel irrespective of outcome (live birth or still birth).

Deliveries in health facilities: Percentage of deliveries in public and private hospitals, clinics and health centers, irrespective of who attended the deliveries at these facilities.

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

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

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

Person with midwifery skills: A person who has successfully completed the practical course in midwifery and is able to give necessary supervision, care and advice to women during pregnancy, labour and the postpartum period, to conduct deliveries alone, to provide lifesaving obstetric care, and to care for the newborn and the infant.

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

Skilled care: Care provided to a woman and her newborn during pregnancy, childbirth and immediately after birth by an accredited and competent health care provider who has at her/ his disposal the necessary equipment and the support of a functioning health system, including transport and referral facilities for emergency obstetric care.

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

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

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

ABSTRACT

Introduction

Labour and delivery are the shortest and most critical period during pregnancy and childbirth because most maternal deaths arise from complications during delivery. In sub-Saharan Africa skilled delivery coverage is about 46.5%. In Ghana skilled delivery was 45.6% in 2009 and 73 % in 2014 and that of Upper West Region was 53% in 2011 and 63.7% in 2014. This study assessed the factors that account for the low utilization of skilled delivery by pregnant women in the Wa Municipality.

Methods

A community based cross sectional study was conducted using structured questionnaire to collect information from respondents on socio-demographic, geographic and cultural factors that affect the utilization of skilled delivery services. The study involved women of reproductive age (15- 49 years) who delivered within one year prior to the study. Two urban sub-districts and two rural sub-districts were selected using simple stratified random sampling method. Four communities were selected from each sub-district by simple randon sampling. Thirty-three eligible women were interviewed at each community. The data were entered into SPSS 16 cleaned and exported to Stata 13 for analysis. We used univariate analysis to generate descriptive tabulations for key variables. Bivariate analysis and logistic regression modelling produced unadjusted and adjusted associations between backgrounds attributes of respondents and their uptake of skilled delivery services.

Results

Out of 528 mothers 481 (91.6%) had skilled delivery. Mean age of mother was 26 years. Factors that were significantly associated with skilled delivery were, urban residence (AOR= 0.4, 95%), CI 0.1-1.2), women autonomy (AOR=0.2 95% CI 0.1-0.6), time taken

to get to health facility (distance) (AOR=0.08, 95% CI 0.1-0.3), ANC attendance {AOR=0.01, 95% CI, (0.01-0.1)}, where to deliver (AOR=59.8 95% CI 1.6-2122.8), and Trading occupation (AOR= 5.1, 95% CI 1.4-18.4).

Conclusion

The findings of this study demonstrate adequate utilization of skilled delivery services among women in the Municipality. The major factors identified as capable of influencing the utilization of skilled delivery services are women's education, place of residence, women's autonomy and proximity to health facility.

The study also revealed a higher proportion of skilled delivery in urban settlement than in rural areas. Efforts toward improvement of skilled delivery coverage should focus on health education and a girl child education especially for rural women and expansion of community-based health planning and services in various communities.

Key Words: Utilization, Skilled Delivery, Wa Municipality

CHAPTER ONE

INTRODUCTION

This chapter provides the background to the study and presents a summary of the epidemiology of skilled delivery, conceptual background to the study, the statement of the problem, justification for the study, the research objectives and the variables that were measured in the study.

1.1 Background

Skilled delivery is care provided to a woman and her newborn during pregnancy, childbirth and immediately after birth by an accredited and competent health care provider who has the necessary equipment and the support of a functioning health system, including transport and referral facilities for emergency obstetric care (Babalola & Fatusi, 2009b).

A skilled birth attendant on other hand is an accredited health professional (such as a midwife, doctor, or nurse) who has been trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management, and referral of complications in women and newborns (Yanagisawa et al., 2013). In sub-Saharan Africa, skilled birth attendance is often equated with facility-based delivery (Yanagisawa et al., 2013). Despite WHO recommendations of encouraging all women to seek facility-based delivery, numerous barriers have been documented that prevent women in Africa from delivering in health facilities (WHO, 2008). Distance to the facility, lack of health insurance and other economic factors have repeatedly been identified as some of the barriers to lower rates of facility delivery (Dongoo, 2013).

Skilled attendance at all births is the single most critical intervention for ensuring safe motherhood, because it helps the timely delivery of emergency obstetric and newborn care when life-threatening complications arise (Adanu, 2010). Access to health or obstetric services is a big challenge globally especially in developing countries including Ghana (Tann et al., 2007). This has resulted in low utilization of quality maternal care, which has led to the high incidence of avoidable deaths of pregnant women (Evans, 2013).

Globally, the World Health Organization (WHO) estimates that only 43% of women have access to skilled care during deliveries with the rest exposed to unskilled delivery (WHO, 2008). WHO has identified the lack of access to skilled delivery services as a hindrance to the efforts in improving the health of women especially during delivery (WHO, 2007). As far as maternal health is concerned the use of skilled delivery is desirable as it is recognized to yield positive delivery outcomes by reducing maternal and infant mortality (Onta, Choulagai, & Shrestha, 2015). According to studies conducted in Indonesia, a woman's lifetime risk of dying from pregnancy-related causes in high-income countries is 1 in 3,800, but 1 in 39 in sub-Saharan Africa (Ensor, Nadjib, Quayyum, & Megraini, 2008).

Ensuring that women delivered by a skilled attendant is regarded as one of the pre-requisites for achieving the fifth millennium development goal of reducing maternal mortality by three quarters by 2015 (Mpembeni et al., 2007). In order to save lives, skilled attendants need to be linked up with a larger health care system with the facilities, supplies, transport and professionals to provide emergency obstetric care when it is needed (Karkee, Lee, & Khanal, 2015)

1.1.1 Global coverage of skilled and unskilled Delivery

An estimated 289, 000 women died Globally during pregnancy and childbirth in 2013 (UNFPA, 2014; WHO, 2014). Every day, approximately 800 women die from preventable

causes related to pregnancy and childbirth and, 99% of all maternal deaths occur in developing countries (UNFPA, 2014). More than half of these deaths occur in sub-Saharan Africa and almost one third occur in South Asia (UNFPA, 2014). The maternal mortality ratio in developing countries in 2013 was 230 per 100 000 live births versus 16 per 100 000 live births in developed countries (WHO, 2008) Maternal mortality is higher in women living in rural areas and among poorer communities without access to skilled routine and emergency care (Length, 2015). This is particularly worrying in sub-Saharan Africa where over 162,000 women still die each year during pregnancy and childbirth, because of the lack of access to skilled delivery attendance and emergency care. According to WHO, 60 million deliveries take place worldwide each year in which the woman is cared for by a family member, untrained traditional birth attendant, or no one at all (Organização Mundial da Saúde., 2004). Studies conducted across the world found that while many women do not have access to good quality health services, especially in developing countries, the few that have access to health facilities face many challenges, including health system barriers (Johanne Sundby, 2007). Several studies have shown that many women delivered without skilled birth attendants in the less developed countries (Length, 2015). According to the UNFPA all the health indicators monitored, maternal mortality is the one with the widest discrepancies between the developed and developing countries

Table 1.1 Global, Regional and Sub-regional estimates of births attended by a skilled health worker

Region/sub-region	% skilled health worker (doctors, nurses, midwives and other cadres)	Coverage of estimates*
World total	65.7	99.2
More developed regions	99.5	93.5
Less developed regions	61.9	99.8
Least developed countries	35.3	100.0
Africa	**46.5**	**99.9**
Eastern Africa	33.7	99.9
Middle Africa	55.0	100.0
Northern Africa	70.5	99.8
Southern Africa	89.4	100.0
Western Africa	41.2	100.0
Asia	**65.4**	**99.8**
Eastern Asia	98.0	100.0
South-Central Asia	46.9	100.0
South-Eastern Asia	70.1	100.0
Western Asia	79.2	97.1
Europe	**99.5**	**88.4**
Eastern Europe	99.6	100.0
Northern Europe	99.2	79.8
Southern Europe	99.2	63.1
Western Europe	99.5	95.9
Latin America & The Caribbean	**88.5**	**99.9**
Caribbean	73.1	99.0
Central America	82.5	100.0
South America	92.7	100.0
Northern America	**99.5**	**100.0**
Oceania	**76.4**	**98.5**
Australia/New Zealand	98.7	100.0
Melanesia	45.6	100.0
Micronesia	87.5	50.9
Polynesia	99.8	83.1

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

SOURCE: WHO Updates of Skilled Delivery 2008

1.1.2 The Epidemiology of Skilled Delivery: A Local Overview

Several studies conducted in Ghana suggested that some women did not receive the care they expected from skilled attendants (Summit & Committee, 2008). The studies showed that some women end up delivering on their own in manner similar to home delivery due to inadequate care form health personnel. Skilled birth attendance has been shown to reduce maternal deaths and disabilities, yet only 45'6%, 49.5% and 52.2% of mothers in Ghana gave birth with skilled birth in 2009, 2010 and 2011 respectively (GHS, 2011). These figures have not change much despite various policies and initiatives including an Antenatal Care policy and the Safe Motherhood initiative and the introduction of an exemption policy directed at making delivery care free (MOH/GHS, 2011). The thrust of these policies have been to improve uptake, quality, financial and geographic access to delivery care services. The services covered by the exemption policy are normal deliveries, assisted deliveries including Caesarean section and management of medical and surgical complications arising out of deliveries, including the repair of vesico–vaginal and recto–vaginal fistulae (Synthesis Report, 2008). In 2005, the Ghana Health Service piloted an enhancement of its Community-Based Health Planning and Services (CHPS) program, training Community Health Officers to address the gap in skilled attendance in rural Ghana and the policy covered delivery services in public, private and faith based health facilities (GHS, 2011). According to the Ghana Health Services (GHS, 2011) even though antenatal care coverage has been highly sustained at 85%, utilization of skilled delivery remains low with a national average between 52 and 57% and 53 % for the Upper West Region (GHS, 2011).

Assessment of trend of skilled delivery services in the region compared to antenatal services shows that although antenatal services is at an appreciable level of 91.3% in 2014, skilled deliveries however is low 63.7% (GSS, 2014).

1.2 Problem Statement

Access to skilled delivery is crucial for reducing maternal mortality (Hounton et al., 2008). In Ghana it is estimated that only about 49.5% of deliveries are attended by a skilled personnel in 2010 (GHS, 2011) even though various interventions have been put in place to expand and improve access to skilled delivery (GHS, 2009). These interventions include free delivery services to solve the problem of cost of services, establishment of a CHPS compounds and health education on the benefits of utilization of maternal and child health services, (GSS, 2008). There has been an increase in the number of women who access antenatal services over the years (GHS, 2013). An UNDFPA report, has shown that 62 per cent of births occur in rural areas (UNFPA, 2014) of which less than half (43%) were assisted by Skilled Birth Attendance (SBA) compared with the national average of 57%

(Asamoah, Agardh, Pettersson, & Östergren, 2014). The Upper West Region recorded 39 maternal deaths for the year 2013; 34 institutional deaths and 5 community maternal deaths with Wa Municipality recording the highest (8 deaths). Maternal mortality for the first half of the year was unacceptably high (39 maternal deaths) (GHS, 2013). Maternal mortality ratio in the Region as at 2013 was 196 deaths/100,000 lives births. This is above the 185 deaths per 100,000 live births target of MDG5 by 2015, hence, the need to intensify efforts in reducing maternal deaths in the Region (GHS, 2013).

Assessment of trend of skilled delivery services in the Wa Municipality compared to antenatal services shows that although antenatal services was at an appreciable level of 84% in 2010, coverage of skilled deliveries however is as low as 46% (GHS, 2012). With Ghana's maternal mortality rate still unacceptably high at 350/ 100,000 live births, there is a need to identify and remove bottle necks to skilled delivery (MOH/GHS, 2011). The exact reasons why most women access antenatal services but failed to deliver by skilled

attendants are not clear in Wa municipality. Since unskilled delivery increases the chances of maternal death, it is important to identify specific factors that influence the decision of pregnant women to access or not access skilled delivery (MOH/GHS, 2011). If these factors are not identified and addressed, maternal mortality will continue to increase or its decline will be stagnant, thus hindering the achievement of program goals. This study therefore examined the factors that account for the low utilization of skilled delivery by pregnant women in the Wa Municipality.

1.3 Conceptual frame work on factors that influence uptake of skilled delivery

Maternal morbidity and mortality have a relationship with the utilization of skilled attendants and it is used as delivery indicator to track progress toward the Millennium Development target of reducing the maternal mortality ratio by three quarters between 1990 and 2015 (GSS, 2011). It is presumed that high use of skilled attendants would decrease maternal mortality and morbidity and vice-versa (Tarekegn, Lieberman, & Giedraitis, 2014). The use of skilled attendants is reliant on several factors which act independently and dependently on utilization of skilled delivery services with its resultant outcomes (Mangeni, Mwangi, & Mukthar, 2013b). This framework considers person related factors as well as health facility factors and how these factors affect uptake of skilled delivery services. The person related factors include a mother‘s socio-demographic characteristics, socio - cultural factors and geographical barriers and how they affect the use of health care facility before, during and after child birth (Choulagai et al., 2013b).

Geographical barriers: Economic and geographical accessibility mainly influence whether the woman actually reaches the health facility (Jat, Ng, & San Sebastian, 2011). Access to such facilities should be such that roads to and from it are easily accessible, in times, cost and means. The lack of access roads, may increase time in accessing skilled

delivery services due to lack of vehicle or inability to afford the cost of transportation (Nair, Ariana, & Webster, 2012). Easily accessible roads attracts more vehicles and reduces cost of transportation hence, enable clients to access health facilities in time in times of need such as during labour (Saxena, Vangani & Thomsen, 2013). All the above points directly and indirectly affect the accessibility of women to health care facility during pregnancy, birth and after birth (Ensor et al., 2008). When these factors hinder supervised birth and complications are not managed then it will certainly lead to infant mortality and maternal death, maternal disability and its aftermath

Socio-economic factors: The client's socio-economic characteristics including their ages, educational status, religions, incomes, occupation and decision making ability, among others could determine the use or non-use of skilled delivery services. A study by Adjei (2008) indicated that a person's socio-economic characteristics affect skilled delivery. It is presumed that a woman who is self-empowered socially and economically through education, religion and earnings could make informed decision and afford independently to implement such decision to her benefit

(Kitui, Lewis, & Davey, 2013). On the other hand, a woman with low socioeconomic status could be largely impeded by social, economic and decisional factors that could hinder her from using skilled attendants even though she may desire so (Kitui et al., 2013). Esena (2013) explained how community attitudes influence family decision making with the location of residence influencing most other factors. The availability of health facilities is important in determining the utilization of skilled attendants (Prata et al., 2011).

Socio-cultural factors: Older women are more confident and influential in household decision-making than younger and adolescent women in particular (Gabrysch & Campbell, 2009a). Furthermore, older women may be told by health workers to deliver in

a facility since older age is a biological risk factor (Afework et al., 2014). On the other hand, older women may belong to more traditional cohorts and thus be less likely to use modern facilities than younger women (Gabrysch & Campbell, 2009b).

Women's autonomy: Female autonomy is the ability of the woman to take decisions without necessarily requiring permission from their male partners (Nair et al., 2012). The various dimensions of autonomy, such as position in the household, financial independence, mobility and decision-making power regarding one's own healthcare, may all impact on health facility use (Tarekegn et al., 2014). Studies in many African countries suggest that, women cannot decide on their own to seek care, without seeking permission from a husband or mother-in-law (Doctor & Dahiru, 2010). Furthermore, women may lack control over material resources needed to pay for expenses, their mobility may be restricted or they may lack access to vehicles or even bicycles or donkeys (Story et al., 2012) However, women's informal power in the household may mitigate some of the above reasons. Living with an extended family may influence decision-making power of the woman; and the number of small children at home may also be an indicator for socioeconomic status of the household (Johanne Sundby., 2007).

Quality health services: The quality of prenatal services, geographic access to available health facilities coupled with the socio-economic background and the availability and capacity of skilled attendant are inter-related and interdependent in determining the use of skilled services (GSS, 2011). Adanu (2013) found that quality of prenatal services would be dependent on clients satisfaction which would be influenced by their socio-economic perspective coupled with the skilled employed by the available attendants and also the easy access to the physical health structure by clients. The availability of equipment and logistics would stimulate staff with the requisite training and skills to better perform hence,

improve on the quality of services thereby attracting more women to use skilled services (Yanagisawa, Oum, & Wakai, 2006) However the lack of it would also create frustration and weaken staff skills and capabilities and therefore with its resultant dissatisfaction of clients reflecting in low utilization of the services (Hussein et al., 2004). The capacity of staff when improved through training and facilitated peer reviews could stimulate better and improved performance in the use of current and effective skills in rendering delivery services (MOH/GHS, 2011). This would presumably influence the outcome of services and thereby increase use. The factors elaborated above could therefore affect utilization of skilled delivery services positively and negatively and therefore informed the framework for this study.

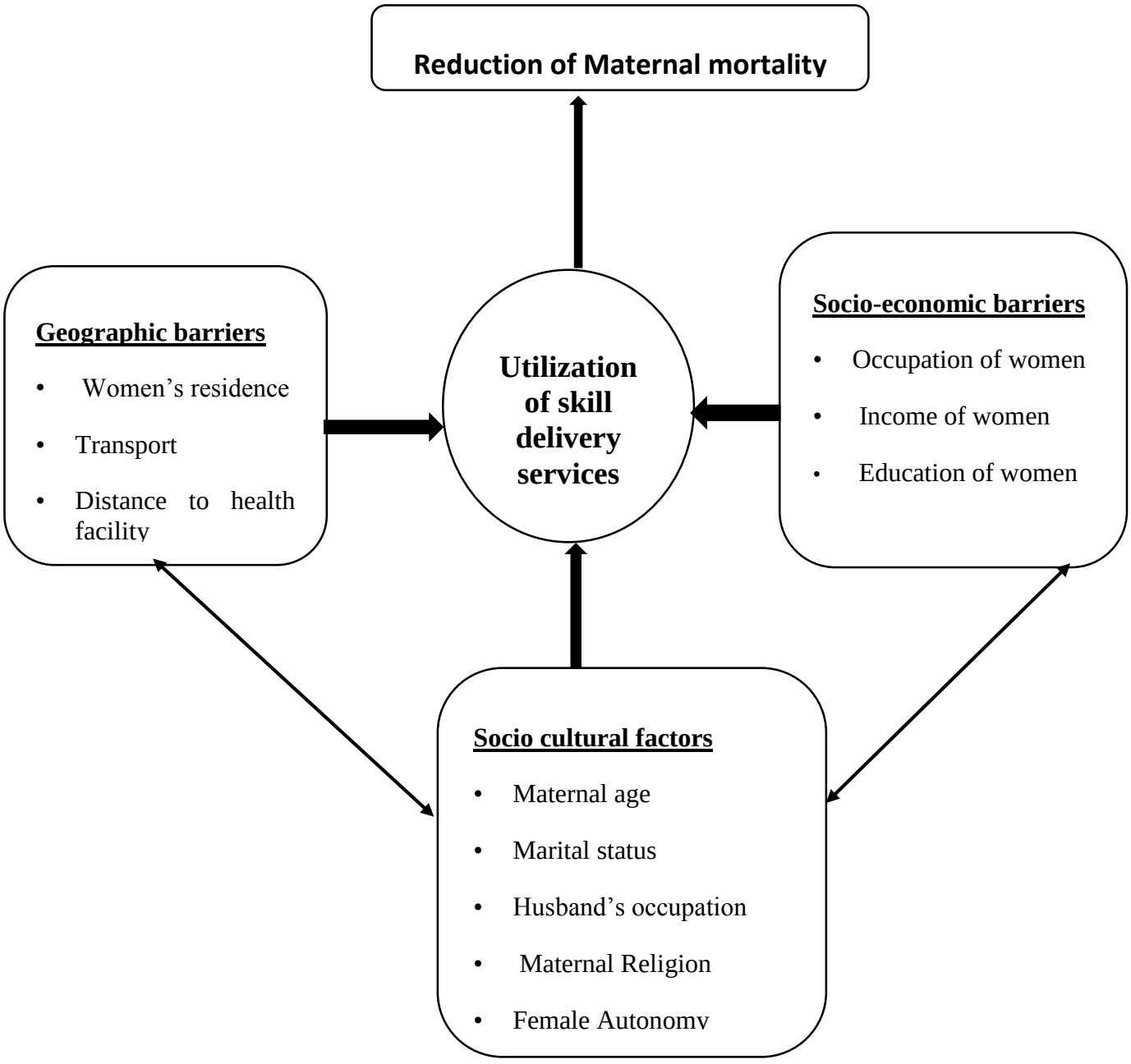

Figure 1.1 Conceptual Frame Work

1.4 Justification

Studies have been conducted at various settings including Ga East in Accra, Bolgatanga and Northern region to identify the barriers that mitigate against skilled delivery services (Amankwah, 2009; Esena & Sappor, 2013). However in the Upper West Region, Studies conducted on skilled delivery have been inadequate. Historical evidence shows that no country or town has managed to bring its maternal mortality below 100 per 100 000 live births without ensuring that all women are attended by an appropriate skilled health professional during labour, birth and the period immediately afterwards (WHO, 2007). Efforts aimed at improving maternal health and reducing maternal morbidity and mortality are top priorities of the GHS (MOH/GHS, 2011). However, maternal health programs should be based on evidence or quality and specific information in an area. This information is necessary to inform local policy makers and stakeholders at the facilities for programming and delivery interventions, for the improvement in maternal health care and also to help solve the problem of maternal mortality, infant mortality and morbidity in the Municipality. Additionally, by increasing the coverage on skilled supervision before, during and after child birth. This study is to generate information on factors contributing to the low uptake of skilled delivery services in the Wa Municipality.

1.6 Research Questions

To achieve the objectives of this research, the following research questions were formulated.

1. What proportion of women in the Municipal made use of skilled attendants during their most recent delivery?
2. What are the characteristics of women who delivered at facilities with skilled or unskilled delivery services?

3. What are the barriers to the utilization of skilled delivery services?

1.7 General objective

- To determine factors associated with utilization of skilled delivery services in the Wa Municipality

1.8 Specific objectives

1. To determine the proportion of births attended to by skilled birth attendants in the Wa Municipality.
2. To assess the association between socio-demographic characteristics and uptake of skilled delivery services in the Municipality.
3. To determine barriers (cultural and geographic) to the utilization of skilled delivery services in the Municipality

CHAPTER TWO

LITERATURE REVIEW

This chapter focused on establishing what has been done in the area of skilled delivery services in both developed and developing countries. Areas highlighted include: the proportion of births attended to by skilled birth attendants, accessibility and socio-economic and cultural and geographic barriers of skilled deliveries.

2.1 The proportions of births attended to by skilled birth attendants

Studies conducted across the world found that while many women do not have access to good quality health services, especially in developing countries, the few that have access to health facilities have many challenges, including health system barriers (Adegoke, Utz, Msuya, & Broek, 2012; Hazarika, 2011). Several studies have shown that many women deliver without skilled birth attendants in the less developed countries (Mengesha, Biks, Ayele, & Tessema, 2013; Press, 2013; Story et al., 2012) According to the WHO, of all the health indicators monitored, maternal mortality is the one with the widest discrepancies between the developed and developing countries (WHO, 2014). Women who seek skilled care, especially for childbirth, expect kind, courteous and professional treatment from health workers and anything less than that force them to look elsewhere the next time they are pregnant and may not recommend those health services to other women (Jat et al., 2011) Several studies conducted in Ghana suggested that women did not receive the care they expected from skilled attendants as some women had to deliver on their own in the same unhygienic manner as in the home due to inadequate care from health personnel (Adanu, 2010; Amankwah, 2009; Esena & Sappor, 2013). Other women, including family members, also see hospital delivery as dangerous because of caesarean section and episiotomy (Press, 2013). In an explorative study in rural Malawi, Seljeskog and

colleagues indicated that fear of having an operation was one of the reasons women did not go for a hospital delivery (Yanagisawa et al., 2013). Caesarean sections were in generally considered as negative because *"a woman is born to deliver vaginally"* (Mengesha et al., 2013)." It was also mentioned that it was dangerous and that the reason for having an operation was being lazy (Length, 2015). Health professionals are also unable to assure women of confidentiality of information given as well as the privacy needed to express their feelings and emotion (Moyer et al., 2012).

However, monitoring progress towards maternal mortality reduction is difficult, therefore indicators set to monitor progress is proportion of deliveries by skill birth attendant (Afework et al., 2014). Skill birth attendance can be described as proportion of births attended by skilled health personnel (WHO, 2008). It represents the percentage of all the process by which pregnant women and their infants are provided with adequate care during pregnancy, labour, birth and the postpartum and immediate newborn periods, whether the place of delivery is the home, health center or hospital (WHO, 2007). Nevertheless, the attendants must have the needed skills and must be backed by an enabling environment at various levels of the health system, including a supportive policy and regulatory framework; adequate supplies, equipment and infrastructure; and an efficient and effective system of communication and referral or transport (Moyer et al., 2012)

The proportion of deliveries attended by skilled health personnel has been identified as one of the main tools that reduce the incidence and prevalence of maternal mortality and morbidity greatly (GSS, 2008). It is one vital indicators which is being used for measuring progress towards the fifth MDG, improving reproductive health (WHO, 2014).

The World Health Organization in the 2007 updates of the proportion of births attended by skilled attendants estimates that 63.1% of births are attended to by skilled professionals

globally, 59.1% in the more developed countries whilst 34.3% in the less developed countries (WHO, 2007).

In Africa and Asia, studies indicated that only 46.5% and 65.4%, respectively, of women gave birth with professional assistance (Borghi, Neupane, & Tiwari, 2006; Press, 2013; Wirth et al., 2008). In less developed regions, the lowest levels of skilled attendant at birth were in East Africa (33.7%), followed by West Africa (41.2%) and South central Asia (46.9%) with the highest levels in Polynesia (99.8%), East Asia (98%) and South America (92.7%) (WHO, 2010). However in these individual African countries, such as Ethiopia at 9.8%, Niger at 15.7%, Chad at 16.2%, and Burundi at 19.1%, deliveries assisted by skilled personnel is still very low (Saaka & Iddrisu, 2014). In 2011 the Ghana Health Services annually reported skilled delivery ranged from 45.6% in 2009 to 52.2% in 2010 while Upper West Region ranged 36.7% in 2009 to 46.5% in 2011(GHS, 2011). According to the Multiple Indicator Cluster Survey conducted in 2011, for Ghana, Upper West region's ANC coverage was 90.3% while institutional delivery coverage was 60.4%(GSS, 2011)

A study conducted in Ethiopia revealed that only 12.1% of pregnant women delivered at health facilities while majority 87.9 % delivered at home claiming that home was best place for giving birth (Teferra, Alemu, & Woldeyohannes, 2012).

2.2 Socio-demographic characteristics and uptake of skilled delivery services

The general socioeconomic status of mothers is the ability of women to manage resources and make independent decisions about their health that has an impact on reduction of maternal mortality (Saleh, 2012). Lack of education and poor knowledge about maternal health care can contribute to delays in seeking care during pregnancy and child birth. Poverty is one of the major health determinants (Moore, Alex-Hart, & George, 2011). Poor

mothers are at high risk of developing pregnancy related complications. Almost all maternal deaths that occur in low and middle-income countries are mainly among the poorest of the poor (WHO, 2008).

Power hierarchies within the community are extremely important factors in women's decision in their delivery experiences. Socio-economic factors such as education, occupation, income, decision making and religion, are also known to have influence on women behavior towards seeking health facility delivery services in various settings (Aborigo, Hodgson, Engmann, & Devries, 2013). A study in Northern Ghana revealed that social factor had impacts on delivery decisions on its own and also play an important role as a mediator of other social factors that can influence delivery decision (Saaka & Iddrisu, 2014). Community members disagreed about whether women needed permission from their husbands, mother-in-laws, or compound heads to deliver in a facility, but all agreed that women rely upon their social networks for the economic and logistical support to get to a facility (Baral, Lyons, Skinner, & Van Teijlingen, 2010; Tarekegn et al., 2014).

2.2.1 Maternal education

It is well-recognized that parental education, especially mother's education, plays an important role in the use of skilled assistance at delivery (Jat et al., 2011). Association between women's education and the use of maternal health care services is evident (Babalola & Fatusi, 2009b; Gabrysch & Campbell, 2009b). Findings from a study conducted in Ghana showed that all women who attained tertiary education (100%) utilized skilled delivery services. Improving education for the girl child can increase skilled delivery attendance, since most of those who used unskilled delivery, their educational status were either low or none (Esena & Sappor, 2013). The rate of receiving antenatal care was very low among women with no formal education, and substantially

higher among those with at least secondary education in Africa (Doctor et al., 2012). The mother's education emerged as an independent factor in determining the choice of delivery under skilled supervision in a study from Tanzania (Mrisho et al., 2007). Educated women have better knowledge on current health practices, as they are more accessible to resources than their less educated counterparts (Gabrysch & Campbell, 2009a). This, in turn, may influence educated families to use proper medical care whenever they perceive it to be necessary (Kruk, Prescott, & Galea, 2008). A study of analysis of choice of delivery location reveals that parental education is a predisposing factor in determining the choice of facility for delivery with skilled attendants (Afework et al., 2014)' The pattern of service utilization by husband's education was found to be almost at par with what was observed for women's education (Pearson, Larsson, Fauveau, & Standley, 2006). Women with secondary or higher education and women with primary education were respectively 2.2 times and 1.4 times more likely to receive antenatal care services from a health professional (Karkee et al., 2015).

2.2.2. Income

Furthermore, studies find a positive association between economic status and the use of skilled assistance at delivery (Wagle, Sabroe, & Nielsen, 2004). A study in India attributed the low use of maternal health care services to low level of household income (Onta et al., 2015). A similar study in Nigeria points out a significant association between household socio-economic status and the use of skilled assistance at delivery (Doctor & Dahiru, 2010). The study affirms that the use of skilled assistance at delivery is more than four times higher among women from rich and very rich households compared to the women from very poor households (Babalola and Fatusi, 2009). Likewise, evidence from Ghana shows that household economic status is an important factor associated with the

use of professional assistance at delivery (USAID, 2009). However, some studies argue the association between economic status and the use of skilled assistance at delivery (Ravi & Kulasekaran, 2014). The lower the economic status of the mother, the more likely that she would not go into hospital for delivery (Wagle et al., 2004).

2.2.3 Occupation

Additionally, the occupation of the woman or husband also plays an important role in the use of maternal health care services by pregnant women (Gss, 2008). The occupation of the husband may also serve as a proxy for family income and status, which serves as a significant factor in the use of skilled assistance at delivery (Gabrysch & Campbell, 2009b; Tann et al., 2007).

Findings from the study in Ghana showed that employed professionals utilized skilled delivery services 100% compared to nonprofessional and unemployed mothers (GSS, 2008). Since socio-economic status is known to correlate with education and it can be deduced from the study that majority of the mothers who were employed patronized skilled delivery service (Prata et al., 2011). Poor mothers and their families are exposed to the risk of poor nutrition and its effect on their health in general, as well as giving rise to the use of substandard means of health care (Esena & Sappor, 2013). However, all women with formal employment such as teaching and nursing, and a higher proportion of women engaged in other better income generation activities such as petty trading , dressmaking and hairdressing utilized health facility for delivery than women engaged in pito brewing and the unemployed (Dongoo, 2013).

2.2.4 Religion

Religion and the gender of the household head influence the pregnant women in using services to treat and prevent maternal morbidity and mortality. A study from Bangladesh reveals that the use of skilled attendants at birth is higher among women from Hindu religion compared to women from Muslim religion (Baral et al., 2010). On the other hand, studies in India claim that Muslim women are more likely to deliver with skilled assistance compared to women from Hindu religion (Nair et al., 2012).

2.2.5 Decision Making

In most African settings, men's decision-making authority over women hinders their use of reproductive health-care services. This fact was clearly revealed by Jibo (2004), who studied women in Kano state where he found that the two main reasons for non-utilization of maternity care services amongst the women are spousal inhibition and access to experience traditional birth. Findings from this study indicate that, when women made the final decision on location of birth in consultation with either the spouse or other people, the likelihood of giving birth assisted by a skilled birth attendant was very high. However, when women made the final decision alone; the likelihood of giving birth assisted by SBAs was significantly reduced. Women who made joint decisions with spouses or other close persons (mother in laws, friends) on the other hand were more likely to deliver under the assistance of skilled birth attendant. Joint decision-making was further strengthened by high education and high household assets ownership (Kabakyenga, Östergren, Turyakira, & Pettersson, 2012).

2.3 Socio- demographic characteristics associated with access to skilled delivery services

Socio-economic factors that affect access to health care and causes maternal mortality operates at the individual, family and community level and is a complex issue. The individual woman makes decisions about her health depending on her educational level, occupation, level of personal income or wealth and her autonomy. The aggregate family income and occupation and education of family members could also affect access to health care for the woman.

2.3.1 Maternal age

Older women are more confident and influential in household decision-making than younger and adolescent women in particular (Nair et al., 2012). Furthermore, older women may be told by health workers to deliver in a facility since older age is a biological risk factor (Yanagisawa et al., 2013). On the other hand, older women may belong to more traditional cohorts and thus be less likely to use modern facilities than young women (Gabrysch & Campbell, 2009b). Women within the age group of 35-44 years did not deliver at the health facility. This might be because there are more likely to be confident in their ability to have a successful home delivery due to accumulated experience in birthing and might also be more traditionally inclined (Doctor et al., 2012)

2.3.2 Women's autonomy

Female autonomy is the ability of the woman to take decisions without necessarily requiring permission from their male partners (Tarekegn et al., 2014). The various dimensions of autonomy, such as position in the household, financial independence, mobility and decision-making power regarding one's own healthcare, may all impact on

health facility use (Baral et al., 2010). In many countries, women cannot decide on their own to seek care, without asking for permission from a husband or mother-in-law. Furthermore, women may lack control over material resources needed to pay for expenses, their mobility may be restricted to access to transportation such as vehicles or even bicycles or donkeys (Shimazaki, Honda, Dulnuan, Chunanon, & Matsuyama, 2013). Household size is an important determinant of health care utilization. Living with an extended family may influence decision-making power of the woman; and the number of young children at home may also be an indicator for socioeconomic status of the household (Esena & Sappor, 2013). Larger families also cause resource constraints, which have a negative effect on health care utilization (Duong, Binns, & Lee, 2004).

2.3.3 Place of residency

Studies in developing countries have demonstrated that institutional delivery service utilization is influenced by place of residence (Baral et al., 2010). Living in urban areas increases the probability of pregnant women using skilled assistance at delivery (Mayhew et al., 2008; Tarekegn et al., 2014). History of obstructed labour appeared to be positively and significantly associated with the women residing in urban areas were almost two times more likely to receive antenatal care than women residing in rural areas in Bangladesh (Babalola & Fatusi, 2009a). Urban women tend to be more educated than rural women, which broadens their knowledge about the benefits of modern health care services (Gabrysch and Campbell, 2009). The majority of births took place at home compared to births at different health facilities of the districts in Ethiopia. Education, family education, low parity, history of prolonged labor and receiving ANC were significantly associated with selection of institutional delivery (Johanne Sundby., 2007).

2.3.4 Marital Status

It is also observed that the age at marriage and place of deliveries were positively associated (Yanagisawa et al., 2013). The women who married at later age (22 and above years) were less likely to given birth at home than those who married at an early ages (Mengesha et al., 2013).

According to (Breen, 2011), Marital status has been shown in qualitative research carried out on maternal health in Zambia to have an important impact on access to healthcare services during pregnancy, with those who were married more likely to receive health care access during pregnancy than unmarried women. Many studies have confirmed that, polygamous relationships have a negative effect on a mother's receipt of adequate care during pregnancy and childbirth (Mengesha et al., 2013). For instance, in the study on Mobilizing Access to Maternal Health Services in Zambia reveals that females who were in polygamous marriages, particularly if they were the older wives tended to be excluded and had a higher likelihood of being the victim of domestic violence (Breen, 2011).. Women encouraged by their husbands were however more likely to use Health Facility for delivery service and assisted by skilled birth attendants.

2.3.5 Distance and Means of Transport to Health facility

Distance to health services acts in two ways to affect health care seeking behaviour. Firstly, it discourages women from making a decision to seek skilled care in the first place(Story et al., 2012) and as an actual obstacle to accessing care after an individual has decided to seek it (Ngula, 2005). The obstacle provided by distance is magnified when combined with lack of transport and poor roads, but this disincentive is believed to be less pronounced when women have serious complications or the reputation of the provider is good

(Yanagisawa et al, 2006). Despite this, qualitative studies often cite distance as an important barrier in stopping delivering in facilities, which may be particularly salient when labour starts unexpectedly or at night. Quantitative studies have also concluded that longer distances to a facility are positively related to lower utilisation rates (Mpembeni et al., 2007). In studies where distance did not seem to have an effect on delivery attendance, the authors concluded that health care and transport infrastructure in the area were good (Duong et al, 2004; Paul et al, 2002); which meant that distance differentials became small and relatively unimportant. Despite the clear importance of distance or travel time to health facilities, it is often not included in studies on the determinants of skilled attendance, partly due to inadequate data (Stephenson and Tsui, 2002; Gage and Callixte, 2006).

2.3.6 Cultural Beliefs and Practices that affect skilled delivery

It is traditional that all the relatives, mothers, husbands, religious leaders gather and practice religious prayers till the mother gives birth instead of taking the laboring mother to the health facility (Yanagisawa et al., 2013). They believed the prayer will help the mother to have an easy delivery without the assistance of a skilled attendant. Socio-cultural norms also influence inappropriate and ineffective health seeking behaviors and health delivery (Karkee et al., 2015). For example, male village-level health providers in India reported that taboos prohibit them from conducting physical examinations or invasive diagnostic and therapeutic procedures on rural women, a situation that resulted in them providing care that was ineffective and more expensive (e.g. pills and shots) and can delay correct diagnosis and access to appropriate facility-based care (Ravi & Kulasekaran, 2014). In rural Indonesia, it is reported that husbands generally disapprove of their wives having their reproductive health checked by male medical professionals, which was a difficult situation when there were no female trained health care workers available (Cotter, Hawken, & Temmerman, 2006). This situation was compounded when rural women also

report that they do not feel comfortable receiving reproductive care and treatment from a male doctor (Mrisho et al., 2007). In Africa and most developing countries, diseases and sickness are attributed to witchcraft, sorcery and mystical forces; hence illness and diseases are perceived, evaluated and acted upon in line with these beliefs that are why they seek medical help from assorted traditional healers (Ziraba, Madise, Mills, Kyobutungi, & Ezeh, 2009). Patients want to use traditional medicines or the services of traditional healers at the onset of ill health (Doctor et al., 2012).

2.4 Conclusion on Literature Review

Extensive review of literature revealed that much work has been done on perceptions, patterns and determinants of maternal health care utilization among rural women in other settings. Various explanations were available for the few women delivering under skilled care and included demographic, socio-economic, physical and cultural and negative staff attitude. It is also evident that the determinants are not consistent in different regions and countries; they vary within and between regions and countries. It is hoped that findings from this study may throw more light on how to improve women's access to skilled delivery services in the Upper West Region.

CHAPTER THREE

METHODS

This chapter presents the implementation methods of the study. It comprises the study design, study population, study area, sample size and sampling procedures, data collection and ethical issues. Also included is data management, analysis and quality assurance.

3.0 Study Area

3.1 Geographical Location of study area

The study was conducted in Wa Municipal, the only Municipality among the eleven (11) districts in the Upper West Region of Ghana. The Wa Municipality, which covers the southwestern parts of the region, stretching from between latitudes 9º 55"N and 10º 25"N and longitude 1º 10"W and 2º 5"W. It has a landmass of about 1,078km², and shares boarders with Nadowli-Kaleo District to the north and Wa West District to the south and on the West by the Wa West district and in the east by the Wa East District. The capital of the Municipal is Wa which also serves as the Upper West Regional Capital. The town is well planned with quite good environmental sanitation and has a serene environment (GHS, 2013).

3.2 Demographic Characteristics of the Municipality

Wa is the political seat of the district and therefore has the Municipal Assembly (headed by Municipal Chief Executive) as well as other decentralized departments including the Municipal Health Directorate. The municipality has a projected total population of 115,597 as at 2010 with the WIFA (15-49 years) is 24% (27,226) of the total population which has been zoned into six sub-districts including Wa Urban, Bamaha, Busa, Charia, Kanbali and Charigu (GSS, 2010). The Six (6) sub-districts comprise 123 communities.

The greater proportions of the people are made up of Dagaabas with few Sissalas. The economic activities are Public Service, subsistence farming, artisanship, and trading. Trading is the most dominant occupation and poverty is widespread. Majority of the work force in the municipality are unemployed reflecting the high poverty level and for that matter their inability to pay for the health care services offered. Families are patrilineal, and the eldest male, usually referred to as the compound head, typically has the final say in all decisions. Christianity and Islam are the dominant religions in Municipality, with a small percentage of people practicing traditional religion.

3.3 Health Facility Coverage of the Municipality

The Municipality has six (6) Health Centers, Three (3) Hospitals and Five (5) Clinics all situated in Wa Central as well as Eleven (11) functional Community-based Health and Planning Services zones. These health facilities send monthly reports to the Municipal Health Directorate.

3.4 Common causes of morbidly and mortality in the study area

The most common disease in the district are malaria, road traffic accident involving mostly motor bikes, hepatitis, diarrheal diseases ,HIV and AIDS, snake bites and maternal health challenges. Anemia in pregnancy is a common maternal health challenge (GHS, 2013).

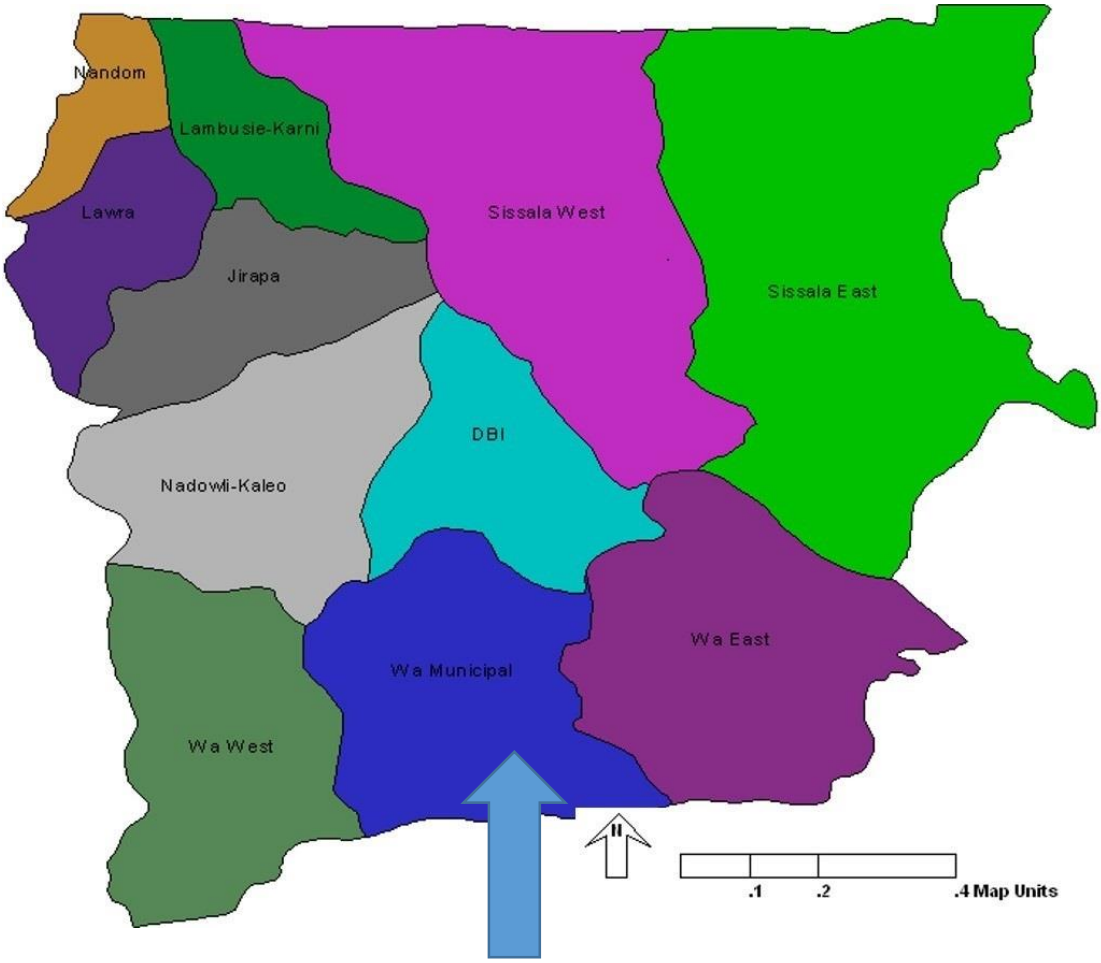

Figure 3.1 Map of Upper West Region showing 11 administrative Districts and their boundaries.

Source: Wa Municipal Health Directorate

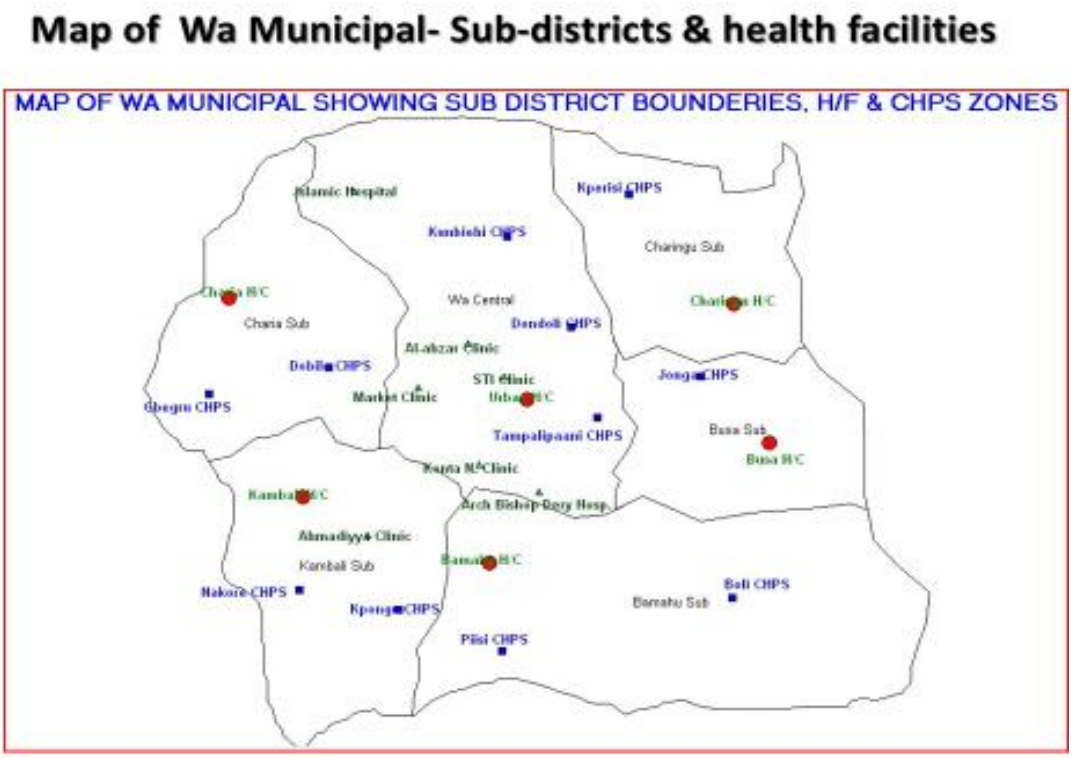

Figure 2.2 Wa Municipal Showing Sub-district boundaries and Health facilities

Source: Wa Municipal Health Directorate

CHPS Compounds Health Centers clinics & hospitals

Sub-districts

3.5 Study Design

A community based cross sectional study was conducted using structured questionnaire among a sample of mothers residing in 16 communities randomly selected from the Municipality. Information was collected from the respondents on socio-economic, socio-demographic characteristics and geographic factors that affect the utilization of skilled delivery services in the Wa Municipality.

3.6 Study population

The study was conducted among women of reproductive age group (15- 49 years) who had delivered within one year prior to the study in the Wa municipality, whether by skilled or unskilled attendants.

3.6.1 Inclusion Criteria

Women with a child one year of age prior to the study, who had been residents in the Wa municipality for at least one year were eligible for inclusion in the study.

3.6.2 Exclusion Criteria

Women visiting the households in the study area at the time of data collection were excluded. All non-consenting mothers with children less than one year of age were also excluded from the study.

3.7 Sample size determination

Sample size was calculated assuming proportion of skilled deliveries in Wa municipal to be 50% in 2012

- The sample size (**n)** was calculated:
  - **z** = confidence level at 95% (standard value of 1.96)
  - **p** = estimated prevalence of 50% skilled delivery
  - **m** = the margin of error at 5% (standard. value of 0.05).

The formula is $\mathbf{n = \frac{z^2 \times p\,(1-p)}{m^2}}$ $\mathbf{n = \frac{1.96^2 \times 0.50(1-0.50)}{0.05^2} = 384}$

- Using design effect of 1.25 and 10% nonresponse rate**.**

Sample (n) x design effect x 10% = 384 x 1.25 x 10%=528

Using design effect of 1.25 (480) and (48)10% nonresponse rate total of **528 participants**

The design effect of 1.25 was added to take care of huge variations between mothers in urban sub-districts and mothers in rural sub-districts.

3.8 Sampling technique

The study participants were selected by multistage cluster sampling technique. The study area was first categorized into rural and urban. Each sub-district within Wa municipality represented a cluster. We defined urban to include sub-districts in Wa Central while rural settlements included sub-districts outside Wa Central. Two urban sub-districts and two rural sub-districts were selected using simple random sampling method. Balloting was done to select the districts by writing the names of all the three urban sub-districts on pieces of paper and wrapping them. The wrapped papers were put in a box, mixed thoroughly and two of them picked out at random. The same procedure was followed to select the rural sub-districts The communities in each sub district were compiled and simple random sampling was used to select four (4) communities from each selected sub district using the balloting procedure described above.

Data collectors selected households from each selected community by spinning a pen in the center of the community and selecting the immediate house as the starting point in the direction of the pen. Every left house was then selected. House selection continued in that manner until thirty-three (33) eligible women were selected from each community. Where there were more than one eligible respondent, only one of the lot who agreed to partake in the study was randomly selected to participate through balloting. In case of the absence of an eligible respondent, the interviewer moved to the second house until the target

respondent was obtained. The process was repeated until the selected sixteen (16) communities (from the selected four (4) sub-districts) with eligible women were recruited and interviewed. The sixteen (16) communities were shared equal among the total sample size (528 mothers) and each community 33 mothers were interviewed

3.9 Study variables

Dependent variable:

- Utilization of skilled delivery

Independent variables:

- **Geographic barriers**
  - Residence
  - Distance and transport to health facility
- **Socio-economic barriers**
  - Maternal occupation
  - Maternal education
- **Cultural factors**
  - Maternal age,
  - Marital status
  - Women autonomy
  - Religion

3.10 Quality Control

A standardized questionnaire was prepared in English and translated into the local language (Dagaare and Sissali) prior to the start of the fieldwork. These questionnaires

were scrutinized by experienced supervisor and first pre-tested to mothers in a community not part of the sampled sub districts, who met the eligibility criteria and questions whose meanings were found to be ambiguous was rephrased to rectify the ambiguity. This pretesting was done in different communities with similar characteristics of selected study communities and, analyzed results demonstrating increasing degree of precision with each question. This was to ensure that the questions were clear to both the enumerators and the respondents.

3.11 Data collection methods

The data were collected from January 13, 2015 to May 31, 2015 using the pre-tested questionnaire. The questionnaire had sections on women's social and demographic characteristics, cultural and geographical barriers and utilization of skilled delivery. The questionnaire was developed based on standard DHS survey questionnaires. Standardized questionnaire were administered by trained interviewers (Professional Nurses). Administration of questionnaires were face-to-face interview. In order to maintain the quality of data to be collected, interviewers were trained, frequent supervision was performed during data collection and interviews were done using local languages (Dagaare and Sissali). Administered questionnaire were checked daily for completeness and accuracy. Each questionnaire was checked to ensure internal consistency and completeness.

3.11.1 Tools

Standardized questionnaire was used by the research assistants to interview women in their respective communities.

3.11.2 Training

Eight (8) professional nurses were recruited and trained by the Principal Investigator. The content of the training included study objectives, data collection techniques, translation of the questionnaire into the two major local languages (dagaare &sissali), community entry procedures and ethical Issues.

3.11.3 Pre-testing in pilot study

The questionnaire was pre-tested on respondents with similar characteristics as the population in Kperisi community and analyzed results demonstrated increasing degree of precision with each question.

3.12 Data analysis

Data collected were double entered into Microsoft excel, cleaned and transferred to Stata Version 12 for analysis. Frequencies and relative frequencies were generated for categorical variables. Continuous variables such as age, time taken to health facility were recoded and re-categorized. Univariate analysis was conducted and presented as frequencies and proportions. Pearson chi test was conducted to test significant differences between proportions and p-values < 0.05 were considered statistically significant. Binary and multiple logistic regressions were performed to identify factors significantly associated with uptake of skilled delivery and presented as Odds Ratios with their 95% confidence interval.

3.13 Ethical issues

Ethical approval was obtained from the Ethical Review Board of the Ghana Health Service through the School of Public Health, University of Ghana. Permission and subsequent approval was sought and approved from Upper West Regional Health Directorate and Wa Municipal Health Administration. Community entry procedures were duly followed in each community during data collection. All the eligible women were informed about the nature and purposes of the study as summarized in the consent form written in English (appendix D) All the mothers gave their consent prior to their inclusion in the study. Participation was completely voluntary. Mothers were free to drop out of the study at any time without penalty. All responses were kept confidential and anonymous. All study results and completed questionnaires were kept confidential and only accessible to the research team. The study was conducted in the participants own environment. There were no direct risks to participants and no compensation.

CHAPTER FOUR

RESULTS

This chapter presents the characteristics of reproductive aged women who accessed skilled delivery from health facilities or unskilled delivery from other sources. It presents results of the prevalence of skilled delivery in the municipality as well as the socio- demographic and health system factors that influence uptake of skilled delivery services in the Municipality.

4.1 Characteristics of reproductive aged women and prevalence of skilled delivery

A total of 528 women aged between 15 and 45 years with a mean age of 26.4 and standard deviation ±9.4 participated in the study of which 45(8.4%) delivered at home and 481 (91.6%) delivered at a health facility. And 216 (41.0 %,) of the participants were within 25-29 years, followed by 20-24. 173 (32.6%) and 30-34year age groups were 81(15.4%). Nearly halve [240 (45.6%)] of the study participants did not have any formal education. Over 91% of the women were married, 61% lived in rural residence while the rest were urban dwellers. With regards to place of delivery 516 (92.2%) women like to deliver at a health facility. Muslim women constituted the largest [300 (56.6%)] religious group and closely followed by Christian [221 (41.9%)]. Traditional and other religious practices were less (2%). Majority149 (28.3%) of the women were farmers 123 (23.3%) were traders, seamstresses were 120 (22.8%), housewives formed only 70(13.3%) while public servants were 27(5.1%). All other occupations combined formed 38 (7.2%) of the participants.

Table 4.1 Socio-demographic characteristics of respondents, Wa municipality, 2015

Variable	Frequency (N=528)	Percentage
Age of Mother		
15-19	30	5.7
20-24	172	32.6
25-29	216	41.0
30-34	81	15.4
≥35	28	5.3
Level of Education		
None	240	45.6
Primary	87	16.5
JSS	113	21.5
Secondary	58	11.0
Tertiary	28	5.3
Marital Status		
Single	30	5.7
Married	482	91.6
Divorced/widowed	14	2.7
Residence		
Urban	205	39.0
Rural	320	61.0
Ethnicity		
Dagaabas	464	88.5
Sisalas	55	10.5
Other	5	1.0
Religion		
Christian	221	41.9
Moslem	300	56.9
Traditional	5	0.9
Other	1	0.2
Occupation		
Farming	149	28.3
Trading	123	23.3
House wife Only	70	13.3
Seamstress	120	22.8
Public Servant	27	5.1
Other	38	7.2
Place of Delivery		
At home/TBA	45	8.6
At health Facility	481	91.3

Proportions of skilled deliveries were generally high across all age groups. Women within the 30-34 year group had the highest (93.8%) skilled deliveries, while those within the 35 and above year group had the lowest (82.1%) proportion of skilled delivery (Table 4.2).

Skilled delivery significantly associated with education as women with formal education had higher (89.7%) skilled deliveries compared with those without any formal education

(87.9%), (P<0.014). Proportions of skilled delivery increased with increased level of formal education, with women who attained tertiary education recording 100% skilled delivery. There were significant differences in proportions of skilled delivery comparing women in urban areas (97.3%) with their rural counterparts (88.1%). Proportions of skilled deliveries were significantly high among women across all religious groups (above 90%) except tradition and other religions (40%) with P<0.001. There were also significant differences in skilled deliveries across occupations of the participants. Women farmers had the lowest proportions of skilled delivery (85.2%). [P value< 0.002]. Also women whose husbands were farmers had highest proportions of unskilled delivery (13.3%) P value (0.027). (Table 4.2)

Table 4.2 Proportions of Skilled delivery and demographic characteristics of women, Wa Municipal, 2015.

Variable	Skilled Delivery n (%)	Unskilled Delivery n (%)	P value
Age of Mother			
15-19	26(86.7)	4(13.3)	0.252
20-24	156(90.7)	16(9.3)	
25-29	200(93.0)	15(7.0)	
30-34	76(93.8)	5(6.2)	
≥35	23(52.1)	5(17.9)	
Level of Education			
None	211(87.9)	29(12.1)	
Primary	78(89.7)	9(10.3)	0.014
JSS	108(96.4)	4(3.6)	
Secondary	56 (96.6)	2(3.4)	
Tertiary	28 (100.0)	0(0.0)	
Marital Status			
Single	29 (96.7)	1 (3.3)	
Married	438 (91.1)	43(8.9)	0.291
Divorced/widow	14(100.0)	0(0.0)	
Residence			
Urban	200(97.6)	5(2.4)	
Rural	281 (88.1)	38(11.9)	0.001
Ethnicity			
Dagaabas	422(91.1)	41 (8.9)	
Sissala	52 (94.5)	3(5.5)	0.548
Other	5 (100.0)	0 (0.0)	
Religion			
Christian	201 (91.4)	19 (8.6)	
Moslem	277(92.3)	23 (7.7)	0.001
Traditional	2 (40.0)	3 (60.0)	
Other	1 (100.0)	0 (0.0)	
Occupation			
Farming	127 (85.2)	22 (14.8)	
Trading	117 (95.9)	5 (4.1)	
House wife Only	60 (85.7)	10 (14.3)	0.002
Seamstress	113 (94.2)	7(5.8)	
Public Servant	26 (96.3)	1(3.7)	
Other	38 (100.0)	0 (0)	
Husbands Occupation			
Farming	169(86.2)	27 (13.8)	
Trading	71 (91.0)	7 (9.0)	
Artisan	138 (95.2)	7(4.8)	0.027
Tailor	20 (95.2)	1 (4.8)	
Public Servant	75 (96.2)	3 (3.8)	
Others	7(100.0)	0 (0.0)	

4.2 Socio-cultural and geographic barriers to skilled delivery services

In table 4.3 bivariate analysis, antenatal attendance (P<0.001); choice of place of delivery (P<0.001); time taken to reach nearest health facility (P<0.001); seeking husband consent before deciding where to deliver (P<0.001) and the consequences for not seeking the husbands consent (P<0.004) were all significantly associated with uptake of skilled delivery.

Table 4.3 The socio-cultural and geographical barriers of Women to skilled delivery in Wa municipality, 2015

Variables	N	Skilled Delivery n (%)	Unskilled Delivery n (%)	P value
ANC during current pregnancy				
Attended ANC	506	468 (92.5)	38 (7.5)	0.001
Did attend ANC	13	6 (46.2)	7(53.8)	
Where will you like to deliver				
At Home	7	3(42.9)	4(57.1)	0.001
At Health facility (H/F)	516	475 (92.2)	40(7.8)	
Time take to get to nearest H/F				
≤ 10 minutes	180	167 (92.8)	13 (7.2)	0.001
11 – 30 minutes	298	280 (94.3)	17(5.7)	
≥ 31 minutes	47	33 (70.2)	14 (29.8)	
Seeking Husband consent b4 to deliver				
Sought Consent	421	396 (94.1)	25(5.9)	0.001
Did not consent	100	80(80.0)	20(20.0)	
Consequence for not seeking consent from husband				
My husband will punish me	9	6(66.7)	3(33.3)	0.004
Gods will punish me	28	23(82.1)	5(17.9)	
Elders will punish me	484	447(92.5)	36(7.5)	

4.3 Socio-demographic characteristics and uptake of skilled delivery services

Occupation of women was associated with uptake of skilled delivery. The odds of a trader and a seamstress having a skilled delivery is increased by four times {(cOR= 4.1 95% CI (1.5-11.1)} and about 3 times {(cOR=2.8 95% CI, 1.2-6.8)} respectively compared to farmers. After adjustment, only women who trade remained significant {AOR=5.1 95% CI, 1.4-18.4)}. Antenatal attendance during pregnancy was significantly associated with uptake of skilled delivery. The odds of women who did not attend antenatal services during pregnancy, having skilled delivery is decreased by about 90% comparing women who had no antenatal attendance to those who had at least one attendance **(**cOR= 0.1 95% CI (0.02-0.2) in univariate analysis and was still significant in multivariate analysis{AOR=0.01, 95% CI, (0.01-0.1)}

Time taken to arrive at a health facility from place of residence was also significantly associated with uptake skilled delivery. Women who had to walk more than 30minutes before they could arrive at a health facility were 80% less likely to have skilled delivery compared to those who walk less than 10 minutes (cOR= 0.2 ,95% CI (0.1-0.4). this association was significant after adjustment (AOR= 0.1 ,95% CI (0.1-0.3).

Seeking husbands consent before selecting a place of delivery as a measure of women autonomy, was equally significant. The odds of women who did not seek consent from the husband before delivery was 70% less likely to have skilled delivery compared to those who sort consent from their husbands (cOR= 0.3 (95% CI (0.1-0.5) from the summarized table 4.4 below. However, find attached the detailed table 4.4 at the appendix A.

Table 4.4 Summary of Crude and Adjusted odds ratios of factors associated with uptake of skilled delivery services, Wa Municipality , 2015.

Variable	N	cOR (95% CI)	P value	aOR(95%CI)	P value
Age of Mother			0.322		
15-19	30	1.0		1.0	
20-24	172	1.5(0.5- 4.8)		31(0.7-13.0)	0.563
25-29	216	2.1(0.6 -6.7)		2.9(0.7-11.8)	
30-34	81	2.3(0.6-6.7)		2.8(0.6-14.2)	
≥35	28	0.7(0.2-2.9)		4.5(0.6-32.2)	
Level of Education			0.014		
None	240	1.0		1.0	0.12
Primary	87	1.2(0.5-2.5)		1.3(0.4-4.1)	
JSS	113	3.7(1.3-10.8)		3.4(0.7-14.0)	
Secondary	58	3.8(0.9-16.6)		2.8(0.3-19.0)	
Tertiary	28				
Residence			0.001		
Urban	205	1.0		1.0	0.04
Rural	320	0.2(0.1-0.5)		0.4(0.1-1.2)	
Religion			0.013		
Christian	221	1.0		1.0	0.34
Moslem	300	1.1(0.6-2.1)		1.4(0.6-3.4)	
Traditional	6	0.1(0.1-0.4)		3.2(0.1-100.4)	
Occupation			0.006		
Farming	149	1.0		1.0	0.07
Trading	123	4.1(1.5-11.1)		**5.1 (1.4-18.4)**	
House wife Only	70	1.0(0.5-2.3)		0.7(0.2-2.6)	
Seamstress	120	2.8(1.2-6.8)		3.2(0.9-11.7)	
Public Servant	27	4.5(0.6-34.9		0.5(0.1-7.2)	
Other	38	1			
Husbands Occupation			0.017		
Farming	197	1.0		1.0	0.77
Trading	78	1.6(0.7-3.9)		0.9(0.3-3.1)	
Artisan	145	3.1(1.3-7.5)		1.6(0.5-5.2)	
Tailor	21	3.2(0.4-248)		1.9(0.1-32.2)	
Public Servant	78	4.0(1.2-13.6)		0.6(0.1-3.8)	
Other	7				
Did you attend ANC pregnancy			0.001		
Attended ANC	506	1.0		1.0	< 0.001
Did not attend	13	0.1(0.2-0.2		**0.09 (0.01-0.1)**	
Where will you like to deliver			0.009		
At Home	7	1.0		1.0	< 0.001
At Health facility (H/F)	516	15.8(3.4-73.2)		**59.8(1.6-2122.8**	
Time taken to get to H/F			0.001		
≤ 10 minutes	180	1.0		1.0	< 0.001
11 – 30 minutes	298	1.3(0.6-2.7)		0.9(0.3-2.2	
≥ 31 minutes	47	0.2(0,1-0.4)		**0.08(0.1-0.3)**	
Seeking Husband consent			0.001		
Sought consent	421	1.0		1.0	< 0.001
Did not seek consent	100	0.3(0,1-0.5)		**0.2(0.1-0.6)**	

CHAPTER FIVE

DISCUSSION

This section interprets the findings in the context of available evidence from literature from Ghana and elsewhere. The implications of the study findings and conclusions are discussed in relation to strengths and limitations of the design and implementation of the study protocol.

This study results showed that skilled delivery utilization was generally high (over 90%) in the Municipality. Over 90% of the women seeking skilled delivery care could partly be attributed to the increased number of Community-based Health and Planning Services (CHPS) compounds and Community Health Officer (CHO) in the study area. Almost all the women both from urban and rural settings preferred to deliver with a skilled attendant in health facility. This could be attributed to positive influence of the presence of CHO-nurses and midwives in the areas. It should be noted that these nurses and midwives conduct regular health education programs which could have contributed to women's uptake of skilled attendant deliveries. However, there is still the need for more sensitization since about 10% of the women reported that they delivered at home and were attended by TBAs in the communities. Studies conducted in three districts in Upper East Region with a similar prevalence of 80% uptake of skilled delivery explained that the availability of CHPS services, equipment and logistics would stimulate staff with the requisite training and skills to better perform hence, improve on the quality of services thereby by attracting more women to use skilled services (Sakeah et al., 2014). This finding suggests that women make good use of skilled delivery services and place value on the role of health institution in maternal health care. However, the difference in proportions of skilled delivery between what is observed in the Wa municipal annual report and that of the regional or national average could be explained by the population denominators. The

numerators used for estimation of the municipal proportion could be exaggerated, considering the fact that most women from other districts in the region and some parts of the Northern region, who did not attend Antenatal Care (ANC) service in Wa municipal, also access skilled delivery services at the Wa Regional Hospital. This is evident in national GHS report of 2013 where the Wa Municipal Health Directorate reported 118% skilled delivery coverage (GHS, 2013), which suggests that women from other districts were not segregated from the numerators

The proportions of skilled delivery observed in this study is similar to what was found in other studies conducted in parts of Ghana and other countries. Esena and Sappor (2013) reported 79% skilled delivery in the Ga East Municipal. Generally, skilled birth attendance in East Africa and some part of the Asian Pacific are lower compared to Ghana. Studies from Bangladesh and Ethiopian have reported 14.7% and 21% skilled delivery coverage rates respectively (Mangeni, Mwangi, Mbugua, & Mukthar, 2013a)

Furthermore, this study revealed a higher proportion (over 97%) of skilled delivery in urban settlement than in rural areas. Women in rural area were more likely to have in unskilled delivery. However, one of the reasons for this findings might be due to the fact that in the urban areas the proportion of women with education is higher, accessibility of the services with minimal distance and transport, and women could have better decision making autonomy, good knowledge of pregnancy and delivery complications, and better access to information than rural mothers. This finding is comparable to the (GSS, 2011) report which indicated that proportions of skilled delivery are higher in urban areas than in rural areas. From literature, similar findings were observed in other African settings (Choulagai et al., 2013b; Essendi, Mills, & Fotso, 2011). Improved access to health care services through the provision of both private and public health facilities in the towns and

improvement in number of skilled professional (midwives) could be one of the factors responsible for the higher proportions of skilled delivery reported in urban areas than rural setting in this study. This meant that if the skilled delivery programs are well implemented in CHPS zones, every woman would be supervised by a skilled attendant at birth and that would guarantee the safety of women during delivery and accelerate the attainment of MDG 5.

Trading was the second most common occupation of women in this study (23.3%) after farming (28.3%). Traders were more likely to have skilled delivery compared to farmers. The farmers appeared to be busy in their farm work and mostly settle far away from towns and could not notice the early signs of the onset of labour and end up delivering at home while the traders are always moving to and from cities for business trips hence have access to maternal health information. Traders could also be financially sound to afford maternal health care. Studies from other parts of Ghana showed that, being a famer did not significantly lead to skilled births attendance. The Dagaabas were more likely to have skilled delivery at birth compared with the Sissalas after controlling for other socio-demographic factors. (Amankwah, 2009). This can be explained that majority of Dagaabas are Christians and more enlightened compared with the Sissalas who are mostly traditionalist and prefer traditional interventions including used of TBAs at child birth. These findings are consistent with results from previous studies that revealed the significant role ethnicity plays in influencing women's decision to seek skilled care at birth (Tarekegn et al., 2014).

Skilled delivery has been found also to be closely linked with distance (Shimazaki et al., 2013). Distance was found to be associated with health facility delivery with increased odds of delivering at home comparing people who had to walk more than 30 minutes

before arriving at a health facility. In this study distance is a major barrier to skilled delivery. Distance was assessed by estimating the time a woman will take from her home to a health facility. Women who needed to walk for more than 30 minutes from their home before reaching a health facility had an increased chance of not accessing skilled delivery services (Story et al., 2012). Though access to skilled delivery services has been improved over the years with the introduction of CHPS compounds concepts much more still needed to be done because many rural areas lack skilled delivery services and coupled with transportation challenges could mean many women are still not reached with skilled care. Long distance reduces utilization of skilled delivery services.

Women who live in urban areas have been found to be more likely to deliver in a health facility than those who live in rural area (Amankwah, 2009). Women who live in rural areas are twice more likely not to access skilled delivery services.

Several studies have showed statistical link between maternal formal education and skilled delivery services (Amankwah, 2009; Moore et al., 2011; Yanagisawa et al., 2013). Educated women were more likely to have skilled delivery, with the increasing chance of having skilled delivery as level of education increases (Saxena et al., 2013). This study had demonstrated that proportions of skilled delivery increased with increased level of formal education, with women who attained tertiary education recording 100 percent.

ANC attendance proves to be major determinant of skilled delivery utilization. With ANC coverage in almost all parts of the country over 80% (GHS 2013) women who had no ANC attendance were about 90% less likely to have skilled delivery.

Similarly, ANC attendance was found to improve the chance of having skilled delivery by about four times in Ethiopia (Mengesha et al., 2013) , however in the Nepal study,

delivering at a health facility was not significantly associated as this study found it significant (Choulagai et al., 2013a). Women who did not have to seek consent had reduced odds of delivering at a health facility by a skilled attendant. Likewise in Ethiopia, female headed families had better odds of skilled delivery compared to women from male headed (OR= 3.4).

Studies on the relationships between health seeking behaviour and women autonomy have yielded various results (Tarekegn et al., 2014). Some suggested that women with greater autonomy have an increased ability to make a decision to deliver at health facility (Mistry R, Galal O etal,2009) In some parts of northern Ghana where families are headed by males, the decision of place of delivery is the exclusive duty of the compound household head usually husband or occasionally elderly women(Story & Burgard, 2012). The involvement of husband in education of people concerning maternal health services is important for improving skilled delivery services (Story et al., 2012). In a Kenyan study, women from a female headed family had a lower odds of having a skilled delivery (OR=3.4) compared to those from male headed families (Mwifdzu etal, 2007)

5.1 Limitations of the study

- The cross sectional nature of the study limits the use of the study findings to establish causal associations.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATION

This chapter presents the conclusion and recommendations based on the study objectives and findings of the study.

6.1 Conclusions

This study showed that skilled delivery utilization was generally high in the Wa Municipality. The major factors identified as capable of influencing the utilization of skilled delivery services are women's education, place of residence, women's autonomy and proximity to health facility. The study also revealed a higher proportion of skilled delivery in urban settlement than in rural areas in the Wa municipal. Women's education was identified as a vital factor in the use of maternal care services. Skilled delivery services utilization increase consistently as the education level of woman increases.

6.2 Recommendations for Policy makers

To Municipal Health directorate

- With the high achievement of skilled birth attendance, The Municipal Director and her Team should commend and design motivated packages to all skilled birth attendants to maintain the good work in the municipality
- Scaling-up and strengthening of CHPS and active community participation in CHPS activities should be intensified in approved zones.
- It was observed in this study that women who did not attend ANC were more likely to have an unskilled delivery. Community heads should encourage pregnant women to attend ANC services

- Women with autonomy of decision taking regarding choice of place of delivery were more likely to have a skilled delivery compared to those who had seek consent. Husbands and household heads should be targeted in safe motherhood and healthy reproductive life programs in rural areas through the Behavioral Change Communication (BCC) or Information, Education and Communication (IEC).

To Wa Municipal Assembly and Ghana Education Service

- Girls should be highly motivated and incentivized to attend school up to secondary level or higher. This could be achieved through interventions such as sustainable school feeding programs at the basic level and the introduction of tuition-free secondary level or higher education for females.
- Education on the use of maternal health services should also be intensified in basic schools so that women who have a minimum of basic level education would acquire appropriate knowledge on safe maternal health services.

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APPENDICES

APPENDIX A: CRUDE AND ADJUSTED ODDS RATIOS OF FACTORS ASSOCIATED WITH UPTAKE OF SKILLED DELIVERY SERVICES, WA MUNICIPALITY, 2015.

Variable	N	cOR (95% CI)	P value	aOR(95%CI)	P value
Age of Mother			0.322		
15-19	30	1.0		1.0	
20-24	172	1.5(0.5- 4.8)		31(0.7-13.0)	0.563
25-29	216	2.1(0.6 -6.7)		2.9(0.7-11.8)	
30-34	81	2.3(0.6-6.7)		2.8(0.6-14.2)	
≥35	28	0.7(0.2-2.9)		4.5(0.6-32.2)	
Level of Education			0.014		
None	240	1.0		1.0	0.12
Primary	87	1.2(0.5-2.5)		1.3(0.4-4.1)	
JSS	113	3.7(1.3-10.8)		3.4(0.7-14.0)	
Secondary	58	3.8(0.9-16.6)		2.8(0.3-19.0)	
Tertiary	28				
Marital Status			0.232		
Single	30	1.0			
Married	482	0.4(0.1-2.6			
Divorced/widow	14	1.0			
Residence			0.001		
Urban	205	1.0		1.0	0.04
Rural	320	0.2(0.1-0.5)		0.4(0.1-1.2)	
Ethnicity			0.37		
Dagaabas	464	1.0			
Sisalas	55	1.7(0.5-5.6)			
Other	5	1			
Religion			0.013		
Christian	221	1.0		1.0	0.34
Moslem	300	1.1(0.6-2.1)		1.4(0.6-3.4)	
Traditional	6	0.1(0.1-0.4)		3.2(0.1-100.4)	
Occupation			0.006		
Farming	149	1.0		1.0	0.07
Trading	123	4.1(1.5-11.1)		**5.1 (1.4-18.4)**	
House wife Only	70	1.0(0.5-2.3)		0.7(0.2-2.6)	
Seamstress	120	2.8(1.2-6.8)		3.2(0.9-11.7)	
Public Servant	27	4.5(0.6-34.9		0.5(0.1-7.2)	
Other	38	1			
Husbands Occupation			0.017		
Farming	197	1.0		1.0	0.77
Trading	78	1.6(0.7-3.9)		0.9(0.3-3.1)	
Artisan	145	3.1(1.3-7.5)		1.6(0.5-5.2)	
Tailor	21	3.2(0.4-248)		1.9(0.1-32.2)	
Public Servant	78	4.0(1.2-13.6)		0.6(0.1-3.8)	
Other	7				

Did you attend ANC pregnancy			0.001		
Attended ANC	506	1.0		1.0	< 0.001
Did not attended	13	0.1(0.2-0.2		**0.009 (0.01-0.1)**	
Where will you like to deliver			0.009		
At Home	7	1.0		1.0	< 0.001
At Health facility (H/F)	516	15.8(3.4-73.2)		**59.8(1.6-2122.8**	
Time taken to get to H/F			0.001		
≤ 10 minutes	180	1.0		1.0	< 0.001
11 – 30 minutes	298	1.3(0.6-2.7)		0.9(0.3-2.2	
≥ 31 minutes	47	0.2(0,1-0.4)		**0.08(0.1-0.3)**	
Seeking Husband consent			0.001		
Sought consent	421	1.0		1.0	< 0.001
Did not seek consent	100	0.3(0,1-0.5)		**0.2(0.1-0.6)**	
Consequence for not seeking consent from husband			0.023		
My husband will punish me	9	1.0			
Gods will punish me	28	0.3(0.4-12.4)			
Elders will punish me	484	6.2(1.4-25.9)			

APPENDIX B: STUDY QUESTIONNAIRE

Title of study: utilization of skilled delivery Service in Wa Municipality.

We are conducting a study on the Utilization of Skilled Delivery Services in Wa Municipality. Your input will help us identify the factors responsible for poor utilization of reproductive health services. Participation is voluntary: that is you may decide to participate or not. If you agree to participate then you will answer a few questions that I will ask you, and this will last for about 15 minutes. Any information you give will highly be kept confidential and used only for the study. For Verification or Additional Information about this study you may contact:

The chairman, Ghana Health Service Ethical review committee, P. O. Box MB 190

Accra, Ghana .Tel : *+233-302-681109 email: Hannah.Frimpong@ghsmail.org or*

Madam Abena kwaa Addai *at* *nanatuesdaykad@yahoo.com*

- **School of Public Health, College of Health Sciences, University of Ghana**
- The Municipal Health Directorate, UW/R- Wa.

If you agree to participate in the study please sign / thumbprint Signature/thumbprint of]respondent……..Date……

Signature

investigator……Date…….

Signature

INDENTIFICATION

Community code :	Respondent code
Name of community:	Date:
House number/Name:	Time interview started:
Language of interview:	Time interview ended:

SECTION A: DEMOGRAPHIC CHARACTERISTICS

	VARIABLE	RESPONSE
D1	**Level of Education**	1.No Schooling [ ] 2.Primary [ ] 3. Middle/JHS [ ] 4.Secondary/Technical/Vocational [ ] 5.Tertiary [ ] 6. Others (Specify)……. [ ]
D2	**Age of mother**	1. 15-20 [ ] 2. 21-34 [ ] 3. 35-49 [ ]
D3	**Marital Status**	1.Single [ ] 2.Married [ ] 3.Divorced/Separated [ ] 4. Widowed [ ] 5. Cohabiting [ ]
D4	**Place of residence**	1.Urban area [ ] 2.Rural area [ ]
D5	**Ethnicity**	1.Dagaaba [ ] 5.Sissala [ ] 2. Others (Specify) [ ]
D6	**Religion**	1. Christian [ ] 2.Muslim [ ] 3.Traditional [ ] 4. Others (Specify)…… ……
D7	Occupation of Mother	1.Farming [ ] 2.Trading [ ] 3. Housewife only [ ] 4.Seamstress [ ]

		5.Public servant [ ] 6. Others (Specify)……
D8	Occupation Of Husband	1.Farming [ ] 2.Trading [ ] 3.Artisan- [ ] 4.Tailor [ ] 5.Public servant [ ] 6. Others (Specify)……

SECTION B: COVERAGE OF SKILLED BIRTH ATTENDANCE

	QUESTION	RESPONSE
C9	When did you deliver the recent baby?	1. Ten(10) months ago [ ] 2. twelve (12) months ago [ ] 3.Twelve and above [ ]
C10	Where did you deliver?	1. At home [ ] 2.At health facility [ ] 3.With a TBA [ ]
C11	Did you attend ANC when you were pregnant?	1.Yes [ ] 2. No [ ]
C12	Where will you personally like to give birth?	1. Home [ ] 2. Health facility [ ]
C13	Time required to reach the nearest birthing facility	1. ≤10 minutes [ ] 2. 11-30 minutes [ ] 3. ≥31 minutes [ ]

SECTION D: SOCIO-CULTURAL/BELIEFS FACTORS.

S15	Do you have to seek your husband's approval before deciding where to deliver?	1.Yes [ ] 2.No [ ]
S16	If you decide to seek skilled attendance without your husband's consent, what would be the consequence?	1.My husband will punish me [ ] 2.Community gods will punish me [ ] 3.Community elders will punish me [ ] 4. Others (Specify)……..
S17	Why do you prefer delivering outside health facility?	1.Because of privacy [ ] 2.Due to beliefs/cultural practices [ ] 3. Others (Specify)……

APPENDIX C: CONSENT FORM

I……..Have read/understood the content of this study. I have been adequately informed about the purpose, procedure, potential risk and benefits of the study. I have been given the opportunity to ask questions about the study and my questions were answered satisfactorily. I know that I can choose not to participate in this study or withdraw from this study at any time without the loss of any benefit which I would have otherwise been entitled to. I have given my consent to participate in this study

Signature/thumbprint of participant…….

Signature/thumbprint of Witness …….

Interviewer statement

I have clearly explained the study to the participant in the language that he or she understands best and he/she has agreed to participate in the study.

Signature of interviewer…….

Date consent signed……..

Contacts for Additional Information

For any enquiries about the study you may call the chairman, Ghana Health Service Ethical review committee, P. O. Box MB 190

Accra, Ghana .Tel : +233-302-681109 email: Hannah.Frimpong@ghsmail.org or Madam Abena kwaa Addai at nanatuesdaykad@yahoo.com