FACTORS CONTRIBUTING TO LOW UPTAKE OF SKILLED DELIVERY SERVICES IN THE BUIPEILA SUB-DISTRICT, NORTHERN REGION

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UNIVERSITY FOR DEVELOPMENT STUDIES

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BY

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A THESIS SUBMITTED TO THE DEPARTMENT OF PUBLIC HEALTH, SCHOOL OF ALLIED HEALTH SCIENCES, UNIVERSITY FOR DEVELOPMENT STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE DEGREE IN COMMUNITY HEALTH AND DEVELOPMENT

JANUARY, 2017

DECLARATION

Student

I hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere:

Candidate's signature…….. Date……..

Name: **VIDA B. VUOCHE**

Supervisor

I hereby declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines on supervision of thesis laid down by the University for Development Studies:

Supervisor's Signature:……. Date:……..

Name: **DR BENSON KONLAAN**

ABSTRACT

Increasing the proportion of births in health facilities is an important factor in reducing the health risks to both the mother and the baby. Proper medical attention and hygienic conditions during delivery can reduce the risks of complications and infection that can cause morbidity and mortality to both the mother and the baby. The aim of this study was to investigate the factors leading to low facility delivery in the Bilpeila sub district. The study was conducted among 450 three-month postpartum women who were selected using stratified sampling procedures. Quantitative methods were used in gathering the data. About 39.6% initiated ANC in the first trimester, 54. % initiated ANC in the second trimester and 6.1% initiated ANC in the third trimester. About 46% made less than 4 ANC visits whilst 53.5% made 4 or more ANC visits. Majority (58.3%) of the respondents delivered at home whilst 41.7% delivered in health facilities. About 41.7% of the deliveries were conducted by a health professional or skilled birth attendant (doctors/midwife/nurses). Mother in-laws conducted 24.8% deliveries and TBAs conducted 22.6%. About 10.9% of the women delivered by themselves. About 46.3% of the women delivered at home because of the unavailability of health facilities, 20.9% delivered at home because they had no difficulties in their previous deliveries whilst 13.4% delivered at home because of transportation difficulties. Only 8.2% delivered at home because of the cost of delivery pack. Number of ANC visits was positively associated with uptake of skilled delivery services, ($p<0.001$, $\chi^2= 20.4$). Educational level was significant factor that influence the use of skilled delivery services ($p<0.001$, $\chi^2= 43.2$).

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Nothing is possible and successfully done without the concern of our creator. Our first and foremost thanks go to the almighty God for granting us life, strength, knowledge and good health to conduct this all important research work successfully. We could not have gone through this course successfully without his divine inspiration and provision.

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DEDICATION

I dedicate this work to my children

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LIST OF ABBREVIATIONS

ANC	Antenatal Care
GDHS	Ghana Demographic Health Survey
GHS	Ghana Health Service
JHS	Junior High School
MICS	Multiple Indicators Cluster Survey
NHIA	National Health Insurance Authority
SBA	Skilled Birth Attendant
SHS	Senior High School
TBA	Traditional Birth Attendant
UN	United Nations
UNICEF	United Nations Children Emergency Fund
UNFPA	United Nations Population Fund

OPERATIONAL DEFINITION OF KEY TERMS

Antenatal care: The care that a woman receives during pregnancy which helps to ensure healthy pregnancy outcomes for women and newborns

Skilled/facility delivery: the act of a pregnant woman being assisted by skilled birth attendant to deliver her baby in an accredited health facility

Traditional Birth Attendant: A person (mostly a woman) who has been trained and is recognised in community to assist pregnant women in labour to deliver or refer them to a health facility.

Skilled Birth Attendant: A trained and professional health care provider (mostly a midwife/nurse/medical doctor) who assist pregnant women to deliver

CHAPTER ONE

1.0 INTRODUCTION TO STUDY

Chapter one comprises the background to the study, the problem statement, the study objectives, the significance of the study and the conceptual framework

1.1 Background to the Study

On a worldwide scale, significant progress has been made to date on improving maternal health (World Health Organization, 2015). Globally, the maternal mortality ratio dropped by 45% between 1990 and 2015, from 380 to 210 deaths per 100,000 live births (WHO, 2015). The UNFPA 2015 reported that despite progress in all world regions, the maternal mortality ratio in developing regions of 230 maternal deaths per 100,000 live births in 2015 was fourteen times higher than that of developed regions, which recorded only 16 maternal deaths per 100,000 live births in 2015.

Maternal mortality is a health care issue between developed and developing countries with about 99% of all maternal deaths estimated to occur in the developing world. Burden of this tragedy is felt by African countries, which account for 40% of the global total pregnancy related mortality (UNICEF, 2012). Great disparities in perinatal health occur worldwide. Between 7 and 8 million perinatal deaths occur globally each year with the majority occurring in developing countries where over 90% of all infants are born (Stephenson et al, 2006). The major causes of maternal deaths include unsafe abortions, eclampsia, bleeding, obstructed labour, infections and sepsis, reflecting poor provision and use of maternal health services. One way to address both maternal and neonatal mortality is to ensure skilled obstetric care at the time of delivery, which is often

achieved in sub-Saharan Africa by encouraging pregnant women to deliver their babies in health care facilities.

Poor use of maternal health services is a result of barriers to access (Van Lonkhuijzen et al., 2009). Most deaths would have been prevented if they had access to a skilled attendant, essential midwifery care and emergency obstetric care (EmOC).

For every woman who dies, up to 50 more suffer avoidable and debilitating health problems such as fistulae, prolapse of the womb and infertility (UNFPA, 2012). Over recent decades, infant mortality rates have fallen, but stagnating neonatal mortality rates mean that deaths in the newborn period are becoming responsible for an ever-increasing proportion of infant and child mortality (Lopez, 2008).

In Ghana, Infant mortality is now less than 50 deaths per 1,000 live births and child mortality are 31 deaths per 1,000 children age one year. Neonatal mortality is 30 deaths per 1,000 live births in the most recent five year period, while the risk of post-neonatal mortality is 21 deaths per 1,000 live births (Ghana Demographic and Health Survey, 2014). Neonatal deaths account for 60 percent of the deaths in infancy (GDHS, 2014). Often however, the true burden of maternal mortality and neonatal morbidity and mortality is concealed due to delays and difficulties in presentation for care and the relative speed in which newborns can succumb to infection or perinatal hypoxia and more so newborn deaths occurring in the community may often go unreported (Carolyn et al., 2007).

Antenatal care (ANC) is one of the key practices that have a beneficial influence on maternal health Good antenatal care and high coverage is expected to impact positively

on pregnancy and birth outcome and corresponding high levels of skilled attendance. Attendance for antenatal care represents a unique opportunity to improve the health of women and their infants and it is imperative that we optimize this opportunity by offering a full range of health promoting services that may include voluntary counseling and testing for HIV (VCT), screening and treatment for syphilis, prevention and presumptive treatment of malaria in pregnancy (IPTp) and health education (Carolyn et al., 2007).

WHO (2011) recommends that, a minimum of four antenatal visits for care which include blood pressure measurement, urine testing for detecting bacteria and protein in urine, blood testing to detect syphilis and severe anemia, weight and height measurement to detect possible birth complications should be achieved before the woman delivers.

At delivery, the importance of skilled attendance has long been recognized. However, distance to health facilities, inadequate transportation and the need for immediate and specialized services have hampered women's ability to access these services Attention to clean and hygienic delivery practices (WHO, 2003) and the provision of essential care for the newborn, such as thermal protection and early and exclusive breast-feeding (WHO, 1996), are important for the health of all infants whether born at home or in a health care facility.

About 70% of births in Ghana are delivered with the assistance of a skilled birth attendants (doctor, nurse/midwife, community health officer/nurse), 30 percent are delivered by a traditional birth attendant, and about one in ten births is assisted by a relative, or receives no assistance (GDHS, 2014).

1.2 Problem Statement

Access to proper medical attention and hygienic conditions during delivery can reduce the risk of complications and infections that may lead to death or serious illness for the mother and/or baby. The 2014 Demographic and Health Survey conducted in Ghana showed that 74% of women delivered in health facility with a skilled provider. However, the Northern Region has the lowest proportion (37%) of skilled deliveries in the whole country. Majority of women in the northern region deliver at home. This is attributed to the far distance pregnant women have to travel before accessing health care, cultural values which requires that pregnant women in rural areas of the region have to deliver at the homes of their mother in-laws and the high level of poverty in the region.

The Bilpeila Sub-District has consistently recorded a dwindling rate of the uptake of skilled delivery services since 2011. A review of the Annual Reports of the Sub-District shows a reduction from 44.5% in 2011 to 32.6% in 2014. The proportion of women who delivered in health facility in the Sub-District in 2012 was 27.4% and 35.8% in 2013. Interestingly the use of antenatal care services in the Sub-District has ranged between 89.4% in 2011 to 92.6% in 2014.

Even though a number of studies have investigated the factors and barriers to the uptake of skilled delivery services in Ghana and other parts of the African continent, no specific studies has been conducted in the Bilpeila Sub-District of the Tamale Metropolis. The aim of this study was to investigate the factors that contribute to the low uptake of skilled delivery services in the Sub-District.

1.3 Aim and Objectives of the Study

The aim of the study was to assess factors that influence the uptake of skilled delivery services in Bilpeila Sub-District

Specific Objectives

The specific objectives of the study included:

i. To assess the current uptake of skilled delivery services in the Bilpeila Sub-District

ii. To assess the uptake of antennal care services among pregnant women in the Bilpeila Sub-District

iii. To investigate the common perinatal care practices that occurs both at home and in health facilities of Bilpeila Sub-District.

iv. To determine if there is a significant relationship between ANC attendance and uptake of skilled delivery services of Bilpeila Sub-District

v. To determine the relationship between maternal education, economic and empowerment status with the uptake of skilled delivery services

1.5 Research Questions

i. What is the rate of uptake of antennal care services among pregnant women Bilpeila Sub-District?

ii. What are the perinatal care practices that occurs both at home and in health facilities of Bilpeila Sub-District?

iii. Is there a significant relationship between ANC attendance and uptake of skilled delivery services in the Bilpeila Sub-District?

iv. Is there a relationship between maternal education, economic and empowerment status and the uptake of skilled delivery services?

1.5 Significance of the Study

The 2014 Demographic and health Survey reported that most maternal and infant mortalities occur in the rural areas of Ghana. Since the Bilpeila sub district has a lot of rural communities, the results of these studies will help to address some of the reasons why pregnant women decide to deliver at home instead of the health facilities. Findings from this study would therefore guide District Health Directorates and other agencies that are working in the area of maternal health to devise ways of improving the uptake of the services.

1.6 Conceptual Model

The study was conducted being guided by a conceptual framework of supervised deliveries and the factors that influence the uptake of skilled delivery services. Figure 1.1 below is the frame work of the study.

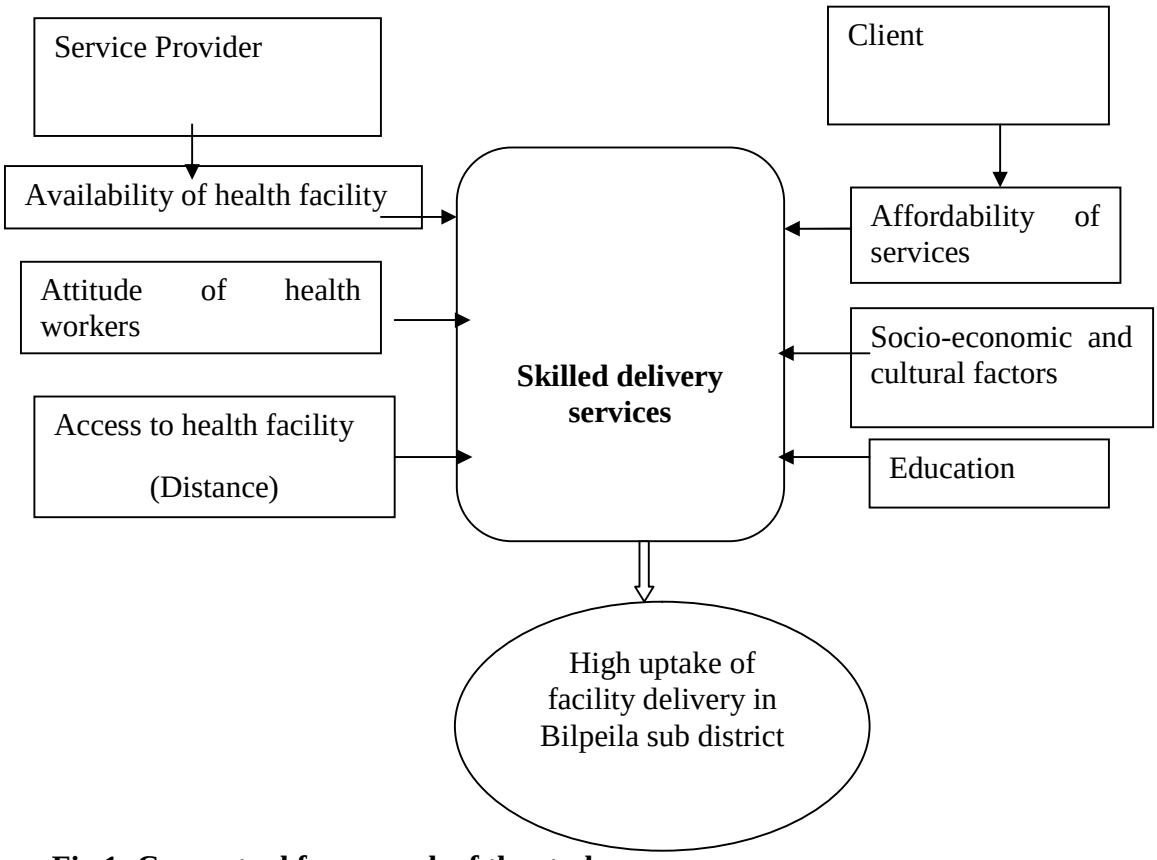

Fig 1: Conceptual framework of the study

Source: Author's construct

From Figure 1 suggests that for one to attain skilled deliveries which will result in low maternal morbidity and mortality in the district, factors affecting both the service provider and the client need to be considered. Whereas Service Providers are largely affected by factors such as the availability of health facility, attitude of health workers and access to health facility (distance) Clients are affected by affordability of services, socio- economic and cultural factors and education. The interplay of these two broad variables could result in skilled or unskilled deliveries. For example, a positive trend of

these factors will result in skilled deliveries which will lead to low maternal morbidity and mortality while a negative trend of these factors will result in unskilled deliveries, consequent upon which will lead to high maternal morbidity and mortality.

CHAPTER TWO

LITERATURE REVIEW

This chapter contains a review of relevant literature in relation to the study. Literature was reviewed based on the objectives of the study. The subsections include; a general overview of maternal health, contribution of TBAs to maternal health, barriers to facility delivery and women empowerment and the use of skilled delivery services. Overview of Maternal Health and Skilled Delivery

The Sustainable Development Goal (SDG) 5 builds on some of the targets that began in the MDGs, specifically MDG 3 and 4. This was aimed at reducing maternal and infant mortalities. Skilled or facility delivery by Skilled Birth Attendants (SBAs) serves as an indicator of progress towards reducing maternal mortality worldwide and is one of the SDGs.

According to the United Nations (2011) the use of SBAs during pregnancy, labour and delivery during the postpartum period could prevent many instances of maternal morbidity and mortality. Unfortunately, qualified midwives, nurses and doctors are often not available in the rural areas of many developing countries where most women are delivered.

The United Nations in the year 2010 reported that maternal mortality remains unacceptably high even though new data that was available showed signs of progress in improving maternal health the health of women during pregnancy and childbirth with some countries achieving significant declines in maternal mortality ratios. The report further reiterated the fact that progress is still well short of the 5.5 per cent annual decline

needed to meet the MDG target of reducing by three quarters the maternal mortality ratio by 2015. Progress has been made in sub-Saharan Africa, with some countries halving maternal mortality levels between 1990 and 2008. According to the report, other regions, including Asia and Northern Africa, have made greater headway (UN, 2010)

Skilled attendance at birth has been adopted as a leading indicator of maternal health for numerous international agreements and agencies. Although all women and babies need pregnancy care, care in child birth is most important for the survival of pregnant women. However, around the world, one third of births take place at home without the assistance of a skilled attendant (WHO, 2012).

The Ministry of Health of Ghana introduced an exemption policy directed at making delivery care free. The thrust of these policies have been to improve uptake, quality and 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. The policy covered delivery services in public, private and faith-based health facilities.

The importance of skilled delivery is further illustrated by the fact that in twelve of 27 countries categorized by the World Bank and International Monetary Fund as 'highly indebted poor countries, reporting on increases in the use of a skilled attendant at birth is required as a condition for securing international debt relief (Starrs, 2007).

It has been stated that there are still 3 million stillbirths and 3.7 newborn deaths each year (UNFPA, 2004). Skilled attendants has been defined as "an accredited health professional- such as midwife, doctor or nurse, who has been educated and trained to

proficiency and skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period and in the identification, management and referral of complications in women and newborns (WHO, 2011).

According to UNFPA (2011), evidence from many countries, such as China, Cuba, Egypt, Jordan, Malaysia, Sri Lanka, Thailand and Tunisia, indicates that skilled midwives functioning in or very close to the community can have a drastic impact on the reduction of maternal and neonatal mortality. The WHO (2014) proposed that by the year 2020, 90.0% pregnant women globally should be supervised by skilled attendants during delivery. The SDG report of 2015 stated that some regions of the world with dramatic gains in the proportion of deliveries attended by SBAs since the millennium declaration recorded more reductions in maternal mortality ratios. The report stated that a 50% reduction in the maternal mortality ratio was observed in Egypt following the doubling of the proportion of deliveries attended by skilled attendants.

Providing skilled attendants for delivery care, along with the equipment, drugs and supplies necessary for effective management of obstetric complications, is now being advocated as the single most important factor in preventing maternal deaths. For this reason, the benchmark indicator" percentage of births attended by a skilled attendant" is currently used to monitor progress toward international goals for maternal mortality reduction.

According to the 2014 Ghana Demographic and Health Survey, 57 percent of births occurred in health facilities, with 48 percent in public health facilities and 9 percent in private health facilities. Forty-two percent of births take place at home. The results also show that medically trained providers assisted 59 percent of deliveries, TBAs assisted 30

percent of deliveries, and relatives or friends assisted 8 percent of deliveries. There has been an increase in access to professional assistance during delivery over the past five years, from 51 percent in 2008 to 71 percent in 2008; over the same period, there has been a decrease in the use of relatives or no assistance at delivery, from 21 to 11 percent. Despite these improvements, medically assisted deliveries continue to be low in Ghana, with 41 percent not benefiting from professional delivery assistance over the past five years.

2.2 Contribution of Traditional Birth Attendants to Maternal Health

Traditional birth attendants (TBAs) are community-based maternal care providers, some of whom receive short training in childbirth and postnatal care. TBAs attend over half (55%) of all home deliveries in Tanzania (NSB, 2011). Most TBAs work independently of the health system and evidence from Africa suggests that TBAs are unable to cope effectively with either severe complications or pending, potentially life-threatening conditions (WHO, 2004).

According to Cotter et al (2006) in a study done on Low Use of Skilled Attendants' Delivery Services in Rural Kenya found that TBAs in Kenya provide services that the formal health system does not, including postpartum care in the home. Some of the women believe that childbirth-related complications are caused by witchcraft, and the TBAs are perceived as better equipped to intervene in these cases. The women have the perception that the health facility is a harsh setting for childbirth.

Researchers have documented that women value TBAs' social skills, patience, and respect, and the additional services that TBAs provide such as cooking, cleaning, and washing (Koblinsky et al, 2006). Other studies examining socio-cultural reasons for

continued high rates of home delivery point to factors such as the relative privacy afforded by home delivery, higher social status gained from not needing birth assistance, and fear of surgical delivery (Bazzano et al, 2008).

It has been reported that some TBAs have arranged a delivery area in their own house or compound. According to the report majority of TBAs interviewed reside in poor rural areas, very distant from health facilities. They often served as a bridge with the formal health system, sometimes accompanying women to health facilities (Stephenson et al, 2006)

Cases reviewed by the UNFPA (2015) showed that TBAs can make the most impact in preventing maternal and neonatal infections. They can prevent post-partum sepsis by applying the "three cleans" during delivery and following placenta management procedures. They also can contribute to decreasing maternal and neonatal deaths due to tetanus by referring women for tetanus toxoid immunization and by conducting an aseptic delivery. In locations where referral is feasible, TBAs can save lives through identifying risks and conducting required preventive measures before arrival at the referral site. The report stated that TBAs are generally older women even though there are few men TBAs who are respected by their communities. Majority of TBAs are illiterate and had learned their skills through working with other TBAs. Most TBAs considered themselves as private practitioners who responded to requests for service and received some compensation, mostly in kind. The focus of their work was to assist women during delivery and immediately post-partum. Frequently the assistance of TBAs also includes helping mothers with household chores.

Akintomi et al stated that TBAs are found in most communities of the world although their nature and function vary considerably. The World Health Organization definition of a TBA is 'a person who assists the mother during childbirth and who initially acquired her skills by delivering babies herself or by working with other TBAs'. TBAs are often older women and are generally illiterate (UNFPA, 2011). For families, TBAs are a cheaper option than domiciliary professional midwives and will often accept payment in kind. In many countries where home delivery is the norm, midwives are only available in health facilities. In many cultures TBAs are respected members of their community, perform important cultural rituals and provide essential social support to women during childbirth.

The work load of TBAs varies considerably from place to place and among individuals. Some TBAs may only attend family members and thus conduct only 2 or 3 deliveries a year while others have a wider clientele and a higher number of deliveries. It is unusual for TBAs to deliver more than 20 women in a year (WHO, 2010).

It is recognized that TBAs can provide emotional and social support to mothers and can provide key health education messages. Most women in rural areas rely on TBAs where there are no skilled birth attendants available or where they cannot afford the cost of professional services. TBAs however are not an acceptable substitute for skilled attendant at birth according to several studies. Based on such evidence, practitioners and maternal health policy makers now conclude that TBAs (untrained) do play an important role in traditional societies but need work in tandem with qualified community midwives and other skilled birth attendants at facility level(Sibley et al, 2004).

2.3 Determinants of the Uptake of Skilled Delivery Services

Qualified antenatal care, skilled birth attendance, access to emergency obstetric care and neonatal resuscitation skills are vital components to substantially reduce maternal, perinatal and neonatal mortality in developing countries (Starrs, 2005). The level of skilled birth attendance varies markedly among and within regions and countries, being well below 50% in many countries in South-East Asia and Sub-Saharan Africa (UNICEF, 2010). Although official nation-wide figures may show high coverage rates, this picture can be misleading. Typically, rates of skilled attendance are lower in rural than in urban areas (Say et al, 2007). This situation applies to Tanzania where in 2004/2005 the average rate of skilled attendance was as high as 81% in urban areas and as low as 39% in rural, remote districts. Even within rural regions, marked differences may exist which can be related to cultural norms, socioeconomic circumstances, accessibility of health institutions and service provision (Gabrysch and Campbel, 2009). In the case of nomadic populations and peasant farmers, it is even more difficult to provide health services, including obstetric care with skilled birth attendance.

It is estimated that 34% of mothers globally deliver with no skilled attendant; this translates into 45 million births occurring at home without skilled health personnel each year. Skilled attendants assist in more than 99% of births in developed countries compared with 62% in developing countries. In five countries including Ethiopia the percentage drops to less than 20% (WHO, 2012).

Available literature suggests that several factors are responsible for the uptake of skilled delivery services by pregnant women. Extensive studies have been carried out in different countries to establish these factors. Baral et al (2010) found that socio-economic, cultural

and religious factors play a significant role in the use of Skilled Birth Attendance for delivery in Nepal. Availability of transportation and distance to the health facility; poor infrastructure and lack of services; availability and accessibility of the services; cost and convenience; staff shortages and attitudes; gender inequality; status of women in society; women's involvement in decision making; and women's autonomy and place of residence are significant contributing factors for uptake of Skilled Birth Attendance for delivery in Nepal.

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

It was also identified that the autonomy of women to be a factor influences the uptake of skilled delivery services. In India, women find themselves in subordinate positions to men socially, economically and culturally. They are economically dependent on men. Women are largely excluded from making decisions, have limited access to and control over resources, are restricted in their mobility, and are often under threat of violence from male relatives.

In Tanzania, a study by Mrisho et al found ethnicity, gender of the household head, maternal education level, and the maternal age at child birth, socio-economic and quality of services status as significant independent factors in determining the choice of delivery

place. The study also identified sudden onset of labour or short labour as some factors that affect decisions towards selecting the delivery place. Selecting health facility for delivery was perceived to be more desirable for prolonged labour

Research work conducted by Adeyola (2010) established that; factors such as cultural beliefs, socio-demographic status, women's autonomy, economic conditions, physical and financial accessibility, disease pattern and health service issues are important determinants of the use of maternal health care services.

Another study from India by Shariff et al (2002) pointed out that the low utilization of maternal health services was due to low levels of household income, high illiteracy and ignorance, and a host of traditional factors.

In Pakistan, Babar et al (2004) found poor socio-economic status, lack of physical accessibility, cultural beliefs and perceptions, low literacy level of the mothers and large family size as the leading causes of poor utilization of maternal health care services.

In another study from Bangladesh, it was observed that the use of maternal health services can be influenced by the socio demographic characteristics of women, the cultural context, and the accessibility to these services.

According to Thind et al (2008) the choice of place of delivery by Indian women is greatly influenced by paternal education level, and scheduled caste status are the predisposing factors that determined the choice of private facilities, public and home deliveries.

In Pakistan, the size of family, parity, educational status and occupation of the head of the family are also associated with the use of maternal health services in addition to age, gender and marital status (Babar et al, 2004).

2.4 Transportation and Distance to the Facility

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

A study conducted in India has shown that distance from private hospitals does not affect health but rather distance from public health care centre does (Deogaonkar, 2007). People in remote areas with poor transportation facilities are more often removed from the health care centres. People are deterred from using existent facilities at health care centres because they are inadequate, insufficient and equipping these facilities is difficult and ineffective.

Large disparities still exist in providing pregnant women with antenatal care and skilled assistance during delivery**.** Poor women in remote areas are least likely to receive adequate care. This is especially true for regions where the number of skilled health workers remains low and maternal mortality high in particular sub-Saharan Africa, Southern Asia and Oceania (UN, 2010).

Several factors studies have reported that transportation and distance to the health facilities ,staff attitudes towards service users, inadequate numbers of SBAs, service delivery systems and poor physical infrastructure in the health facilities ,women's age, parity and education, perceptions of safe pregnancy, place of residence thus urban/rural, gender inequality , cultural and religious beliefs ,decision making power, socio economic status of women and geographical barriers including poor communication and road links are associated factors that affect the uptake of SBAs in Nepal (Baral et al, 2010)

A study in Afghanistan by Bartlett et al (2005) stated that challenges to health care provision in Afghanistan are compounded by the fact that 77% of Afghans live in sparsely populated areas separated by large expanses of difficult terrain and poor transportation infrastructure. For women in some remote areas, more than 2 weeks of travel time is required to access a skilled birth attendant, this is important because both infant and maternal deaths have been found to vary with distance from urban centers.

Nepal's challenging terrain and poor communication network meant that travel to the facility is often difficult especially in the hill and mountain districts of Nepal. Poor or none-existent road links caused transport to be an important barrier. When travel times have to be measured in hours or even days rather than minutes because of the topography of the country (and most people travel without transportation), these become great deterrents to service use (Hotchkiss, 2001) Limited geographic access to maternal health services is a further barrier in the remote rural areas of Nepal (Rath et al, 2007). A period of armed conflict between the years of 1996-2006, further exacerbated the limited use of maternal health services (Thapa, 2003).

A study in 2003 found that the armed conflict had affected women's access to emergency obstetric care through increased barriers to travel and security (Wagle et al, 2004). Studies from Afghanistan, Bangladesh, Malawi and Nepal have shown that living one hour away from a health facility increases the chance of a home delivery without a SBA eight times more than if the patient lived a distance of under one hour away from a health facility. (Kamwendo et al, 2005). Distance from a facility adds to the financial burden facing households through transport charges and time spent as well as other indirect cost for a delivery (Sharma, 2004).

2.5 Effect of Attitude of Skilled Attendants on the Uptake of Skilled Delivery Services

The political commitment needed to develop the human resource and systems necessary for skilled attendance is often limited by social and cultural norms, and these norms mostly place women at a lower status than men. In a study done in Kenya by (Shiferaw et al, 2013), women were not seeking institutional delivery because of the belief that it was not necessary (42%) and not customary (36%). The results showed traditional birth attendants were culturally acceptable as compared to health facility delivery. It was realized that home delivery raises a woman's status in her community while seeking skilled attendance lowers it and does not also give them secrecy enough in labour (Bazzano et al, 2008).

The results of a study in Bayalsa State Nigeria revealed that midwives exhibit both positive and negative attitude but the negative attitude (55%) outweighs the positive attitude (45%). These attitudes have effect on the woman in labour and are major factors influencing the women's choice and decision about where to give birth (Onasoga et al, 2012).

Both positive and negative attitudes of staff play a part in the utilization of SBAs in various ways. Staffs' positive attitude towards women during labour e.g. giving reassurance and encouragement and politeness encouraged use of SBAs. Studies from different developing country have shown that negative attitudes like rudeness, shouting during labour, lack of empathy, refusal to assist, and lack of moral support, making patients wait and giving priority on the basis of links to status, caste and ethnic, language and religion all discourage use of SBAs (Kamwendo and Bullough, 2015).

Similarly, a study from Nepal shows that too many outpatients in the departments of the facility make it difficult to manage privacy and confidentiality and lack of adequate training to service providers to maintain privacy and confidentiality also discourage use of SBAs (Pradhan, 2005).

Upgrading delivery care often begins with improving the quality of personnel and services offered in facilities. When facilities have qualified personnel with the right attitude and provide quality services, they become widely used and trusted by community members (UNFPA, 2012) Lack of doctors, nurses and midwives and also the presence of all these people without the right attitude towards client's posse's serious problems for developing countries. Essential competencies are also needed at the referral level. A study in Burkina Faso, for example, found that caesarean sections are sometimes referred from the district level. Pre-service training institutions are not producing graduates with the essential competencies and attitudes of a skilled attendant, either for routine obstetric care or for emergency obstetric care (Global Health Council, 2008).

A woman reported about the attitude and competencies of a skilled attendant and made a statement such as "even the delivery went normally, but there was a nurse, who was just in training, and after my baby was born, he pulled the placenta out by force…. when he pulled, another nurse shouted at him: 'Don't do that!' I was torn badly down there, so they had to stitch it all up, but everything got so infected, and that infection never seems to have gone away" (Campbell-Krijgh et al, 2003).

According to Cotter et al (2006) women in Kenya place value on delivery by a traditional birth attendant (TBA) because of the attitude of nurses and other skilled attendants. The

society respects and uses the services because of the attitude of some health professionals towards women especially those within the lower social class.

Ghana's free delivery care policy is seen as an effective approach to increase the utilization of skilled care for delivery. However, this has proved to be wrong because even when the delivery-fee-exemption policy the utilization of delivery services is not encouraging because of poor attitude of nurses towards clients, poor quality of care, low staff strength, poverty, transportation, long distances to health facilities, socio-cultural barriers, and the custom of using traditional birth attendant still remains and these hinder access to skilled delivery (Impact, 2007).

A study in Niger shows that the main reason for delays to go to health facility was due to past experience of poor outcome of pregnancy such as still birth, poor management of treatment. Women may choose a place for delivery because they feel that staff non responsive, rude, refusal to assist them, lack of empathy, lack of confidentiality and privacy. Further they experience long waiting time (Meyer, et al., 2012)

Poor staff attitude in addition to problems of financial cost of drugs, transport and distance to facility, poor staff attitude leads to poor quality to conduct delivery and including EmOC delay woman to seek care at facility level (Gessewa et al, 2012).

2.6 Influence of Maternal Education and Empowerment on Skilled Delivery

According to Kabeer (2003), there are three dimensions in women's empowerment: resources agency, and achievement. Resource refers to the fundamental conditions under

decision making, which include land, equipment, finance, working capital, and also knowledge, skills, creativity, imagination, among others. However, as Kabeer (2003) indicates, the problem of using the above ownership of assets or resources is that it does not reflect women's rights in the dynamic process of treating the assets; in other words, women's empowerment cannot be fully reflected by what they own. Therefore, Sathar and Kazi (2009) suggest using "having a say in decisions related to particular resources, for example, household expenses" as the measurement of resources. Agency is the process of making choices itself. He further stated that women's empowerment is not about what the women own, but the freedom to make choices/decisions (or the freedom not to make decisions). He proposed measurement of agency such as domestic violence, women's mobility, and women's power in various domestic decision-making presented by decision-making indicators as household purchase, children's education, health, family planning methods, women's employment, the treatment of assets, etc. (Kabeer, 2003).His study also talked about the achievements of women and said they are the outcomes of the choices and emphasizes that the measurement of achievement should reflect the gender difference based on the ability to make choices instead of preferences. Concerning the measurements of women's empowerments, Kishor (2009) defines three sets of indicators of women's empowerment, including "direct evidence of empowerment, sources of empowerment, and setting indicators". The direct evidence of empowerment embraces indicators of women's power compared to men, for example, women's participation in domestic decision making, the existence of domestic violence, and mobility, etc. Sources of empowerment refer to women's employment and education.

Setting indicators usually reflect family structure or marriage setup, including living with in-laws, the age and education difference between husband and wife (Kishor, 2009).

All these three sets of indicators have been used in most literatures to test the relationship between women's empowerment and uptake of maternal health services. Evidences of significant impact of the above three sets of empowerment indicators are found.

Gage (2006) tests the linkage between women's position and contraceptive behavior. It finds that women who work for cash and are able to select their partners have significantly higher chance to communicate with the partner about maternal health services usage. Apusiga (2012) finds out that polygamy does not affect women's use of maternal health services; on the other hand, sources of empowerment, women's status, literacy and employment are significant.

Direct evidence of empowerment, an index of women's involvement in domestic and fertility decision making significantly affects contraceptive knowledge and use. In a study by Awusabo et al (2008) a woman's empowerment is defined here as a function of her relative physical mobility, economic security, ability to make various purchases on her own, freedom from domination and violence within her family, political and legal awareness, and participation in public protests and political campaigning. All these variables are combined into a composite indicator. This single indicator can be seen as an index of direct evidence of empowerment.

It was also reported by Schuler & Hashemi (2011) that empowerment index has significantly positive impact on use of maternal health services. Malhotra, et al (2011) uses aggregate data for districts of India, finding that male-dominating societal structure has prediction power on fertility. The main indicators it uses are the ratio of female to

male mortality and female share of the labor force. It turns out that both variables significantly predicted district total fertility rates. Except the above literatures which discuss women's empowerment in general and its impact on their reproductive health, another set of research specifically concentrates on the relationship between female schooling and fertility. There are many reasons for the negative correlation these two variables.

First, female education increases women's productivity and therefore makes the opportunity cost of childbearing higher since taking care of children is time-intense for women (Chedu et al, 2010) Second, education lowers mortality rate; therefore, women need less births in order to get desirable family size (Schultz, 2008). Third, women with higher education tend to choose quality over quantity of the children (World Bank report, 2011)). Fourth, a women's education is connected with her husband's education; Therefore, female education has multiplier effect on household income (McCrary and Roger 2006). Fifth, women with higher education tend to have better knowledge of maternal health services (Rosenzweig, 1989).

According to Chengxin (2005) there are two major approaches in an empirical study of the impact of female education on reproductive health. First, reduced-form relationships only exogenous explanatory variables are included. This means family decision variables cannot be added, because they are usually jointly determined with women's choices. For example, migration and income are both jointly determined with reproductive health as life-cycle decisions (Stephenson et al, 2007). However, the significant relationship found in the reduced-form estimation cannot be explained as causal relationship for the following reasons. First, omitted unobservable in the error term might affect both the

decision of education and giving birth. Second, fertility might interrupt school; therefore fertility is endogenous (Angrist and Evans, 1999). The second approach is structural-form relationship. Exogenous changes from natural experiments have been used as Instrumental Variables to test the causal relationship between education and fertility.

In order to test the causal relationship between women's education and use of reproductive health services, many literatures try to find instrumental variables in natural experiments. Long and Osili (2007), uses Universal Primary Education program in Nigeria as an exogenous change. First, the difference in Universal Primary Education regional and age difference is used to estimate educational attainment.

Secondly, the exogenous educational change is used as the Instrumental Variable to estimate the causal relationship between education and use of maternal health services. It is estimated that one year increase in education increases the uptake of maternal health services (McCrary and Roger, 2012).

Falkingham (2003) found a strong relationship between maternal education and the use of skilled attendance, but levels of education are classified differently. For example, in most African settings, effects of primary education versus no education are already well discernible. In Tajikistan, where most women have secondary education and 40% delivered at home in 1998, there is no differential in service use up to secondary education, but those with higher education are more likely to deliver in a facility than the rest.

Maternal education can have an empowering effect on women, broadening their horizons, choices, and opportunities and "enabling women to take personal responsibility for their health and for that of their children" (Paul and Rumsey, 2002). Higher levels of maternal

and head of household education are associated with increased use of health care during pregnancy as well as having a modern delivery or a delivery by trained personnel (Navaneetham and Dharmalingam, 2002).

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter contains the methodologies that were used in conducting this study. The sample size, sampling technique, study design, data collection procedures and tools and the analysis procedure are all presented in this chapter.

3.1 Study Area

The study was conducted in the Bilpeila Sub district of the Tamale Metropolis. The 2014 Annual Report of the Sub-District indicated that the sub-district has a total population of 68,543 with women in fertile age (WIFA) forming 16,450.

Tamale is the capital town of Northern Region of Ghana and shares common boundaries with Savelugu/ Nanton District on the North and Tolon Kumbungu on the North-West. It is also bordered by West and Central Gonja district on the south and East Gonja, and Yendi district on the east. Tamale Metropolis occupies approximately 922 square kilometers of land that is 13% of the total land area of the Northern Region. Although the capital has attained a metropolitan status, the geographical setting still has a blend of typical rural communities embedded within the urban areas (TMA, 2003).

The major economic activity of women in the Tamale Metropolis is trading. Poverty levels are high due to a number of factors. These included discriminatory inheritance of land and property, extensive farming being for subsistence, high domestic responsibility, low capital level, high birth rates, and high illiteracy level in the urban and peri-urban

areas, Tuo Zaafi (TZ) is usually the meal taken at supper, whilst a maize based porridge or tea is taken at breakfast. In these areas, lunch is not usually prepared at home hence the people choose from a wide variety of foods available. In the rural areas, TZ is usually the lunch and supper meal with a maize or guinea corn-based porridge at breakfast (TMA, 2003).

The population density of 318.6 persons per square kilometer of Tamale is about 12 times higher than the regional average density of 25.9 persons per square kilometer. There exists a vast difference between the densities of the urban and rural areas in Tamale. This is an indication of movement into urban Tamale, giving credence to the assertion that facilities and opportunities for modern employment are concentrated in few localities (TMA, 2013).

Malaria which influences birth weight is endemic in Tamale. According to malarial prevalence model of Ghana, Tamale has a prevalence rate between 90 and 100 percent

3.2 Study Population

The study population were three months postpartum mothers. The sampling frame was all women who delivered not more than three (3) months prior to the survey.

Married men were also recruited for focus group discussions.

3.3 Study Design

A descriptive cross-sectional study was conducted in all the 12 communities of the Bilpeila Sub-District.

3.4 Sample Size Determination

The sample size for the study were determined using the Snedecor and Cochran (1989) for one point sample estimate. The formula is;

$N=z^2\ pq/d^2$ where

N is the sample size desired

z is the statistical certainly chosen= 1.96 at a confidence level of 95%

p is the estimated prevalence of skilled delivery (Bilpeila Sub-District Annual Report (2014)) = (32.5)= 0.32

q is the proportion of non-skilled attendance = 1-p = 1-0.0.32=0.68

d is the precision desired = 0.05 (5%)

: $n = \frac{(1.96)^2 \times (0.68)(0.68)}{(0.05)^2}$

n = 423

A sample size of 423 was large enough to detect a reliable smallest difference in the study.

Variables and measurements

The independent and dependent variables that were investigated are listed below:

Independent variables

- Availability of health facility
- Barriers to the uptake of skilled delivery services –
- Spousal attitude or approval of skilled delivery services uptake

- Individuals characteristics such as age and parity
- Uptake rate of skilled delivery services
- Effect of distance on the uptake of skilled delivery services
- Effect of NHIA registration on the uptake of skilled delivery services

Dependent variable

Skilled delivery services acceptor rate was the principal outcome variable. Secondary outcome variables include the strength of relationship between women's economic, educational and empowerment status and the uptake of skilled delivery services.

3.5 Sampling Procedures

A 12 x 36 (36 respondents from each of the 12 communities) multistage cluster sampling procedure was used as the sampling procedure since the study was a community based study. In each of the study communities 36 postpartum women were randomly selected. However, a 5% allowance was made to take care of none response and damaged questionnaires. This culminated into a final sample size of 453. The final sample size that was used during the analysis of the data was 450 questionnaires.

Focus group discussions were organized in five communities for women in order to support or buttress their responses in the individual questionnaires.

3.6 Selecting the Starting Household Using the EPI Method

The first household was selected from the center of each of the study community. In each community, the lead investigator together with the Community base Health Volunteer (CBHV) chose a starting point by going to a central location in the cluster. At the centre of the cluster, a travel direction was selected at random by spinning a pen. The team then

moved in a straight line in a chosen direction and counting all of the houses until the end of the community was reached. The team then randomly chose a number between 1 and the number of houses counted as the starting point for the survey. The number randomly chosen therefore corresponded to the starting house.

3.7 Selection of Subsequent Households

The random-walk procedure will be followed until such time that the required number of interviews was reached. Every third household from the previously selected household formed the basis of selecting respondents for interview.

3.8 Procedure for selecting individual survey subjects

Postpartum women who have a child under 3 months old in the sampled households were recruited for the study (that is, eligible for interview). Only one eligible mother was selected for interview in any particular sampled household. If two women fit that description within one household, the mother of the youngest child was interviewed. This was done to reduce recall bias especially in the types of services received during antenatal care sessions.

3.9 Data Collection

Both qualitative and quantitative data collection methods were employed in the data collection. Focus group discussions and interviews were used to gather data on the study topic. The main data collection tools were questionnaires with open and close-ended questions. A focus group discussion guide was used for the focus group discussion sessions. The focus group discussions helped to collect detail data on the barriers to accessing or uptake of skilled delivery services, dangers of home delivery, determinants

of uptake of skilled delivery services and male contribution to the uptake of skilled delivery services. The proceedings of the focus group discussions were recorded while some salient points were written in a jotter.

3.10 Assessment of Women Empowerment

According to Malhotra et al (2002) different measures are used for the conceptualization of women empowerment. In their study, the proxies used to measure women's empowerment include their participation in decision making in various household issues and their welfare. They mentioned both major and minor decisions, while others include only major decisions, excluding day-to-day household decisions and those that are traditionally within the woman's domain.

Women empowerment in this study represents the position of women in the household especially with regards to decision making over matters that affect their health and the health of their children. The following questions will be used as proxies to determine the empowerment status of women in the family

i. Whether she takes part in decision making on household matters
ii. Whether she decides on how to spend her own money
iii. Whether she takes part in decision to buy her own clothes
iv. Whether the woman is involved in making decision to buy large household items
v. Whether she makes her own decision to work outside of the home

In this study, women were considered to participate in decision making if they make decisions alone or jointly with their husband. A composite index or measure was created using the sums of equally weighted binary input variables. Women were scored 1 for answers to each question that included her (alone or jointly) in decision making. They

were scored 0 if they did not take part in deciding on any of the questions or factors raised (thus if she answered no).

The index of decision making power contained ten factors or proxies, thus the respondents were scored from 0 to 10. A composite index of women empowerment (CIWE) was constructed with two levels of CIWE thus low and high empowerment status. This index was created based on the average value of index in the study sample. A binary variable from CIWE was created to indicate women with high versus low empowerment status. The two categories were created by dividing the sample indexes into approximately half. Women who score less than the average score were classified as low empowered women whilst those who scored at least the mean index value were classified as having a high empowerment status.

3.11 Determination of Household Wealth Index

A household wealth index based on the assets of the household and the building materials used to build the houses was used as indicators for socio-economic status (SES) of households. The index was created from information collected on housing material (mud, bricks and blocks) and roofing material.

Availability of electricity, water and type of toilet facility, and ownership of household durable goods and livestock (e.g. bicycle, television, radio, motorcycle, sewing machine, telephone, cars, refrigerator, mattress, bed).

The scores added up to give the proxy household wealth index. The index varied from 0-23. A household that had a wealth index score of 11 and below was classified as having a low wealth index score and those that has a wealth index score of 12 and above were

classified as having a high wealth index score. This index helped to group the various households into high and low SES.

3.12 Data Processing and Analysis

Data from the quantitative arm of the study were coded and entered into Statistical Package for Social Sciences (SPSS version 18.0) for analysis. Univariate, bivariate and multivariate analyses were performed. Univariate analysis was done for the socio demographic characteristics of the respondents whilst bivariate analysis was done to find the association between the socio demographic variables and the uptake of skilled delivery services. Distance to the source of a skilled delivery service and the socio economic status of the respondents were also compared to the use of skilled delivery services through bivariate analysis.

Multivariate analysis was performed to find the factors or determinants of the use of skilled delivery services.

In both bivariate and multivariate analyses, P-values were considered statistically significant when $P< 0.05$.

Chi square values were also used as test of statistical significance.

The qualitative data from the focus group and the key informant interviews were tapes and transcribed. Content and thematic analysis was then performed to the themes of the interviews.

3.13 Quality Control Measures

- **Pre-testing of questionnaires**: There was a pilot survey to pre-test the questionnaires. The pre-testing was done in Datoyili.
- **Double entries of data**: Double entry of data was done after which the two data sets were compared at the analysis stage.
- **Training of research assistants**: The research assistants who helped in the data collection were trained for one day to enable uniformity in the administration of the questionnaires.
- **Data cleaning**: The questionnaires were scrutinized to check against skipping of questions. The data sets were cleaned before analysis .

3.14 Ethical Consideration

The study protocol was presented to the Department of Community Health of the School of Allied Health Services of University for Development Studies for approval. Verbal informed consent was sought from all study participants before the commencement of any interviews or study activity. The study was not harmful to any study participants. Study participants are free to withdraw from the study at any time without any penalty. Information collected from study participants was treated with utmost confidentiality and will not be passed on to a third party. The data collected for this study was used for the purposes of this study only.

CHAPTER FOUR

RESULTS

4.0 Introduction

The results of the study are presented in this chapter. Both the quantitative and qualitative findings are reported in this chapter. Quantitative results are presented in tables and charts whilst the qualitative results are arranged in themes with some direct quotations from the focus group discussions.

4.1 Socio-Demographic Characteristics of Respondents

Majority of the respondents in this study were in the age group of 15-24.They represented 57.6% (259) of the total number of people surveyed. Majority 84.2 % (379) of the respondents were married either as monogamous or polygamous marriage. Those who were in polygamous marriage formed 65.7 %(249) of the entire married group. There were 3(0.7%) respondents who were widows. Again, majority of the respondents had no formal education representing about 71.1% (320) whilst 11 (2.4%) of the respondents had tertiary education. Farming is the main occupation of the respondents in representing 45.1% (203) of their occupation. A sizeable proportion of the respondents were engaged in petty trading forming 34.1% (153). Islam is the predominant religion of the respondents forming 78.9% (355). Dagombas are the major ethnic group in the Bilpeila Sub-District. They represented 63.8 % (287) of the respondents.

Majority of the respondents were registered with the National Health Insurance Authority (NHIA) representing 74.7% (336)

Most 60.9% (274) of the husbands of the respondents were engaged in farming. Most of their husbands did not have any formal education representing 47.3% (213). However, those who were educated to the tertiary level were more than the women who were educated to the tertiary level. They represented 8.2% (37) compared to 2.4 %(11) of the women.

Table 4.1: Background characteristics of respondents in the survey

Variable	Frequency (n=450)
Age	
15-24	259(57.6)
25-34	182(40.4)
35-44	9(2.0)
Religion	
Islam	355(78.9)
Christianity	89(19.8)
ATR	6(1.3)
Education	
Basic	92(20.4)
Secondary	27(6.0)
Tertiary	11(2.4)
None	320(71.1)
Marital Status	
Single	64(14.2)
Married	379(84.2)
Divorced	4(0.9)
Widowed	3(0.7)
Occupation	
Farmer	203(45.1)
Trader	153(34.0)
Civil servant	36 (8.0)
Others	58(12.9)

4.2 Uptake of Skilled Delivery Services

The respondents delivered their last/latest child during the survey at four different places. Most of the respondents delivered at health centers and CHPS compounds representing 34% whilst 18.7% of them at the hospital. Those who delivered in their homes formed 41.1% whilst 6.2% delivered at the houses of TBAs. Figure 1 below shows the distribution of place of delivery.

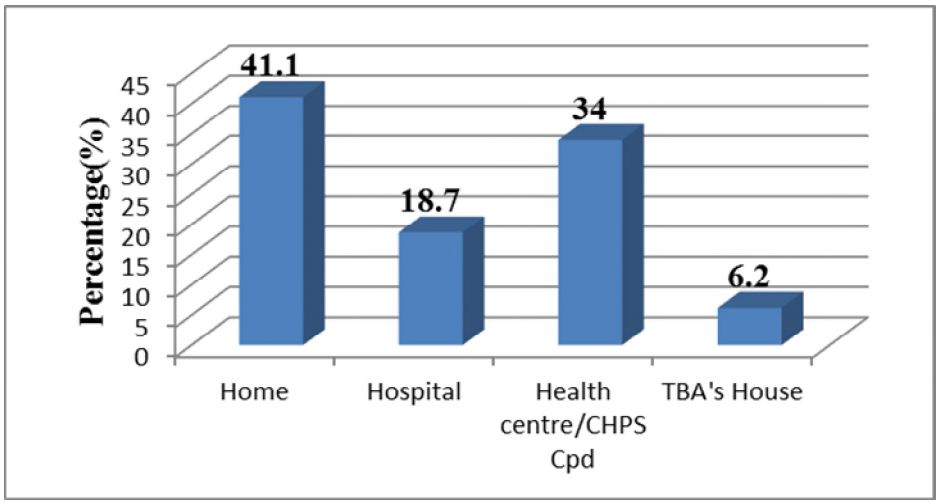

Fig 1: Place of delivery of last/latest child

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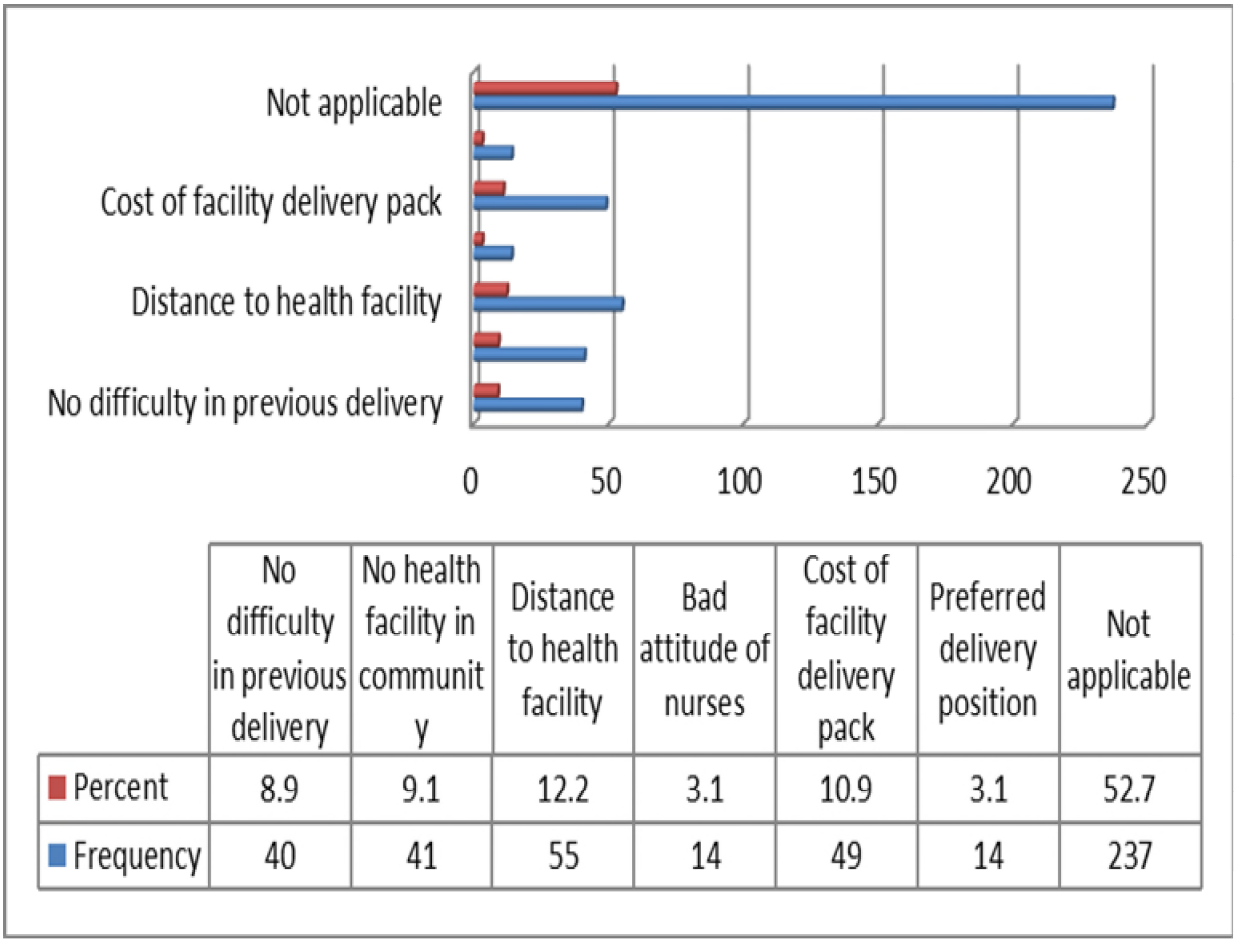
4.3 Reasons for Home Delivery

The respondents who delivered their last or latest child during the survey gave different reasons for delivering at home. Majority 12.2% (55) of them said that the distance to a health facility was a hindrance to facility delivery. Some also reported that the cost of preparation for a facility delivery was their obstacle. They formed 10.9% (49) of the respondents who delivered at home. Only 3.1% (14) of the respondents said that they

delivered at home because of the preferred delivery position and the bad attitude of nurses. This information is represented in figure 4.2 below.



	No difficulty in previous delivery	No health facility in community	Distance to health facility	Bad attitude of nurses	Cost of facility delivery pack	Preferred delivery position	Not applicable
Percent	8.9	9.1	12.2	3.1	10.9	3.1	52.7
Frequency	40	41	55	14	49	14	237

Figure 4.2: Reasons for home delivery among respondents

4.4 Assistance during Delivery

The results showed that TBAs conducted 20.7 % (93) of the deliveries whilst mother in-laws and close relatives of pregnant women conducted 26.7% (120) of the deliveries.

Skilled birth attendants such as doctors and midwives conducted 52.7% (237) of the deliveries as shown in table 4.2 below

Table 4.2: Assistance during delivery

Delivery conductor/Assistant	Frequency (n=450)	Percent
TBA	93	20.7
Mother in-law/Relative	120	26.7
Midwife/Doctor/CHN	237	52.7

4.5 Hygienic Practices Observed by Delivery Conductors/Assistants

The respondents observed some hygienic practices that were carried out by the conductors/personnel who assisted them to deliver. Majority 62.2% (280) of the respondents who delivered at the hospitals, health centres/CHPS compounds and some TBA houses said that the conductors/personnel wore gloves or plastic sheath/rubber on their hands during the delivery process. Some 16.9% (76) of the respondents said that the personnel washed their hands without soap whilst 7.6% (34) of them said the personnel washed their hands with soap. Table 4.3 shows the hygienic practices that were observed by the delivery conductors/assistants.

Table 4.3: Hygienic practices of delivery assistants

Preparation by conductor/assistant	**Frequency (n=450)**	**Percent**
Washed hands with soap	34	7.6
Washed hands without soap	76	16.9
Wiped hands	14	3.1
Did not wash hands	14	3.1
Wore gloves/plastic rubber	280	62.2
Can't Remember	32	7.1

4.6 Antenatal Care Attendance

It is worth noting that ANC attendance was universal among the respondents. There was a 100% ANC attendance among the respondents. However, there were differences in the number of ANC visits made by the respondents. Majority of the respondents representing 53.6 % (241) made four ANC visits whilst 5.3 % (24) made more than four ANC visits. Only 1.3 % (6) made one ANC visit. This information on the number of ANC visits is represented in Table 4.4 below.

Table 4.4: Use of antenatal care services

Number of ANC visits	Frequency (n=450)	Percentage
Once	6	1.3
Twice	13	2.9
Thrice	166	36.9
Four times	241	53.6
4+	24	5.3
No visit	0	0

4.7 Bivariate Analysis

Cross-tabulation was done to compare or assess the association between some variables of study. Place of delivery of the last/latest child of respondents was used as the dependent variable with educational level, NHIA registration, number of ANC visits and parity(number of children) as the covariates/independent variables. The results of these bivariate analyses are presented in tables 4.5 below.

4.7.1 Relationship between educational level, ANC attendance, parity and NHIS registration and Uptake of Skilled Delivery Services

There is a very strong association between the level of education and the uptake of skilled delivery services this association is shown by the P< 0.001 and Pearson Chi Square value of 159.02. This is evidenced by the fact that all the respondents who were educated to tertiary level delivered either at the hospitals or Health Centres. Thus there was a 100% uptake of skilled delivery services by the respondents who had tertiary education. Uptake of skilled delivery services among respondents who had secondary education was higher than those with basic education and those without any formal education. Majority 78.4% (120) of the respondents with secondary education delivered at Health Centers and CHPS compounds whilst only 2.2% (4) delivered at home with none delivering at a TBA's house.

Majority of the respondents who did not have any formal education representing 85.9% (159) delivered at home whilst 50% (14) of them delivered at TBA's house. Table 4.6 shows the association between educational level and the uptake of skilled delivery services. The results of bivariate analysis showed a very strong association between NHIA registration by respondents and the uptake of skilled delivery services. Respondents who are registered with the NHIA took skilled delivery services higher or more than those who did register. There were 83.7% (128) of registered NHIA clients who delivered at the Health Centres/CHPS compounds whilst 88.1% (74 who delivered at the hospital. The test statics are P<0.001 and Chi Square = 30.68.

The results show that all the 6 respondents who made only one ANC visit delivered at Hospital. This could be attributed to difficulties or complications presented during

delivery. Also 64.9%(120) of the respondents who made four ANC visits delivered at home but none of them delivered in a TBA's house. The association is evidenced by a P<0.001 and a Pearson Chi Square of 166.3. Only 5.2% of the respondents who have 7-12 children delivered at the Health Centre/CHPS compounds. There is a strong association between parity and the uptake of skilled delivery services. This association is buttressed by P<0.001 and Chi Square=102.6.

Table 4.5 Relationship between educational level, ANC attendance, parity and NHIS registration and uptake of skilled delivery services

Variable	Home delivery	Facility delivery	P-value
Education			
No education	173(54.1)	147(45.9)	
Basic	36(39.1)	56(60.9	
Secondary	4(14.8)	23(85.2)	
Tertiary	11 (100.0)	0(0.0)	0.001
ANC visits			
less than 4	58(22.8)	196(77.2)	
4 or more visits	53(27.1)	143(72.9)	0.04
Parity			
1-3 children	58(43.6)	75 (56.4)	
4-6 children	121(46.4)	140(53.6)	
7-12 children	34 (60.7)	22(39.3)	0.001
NHIS registrant			
Yes	134(39.9)	202(60.1)	
No	79(69.3)	35(30.7)	0.03

4.7.5 Quality of ANC Services

The quality of ANC services was measured using parameters such as measurement of weight, height, Fundal height, blood pressure, malaria prophylaxis, Tetanus injection, blood examination, and urine examination and health talks given during ANC. The

satisfaction of respondents was also assessed. Majority 81.1% (365) of the respondents reported that they were satisfied with the ANC services offered them. The weight of majority 98.7% (444) of the respondents was measured. Malaria prophylaxis was given to 77.3% (348) whilst 67.6% (308) of them received Tetanus injection. Blood samples examination was the parameter with the least measurement during ANC. Respondents who had their blood samples taken and examined were 61.1% (275). Table 4.7 shows the services provided during ANC.

Table 4.6: Showing the services rendered during ANC

Variable	Frequency	Percentage (%)
Palpation		
Yes	327	72.7
No	123	27.3
Blood Examination		
Yes	275	61.1
No	175	38.9
Urine Examination		
Yes	338	75.1
No	112	24.9
Blood Pressure measurement		
Yes	408	90.7
No	42	9.3
Health Talk		
Yes	392	87.1
No	58	12.9
Height Measurement		
Yes	351	70
No	99	30
Weight Measurement		
Yes	444	98.7
No	6	2.3
Tetanus Injection		
Yes	304	67.6
No	146	32.4
Malaria Prophylaxis		

Yes	348	77.3
No	102	22.7
Fundal height measurement		
Yes	317	70.4
No	133	29.6
Satisfaction with ANC services		
Yes	365	81.1
No	85	19.9

4.8 Regression Analysis

4.8.1 Women Empowerment and its Relationship with the uptake of skilled delivery services

The study assessed the level of empowerment of the respondents and its relationship with the place of delivery. Women empowerment in this current study refers to the position of women in decision-making power with respect to working outside of the home, control of household finance, healthcare use, purchases of clothes, stationery for children and other large household purchases. Analysis of these variables showed that women empowerment is significantly associated with uptake of skilled delivery services (Table 4.7). Women who used skilled delivery services had significantly higher empowerment score on the scale employed/drawn in this study, compared to women who did use skilled delivery services (8.10 versus 5.23) x^2 = 510.2, P < 0.001. This association was again maintained in a multiple regression analysis (P< 0.003, CI = 1.76-1.91).

Table 4.7: Composite index of women empowerment (CIWE) and uptake of skilled delivery services.

	N	Mean	Std. Dev	Std. Error	95% C.I Mean		Min	Max
					Lower Bound	Upper Bound		
Unempowered	232	5.23	2.01	0.01	1.91	2.62	0.00	9.00
Empowered	218	8.10	1.12	0.39	8.01	8.34	0.00	9.00
Total	450	3.92	3.32	0.78	2.95	3.581	0.00	9.00

4. 8.2 Role of Women Empowerment, Education and Economic Status in the Uptake of Skilled Delivery Services

The analysis showed that maternal education was consistently associated with maternal empowerment in the study sample. Women who attained higher education (thus tertiary and secondary) were more empowered in taking decisions that affect their household and their welfare, compared to their illiterate colleagues or women who had no formal education (Mean values of 9.2 versus 1.9 or 2.0) $F(3,234) = 204.3$, $P < 0.001$). This also translated into the higher uptake of skilled delivery services since women with higher education are associated with the uptake of skilled delivery services (Table 4.8).

Table 4.8: Maternal empowerment and maternal educational level

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
None	320	1.9784	2.86384	0.19010	1.9448	2.8972	0.00	9.00
Low	92	2.8235	2.76857	0.33514	3.6747	4.8983	0.00	9.00
High	38	9.2454	1.19080	0.11897	8.1113	9.6754	1.00	9.00
Total	450	3.9767	3.15339	0.72984	2.9538	3.1225	0.00	9.00

4.8.3 Determinants of Uptake of Skilled Delivery Services

Multiple logistic regression analysis in Table 4.10 Revealed that household wealth index has a strong association with the uptake of skilled delivery services. Compared to women from household with lower wealth index women whose household have a higher wealth index use skilled delivery services (AOR = 16.5, CI: 0.19-0.6).

These results also show that uptake of skilled delivery services in the study sample is significantly related to many other factors including household wealth index of mother (access to resources), and maternal empowerment (that is, empowerment to make key decisions, educational level ,parity and the number of ANC visits. These factors were included in the first model of the logistic regression.

Table 4.9: Determinants of the uptake of skilled delivery services (Model 1)

Determinant	B	S.E.	Wald	Sig.	Exp(B)	95% C.I.for EXP(B)	
						Lower	Upper
Parity	-0.377	0.191	3.903	0.048	0.686	0.472	0.997
Age	0.205	0.200	1.048	0.306	1.227	0.829	1.816
Distance	-0.003	0.030	0.012	0.913	0.997	0.939	1.058
Education	-0.296	0.124	5.650	0.017	0.744	0.583	0.949
Occupation	0.228	0.101	5.052	0.025	1.256	1.030	1.532
Household wealth index	0.221	16.552	0.000	0.000	0.273	0.187	0.514
Constant	-0.338	0.777	0.189	0.664	0.713		

The economic status or household wealth index level of the mother remains an important determinant of the uptake of skilled delivery services. Its effect of still remained relevant and its effect did not reduce significantly with the inclusion NHIA registration which is the variable with high significant effect (Table 4.10). Also occupation of the respondent became more significant with the inclusion of NHIA registration in the model (P< 0.025 to P<0.004). This means that occupation is a significant determinant of the uptake of skilled delivery services. Since the occupation also has a correlation with the income level of respondent therefore a determinant of household wealth index it may be significant determinant of the uptake of skilled delivery services.

Table4.10: Determinants of the uptake of skilled delivery services (Model 2)

Determinant	B	S.E.	Wald	Sig.	Exp(B)	95% C.I.for EXP(B)	
						Lower	Upper
Parity	-0.090	0.194	0.212	0.645	0.914	0.625	1.339
Distance	0.040	0.034	1.403	0.236	1.041	0.974	1.112
Education	-0.238	0.129	3.380	0.066	0.788	0.612	1.016
Occupation	0.317	0.110	8.280	0.004	1.373	1.106	1.703
ANC visits	0.202	0.155	1.701	0.192	1.224	0.903	1.659
Age	-0.017	0.021	0.609	0.435	0.984	0.944	1.025
NHIS	1.304	0.254	26.358	0.000	3.684	2.239	6.060
Household Wealth Index	1.719	0.139	23.465	0.002	0.803	3.611	5.056
Constant	-2.515	1.078	5.438	0.020	0.081		

4.9 ANALYSIS OF FOCUS GROUP DISCSSIONS

The findings of the focus group discussions were arranged according to these topics or themes and linked to the results of the quantitative results. In all ten focus groups were organized for three months postpartum women and married men.

4.9.1 Barriers to the Uptake of Skilled Delivery Services

Analysis of the quantitative data of this study revealed that 47.3% of the respondents delivered their last/latest child at home even though the attendance of antenatal care was universal and all the women in the study attended ANC there were still some barriers to accessing skilled delivery services in the study area. In probing to find out these barriers and challenges to accessing skilled delivery services, these were the findings;

4.9.2 Lack of health facilities in the communities: Majority (84%) of the women who took part in the focus group discussions said that they did not deliver at health facility because there are no health facilities in their communities and the distance to the nearest health facility is too far for a woman in labour to travel.

These are some of the statements of these women to that effect;

…….”I made up my mind to deliver in a health facility but we don’t have health centre in this community and the distance to the nearest health facility is about 12 kilometers. The road is also not good to travel on when you are seriously sick. How much more when you are in labour?. This is the reason why we deliver at home.……..…..…

……”Every woman wants to deliver safely which we know is possible when you deliver in the hands of nurses and midwives. But when you don’t stay close to a health facility it becomes very difficult for you to predict where you will deliver. Because labour comes unceremoniously.……..…..…..

“the only means of travelling in this community is the motor bike, so it is very difficult to travel to a health facility to deliver when you are in labour because you can’t sit on a motorbike when you are in labour”……..…..…

High cost of delivery pack: Women who deliver in health facility are supposed to buy a delivery pack which is made up of soap, antiseptic, white bed sheets and toilet rolls. This was found to be a hindrance to facility delivery. These are some statements to that effect;

……..”nurses always ask us to bring detol, Geisha soap, white bed sheets, blades and toilet rolls. It is our husbands who are supposed to buy these items for us to deliver in

health facilities but they don't have money to buy them. It is also embarrassing for you to go to a health facility without these items."……

……."anytime you want to deliver in health facility, nurses ask for Detol and Geisha soap. They don't want any other soap or antiseptic apart from these ones. Meanwhile we don't have money to buy these items

Poor attitude of nurses towards clients: Nurses attitude towards women who come to deliver at health facilities was cited as one of the barriers militating against facility delivery. Some of the women complained that they are not treated with some modicum of respect when they go to the health facilities. This unfriendly act of nurses prevents women from taking maternal health services. These are some of their statements to support it;

These are examples of these statements;

……."young nurses are the people who prevent women from delivery in health facilities because of the way they insult. They talk to clients as if they are not human beings. They shout on you, they are not polite in treating patients. Meanwhile some of them are our children's age mates. I don't want to be insulted and disgraced so I deliver at home"……..

……."when I went to deliver my first child at the hospital, the midwife told me that she didn't impregnate me so I shouldn't cry to disturb her peace. When I was having sexual intercourse with my husband I didn't call her"……..

……..”when you come to deliver you make yourselves so dirty and smelly because you don’t bath well. You don’t shave your private parts. This is an act of villagers. So why should I allow myself to be insulted by a nurse like this?... I will rather choose to deliver in the house than to go to the hospital and be insulted”……..…..

……..” One of the nurses slapped me when I was in labour. She slapped my face but I just kept my temper under control because I have gone there to deliver. The next if I don’t go there again will she get me to slap?”….....

……..”a midwife made me to jump for a long time when I was in labour. She beat up my hips and my child died in the womb when delivered him. It was the nurse who killed the child”……

Ease or no difficulties in delivery among: Some of the women admitted that sometimes home deliveries are not planned or intentional. They deliver at their least expectation so you cannot go to a health facility. These are some of their statements:

……”I was stirring “Tuo-Zaafi” in the afternoon when I experienced something like a wave moving through my abdomen. I just got up from the stool on which I was sitting and entered the bathroom to check underwear. Spontaneously or instantly I felt that the baby was dropping from my vagina. I then called my mother in-law and she helped me to deliver in not more than 10 minutes”……..

….” I spent two days each in labour when I was delivering all my four children. For this reason I always deliver in hospital”…..

…….”I delivered this baby on my way to the farm. I was feeling fine in the morning so decided to go to farm with my eldest child. We didn’t reach the farm when I felt some strange pains in my abdomen. I just squatted to deliver the baby and sent my child to go back to house and inform my mother. They came around and dressed me up and we all went back to the house”…….

……”we are real women, so we don’t struggle to deliver because of the kind of food we eat. Any little push will bring the child out. We believe that no woman in this community will die through child birth”…

…….”I delivered my child in the night; it was so simple and fast. I have given birth to 5 children and all of them were delivered at home. I go to hospital for antenatal care but I don’t deliver at hospital because I don’t experience difficult labour. I sometime deliver without anybody helping or assisting me. That is a gift of God for me”

…….”there some women who have difficulty in delivering or prolonged labour. Anytime such women are in labour the whole community would hear of it and they must go to hospital to deliver. But for me, I have very short labour so why should I go to the hospital and deliver?”…..

Preferred position of delivery: Some of the women mentioned this as a barrier to skilled delivery. Some stated that the lying position which midwives want to use and deliver is more hurting. These are some of their statements;

….the hospital bed is too small for you to lie and deliver on it. Nurses don’t want you to squat and deliver which is the easiest method’…….

…..” I prefer to squat and deliver so that I can push harder for the baby to come out but nurses don’t allow that. When you lie down to deliver it is prolonged and more painful”……

However, some of the women were comfortable with the lying position and according to them it is less painful and easier. These are their statements;

…….” I don’t have problem with lying down to deliver, it is better and less painful than the squatting. When you squat to deliver it is more painful and your knee joints would be shaking/trembling when you squat for a long time”…….

…..”when I lie down to deliver it is easier for me. Because you relax your muscles and joints”……

Fear of caesarean session: Some of the women also mentioned the fear of going through a caesarean session when you want to deliver at a health facility. They made the following statements;

…….”when you go to the hospital to deliver you are likely to undergo a caesarean session. This is why some women are afraid to go to hospital to deliver”…..

…..”when we hear the siren of the ambulance, it frightens us and makes the whole community feel that the woman is going to die. You end up going through caesarean session”…….

4.9.4 Dangers of Home Delivery

The discussants were not oblivious of the dangers of home deliveries. Some of the dangers that were espoused are stated below;

No medication available after delivery: In all the focus groups, it was mentioned that home deliveries can lead to death and other complications because no medication is given to the mother and her child if complications arise which can lead to maternal and infant mortality. Some of the statements to this effect include;

…..”when you deliver at home and you fall sick immediately after the delivery you can die because there are no proper drugs for you to take. This can kill you and your child”…..

……”when I delivered my child at the hospital he was not breathing for about 1 hour but the nurses put some equipment through the nostrils and revived him. If it was to be home delivery, they would have buried the child because he was lifeless and not breathing”…..

……”when I delivered my child at the hospital, the midwife detected that there was excess fluid in my abdomen so it was drained and I became free”…….

……”when you deliver at the hospital and you have some abdominal pains they will give you drugs to treat it but in the house they will only boil water and massage you with it which is not effective”……

……” You child is given some immunization when you deliver in hospital but you want get this when you deliver at home”…….

Placental retention: This was the most common danger mentioned by both the male and female discussants. These are some of their statements;

……..”when I delivered my second child the placenta didn’t come out. So they quickly arranged for a car to carry me to the hospital for treatment. This condition can kill you. Due to this past experience I don’t deliver at home”……..

…….”the main problem with home delivery is when the placenta remains in you. One woman died out of this condition”

….”when a woman delivers at home and the placenta doesn’t come out she can die out of it especially if she is not sent to the hospital very fast”

4.9.5 Ways to Improve the Uptake of Skilled Delivery Services

During the focus group discussions the discussants mentioned proposed some ways and measures to improve the uptake of skilled delivery services. These are stated below;

Provision of means of transport: The discussants stated that lack of means of transport is a major factor for home delivery. Their statements include;

……..”when you are in labour and you call the ambulance at the district hospital to come and carry you to the hospital they have a flat rate charge. You are charged 40 Ghana cedis and even if you deliver on the way or before the ambulance gets to your community you will still pay the fees”

…….”if there is a vehicle to carry us to the hospital we will deliver in the health facilities. The problem is always with transport because your husband will have to hire a whole vehicle to take you to hospital to go and deliver. This is very expensive”……..…

…..”if you are to sit on a bicycle or motorbike to health facility to go and deliver it is very painful. We need a vehicle to carry women to hospital”…..…

Education of men on skilled delivery: The female discussants were very critical on the reluctance of their husbands when it comes to the issues of maternal and child health. Their statements include;

……*"some men think that if you want to deliver at the hospital then you are ready to let him spend his whole money on you. They think that women deliberately want to waste their money at the hospital"……..*

…..*"my husband told me that my colleagues have been delivering in the house why should I go to the hospital to deliver?"……..*

…..*"when you are in labour and the issue of facility/hospital delivery is mentioned then your husband becomes angry with you as if you want to expose his poverty"……*

Change of attitude among nurses: The attitude of nurses if changed to the positive would encourage more women to go for skilled delivery services. Some of the statements of the discussants are;

…….*"nurses should have patience for pregnant women who come to the health facilities to deliver. They should treat us like human beings and we will always go there to deliver"*

……*"our nurses should understand the point that we cannot all be literates and can therefore not behave the same way. They should therefore treat us with respect when we come to the health centers to deliver"……..*

……"nurses should encourage us and pamper us when a woman goes to deliver so that she will come there the next time to deliver. If you don't treat the person with respect she may not come again to deliver at the health facility"……..

These were the views of the women and men who were interviewed. The content analysis was done by comparing the recorded tapes in all the communities before selecting the various themes.

CHAPTER FIVE

DISCUSSION OF THE RESULTS

This chapter comprises the discussion of findings and results. Results are also compared with other research work across Ghana and the world as a whole. Implications of findings are also discussed in this chapter.

5. 1 Socio demographic characteristics

The socio demographic characteristics that were analyzed include age of respondents, religion, educational level, occupation and marital status.

The mothers who were interviewed were within the age group of 14- 44 years and were six months postpartum. There were some teenage mothers among the respondents. This implies that they are prone to complications during delivery since they are not fully developed for child bearing. They may also not be able to provide the necessities of life to their children because they are mostly school drop-outs without any job or employment. These children may grow to become deviants because of lack of parental care. This finding supports the findings of the (GHS & GSS, 2014) in the Ghana Demographic and Health Survey that 13% of teenagers in Ghana are already mothers or are pregnant with their first child. It also reaffirms the assertion of the GDHS that a higher percentage of teenagers in the Northern region are already mothers or pregnant with their first child.

With regards to the religious distribution of the women, majority of the respondents were Muslims while the rest belonged? which confirms the report of the (GSS, 2012) in the 2010 Population and Housing Census which stated that the Bilpeila Sub District

comprises of 74.8 %. The results however differ from the composition of African Traditional believers. This could be due to the sample size used compared to that of the Population and Housing Census which involved everybody in the Municipality.

The findings also showed that majority of the respondents did not have any formal education. This implies that prevention of STIs and the use of maternal; health services will be low in the district because women with high level of formal education use maternal health services more than those with formal education. The results also imply that there is high level of poverty among women in the district because poverty levels increases with low level of formal education due to the lack of skills for employment (Ghana Statistical Service, 2012). The proportion of women without formal education was over three times higher than that of the national average of 21 % provided by the Ghana Demographic and Health Survey of 2014. Those who were educated to the tertiary level were 2.4% which is lower than the findings by the GDHS that 4 % of women in Ghana are educated to the tertiary level.

The husbands of the respondents had a higher level of formal education than their wives. This implies that the husbands of the respondents may be controlling the majority of the household resources because they are in employment. It will also affect the decision making power of women in the household because the husbands may monopolize all the decision making process in the household due to their high level of education. This finding agrees with that of the GDHS (2012) that men attain higher formal education than women in Ghana.

5.2 Maternal ANC History

The WHO recommends that pregnant women should attend antenatal care for atleast 4 times throughout the duration of the pregnancy. The study assessed the use of antenatal care services among the respondents. The results showed that all the respondents representing 100% reported that they attended antenatal care at least once before delivery. This is implies that all pregnant women know the importance of antenatal care which is good for maternal and child health. An assessment of their maternal health records booklets showed that 39.6% initiated ANC in the first trimester of their pregnancy whilst majority of them who represented 54% initiated ANC in the second trimester of their pregnancy. It was also established that only 6.1% initiated ANC in the third trimester of their pregnancies. The results imply that only few pregnant women initiate antenatal care in the third trimester. The effect on maternal and child health in the district could however be enormous in the negative sense. Majority of the pregnant women made more than 4 ANC visits which is good for the health of the mothers and their children.

The results showed that less than half of the respondents made 1 to 3 ANC attendances during their pregnancy. There were also 65.4% of them who made at least 4 antenatal care visits as recommended by WHO (2007). In this study adequate prenatal care was defined as one that was initiated in the first trimester and a minimum of four expected visits made. Going by this definition, only 51.8 % of the respondents received adequate prenatal care. The early initiation of prenatal services is low or not encouraging since everybody made ANC visits but the only half of them initiated it in the first trimester.

The results reaffirm the findings of the GDHS 2014 that almost all Ghanaian women (95%) receive some antenatal care (ANC) from a skilled provider, most commonly from a nurse or midwife and a doctor. The results are also similar to that of the GDHS which showed that more than three-quarters of women had the recommended four or more ANC visits, and 55% of women had an antenatal care visit by their fourth month of pregnancy, as recommended. These figures are lower than that of the MICS (2011) which found that 84.7% of pregnant women in Ghana attended the minimum number of four visits.

5.3 Uptake of Skilled Delivery Services

Use of skilled delivery services was assessed among the respondents. This was done by establishing the place of delivery of the youngest (index) child of the respondents. The study found that 58.3% of the respondents delivered at home whilst 41.7% delivered in health facilities. About 41.7% of the deliveries were conducted by a health professional or skilled birth attendant (doctors/midwife/nurses). The results showed that majority of the people who delivered at home were assisted by their mother in-laws who formed 24.8% whilst TBAs conducted 22.6% of the deliveries. The results however showed that 10.9% of the women delivered by themselves without any assistance from somebody. The above findings suggest that, there could be high maternal and child mortalities in the district because less than half of the pregnant women delivered in health facilities. There could also be high cases of complications during labour and after delivery because the women may not have access to proper medication after home deliveries which can cause postpartum complications and subsequently lead to death. TBAs still conduct deliveries

in the district and it is therefore important that the Ghana Health Service gives them the necessary education on referrals to health facilities.

Those who delivered in their homes formed 41.1% of the respondents. Institutional deliveries were higher than deliveries conducted by unskilled birth attendants. The uptake of skilled delivery services was higher than the findings of 2014 GDHS which reported that uptake of skilled delivery services in the Northern region was 27%. However, the uptake of skilled delivery services was lower than the national prevalence of 59% reported by the 2014 GDHS. The Multiple Indicator Cluster Survey reported that the uptake of skilled delivery services in the Northern region is 37% whilst the national average 68.4%. The findings of this study established a higher rate (41.1%) than that of the Northern region but a lower figure compared to the national average.

The finding does not support that of the WHO (2011) which estimated that 34% of mothers globally deliver with no skilled attendant which translates into 45 million births occurring at home without skilled health personnel each year.

5.4 Barriers to the Uptake of Skilled Delivery Services

The study found that majority of the women delivered at home leaving the health facilities therefore an assessment of the reasons for home delivery and the barriers that prevented women from delivering in health facilities was done. The study also found that the main barrier to the use of skilled delivery services is the unavailability of health facilities in the communities. About 46.3% of the women said that they delivered at home because of the unavailability of health facilities in their respective communities. The

results also showed that 20.9% reported that they delivered at home because they had no difficulties in their previous deliveries whilst 13.4% delivered at home because of transportation difficulties or challenges. This implies that there could be more complications among women who have high number of children because majority of them tend to deliver at home. It also shows that health education on skilled delivery services should target this category of women.

Among the women who delivered at home, most of them cited the unavailability and long distance from the health facilities as their reason for home delivery. They reported that lack of transport to the health facilities was the main reason for delivering at home. Delivery occurs spontaneously so if there is no health facility or a ready transport it becomes difficult to travel to the health facility. The finding implies that the transportation system of the district has a great influence on the uptake of skilled delivery services. There is therefore the need for a multi-stakeholder approach to find a solution to facility delivery instead of narrowing it down to the Ghana Health Service alone. This is in agreement with the findings of Deogaonkar, 2013 that lack of transportation, distance to the health facility; poor infrastructure and lack of services; availability and accessibility of the services were reasons for home deliveries among women in Nepal.

Cost of delivery pack was also one of the reasons for home delivery. This support an earlier finding by McCarthy and Maine, that socio-economic status of a woman has an influence on the uptake of skilled delivery services. They explained that its effect was seen to affect access to health care and ability to pay for the services.

The study also found that attitude of nurses towards women in labour has an effect on their use of skilled delivery services. This supports the results of a study by Mrisho et al

in Tanzania that bad attitude of nurses prevents women from delivering in health facilities.

5.5 Relationship between ANC Attendance and Skilled delivery

The study assessed the relationship between the use of antenatal care services and its effect or influence on skilled delivery. The results showed that use of antenatal cares services is positively correlated or associated with the use of skilled delivery services. It was found that as the number of ANC visits, the probability of delivering in a health facility also increased $p<0.001$, $\chi^2= 20.4$. Antenatal care attendance is therefore a significant determinant of the use of skilled delivery services. Women who made more ANC visits were more likely to deliver in a health facility as compared to those with fewer ANC visits.

The study results show that uptake of skilled delivery services is influenced by an array of factors. The study found that women who made the 4 plus ANC visits and received quality antenatal care are more likely to deliver in health facilities. This finding is supported by an earlier finding by Starrs (2013) who found that women who made the 4 plus ANC visits delivered in health facilities compared to those who made fewer ANC visits.

5.6 Relationship between Educational Level and Skilled Delivery Services Utilization

In bivariate analysis, the educational level of respondents was found to be statistically significant factor that influences the use of skilled delivery services. The results showed that, as the education level of women increase, the use of skilled delivery services also

increased. The test of significance also showed that educational level of women is positively associated with the use of skilled delivery services ($p<0.001$, $\chi^2= 43.2$).

Educational level of women was also found to be significantly related to the uptake of skilled delivery services this is also supported by the findings of Baral et al who reported that socio-economic, cultural and religious factors and educational level of women play a significant role in the use of Skilled Birth Attendance for delivery in Nepal.

Another linkage to the influence of educational level and the uptake of skilled delivery services is the fact that majority of women with high level of education may have good jobs or salaries that will improve their economic status and also empower them. Economic status, parity and women empowerment were found to be significantly associated with the use of skilled birth attendants. These have replicated in studies by McCarthy and Maine, 2010 Deogaonkar, 2011 and Mrisho et al 2012 who found economic status and autonomy of women to be significantly related to their use of skilled delivery services.

CHAPTER SIX

SUMMARY, LIMITATIONS, CONCLUSIONS AND RECOMMENDATIONS

This section of the study presents the summary, limitations conclusions and recommendations of the study.

6.1 Summary of Key Findings

These are the findings of the study;

- ✓ Majority of the respondents who represented 94.8% were married.
- ✓ Islam was the dominant religion in the study sample with 57.4% being Muslims.
- ✓ About 35% of the respondents did not receive any formal education whilst 2.6% had post-secondary and tertiary education.
- ✓ The results further showed that majority of the respondents who formed 64.3 % were farmers.
- ✓ All the respondents representing 100% attended antenatal care atleast once before delivery. About 39.6% initiated ANC in the first trimester, 54. % initiated ANC in the second trimester and 6.1% initiated ANC in the third trimester. It was found that 46.5% made less that 4 ANC visits whilst 53.5% made 4 or more ANC visits.
- ✓ The study found that 58.3% of the respondents delivered at home whilst 41.7% delivered in health facilities. About 41.7% of the deliveries were conducted by a health professional or skilled birth attendant (doctors/midwife/nurses). Mother in-laws conducted 24.8% of the deliveries whilst TBAs conducted 22.6% of the deliveries. About 10.9% of the women delivered by themselves.

- ✓ About 46.3% of the women delivered at home because of the unavailability of health facilities, 20.9% delivered at home because they had no difficulties in their previous deliveries whilst 13.4% delivered at home because of transportation difficulties or challenges. Only 8.2% delivered at home because of the cost of delivery pack
- ✓ Number of ANC visits is positively associated with uptake of skilled delivery services, ($p<0.001$, $\chi^2= 20.4$).
- ✓ Educational level of respondents was found to be statistically significant factor that influences the use of skilled delivery services ($p<0.001$, $\chi^2= 43.2$).

6.2 Limitations

The study found that distance to health facility was a significant factor for facility delivery. However, accurate measurement of distance was not obtained. Therefore, approximate values were used in measuring the distance. This could not give a real picture of the distance that women travelled to access a health facility.

6.2 Conclusions

The following conclusions are drawn based on the findings of the study;

- All pregnant women seek antenatal care at least once during pregnancy, however, most of them initiate ANC visit in the second trimester of their pregnancy. Majority of pregnant women make 4 ANC visits as recommended by the WHO.
- Facility delivery in the Bilpeila District is low. More than 50% of the women delivered at home.

- Mother in-laws conduct deliveries more than TBAs in the Bilpeila District. Some pregnant women deliver without assistance from anybody.
- The reasons for home delivery are lack of health facilities, ease of delivery in their previous deliveries, transportation difficulties and cost of delivery pack
- Women with high level of formal education make more ANC visits than those with low or of formal education
- Women with high level of formal education delivered in health facilities whilst majority of those with low or no formal education delivered at home.

6.3 Recommendations

From the findings of this study, the following recommendations are made to the District Health Directorate and the Bilpeila District Assembly;

1. Hot water should be provided to mothers to bath after delivery since most women prefer home delivery where hot water is readily available for them to bath as soon delivery.
2. Facility delivery pack should not be strictly specified by the Health facilities because some of the respondents complained of strict inspection of the type of clothing brought for delivery. Therefore, this practiced should be reconsidered.
3. More CHPS compounds should be established by the District Health Directorate in the communities because most of the women complained of distance to health facilities.
4. Health education on the importance of facility delivery should be intensified by nurses during ANC sessions because all the women attended ANC before delivery so that session is an opportunity for education on skilled delivery.

6.4 Suggestion for Further Research

The study found that multiparous women delivered at home than the nulliparous. A study should be conducted to establish the relationship between parity and facility delivery.

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APPENDIX- Study Questionnaire

Appendix A: Study Questionnaire for Three month Postpartum Women

QUESTIONNAIRE

FACTORS INFLUENCING UPTAKE OF SKILLED DELIVERY SERVICES IN BUIPEILA SUB DISTRICT OF THE TAMALE METROPOLIS

INFORMED CONSENT

Hello, my name is **Vida Vuoche** and I am a student of the University for Development Studies offering a masters degree programme in community Health and Development. I am conducting a study on "**Factors Influencing the Uptake of Skilled Delivery Services** ". I would very much appreciate your participation in this study .This information will help the District Health directorate ,private agencies, the community and other decision making bodies to plan and improve the uptake of skilled delivery services.

The interview would last between 30 to 45 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shown to any other than the District Health Directorate and the University.

Participation in this survey is voluntary ,and if we should come to any question you don't want to answer ,just let me know and I will go to the next question ; or you can stop the interview at any time .However I hope that you will participate in this study since your views are important .

At this time do you want to ask me anything of this study? May I begin the interview now?

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

Respondent agrees (A) Yes (B) No Record the time ----------

IDENTIFICATION

Cluster Name.....

Interview Date…….....

Interview #.....

House Number/Name …….....

Name of Interviewer…….....

INSTRUCTION: Administer this questionnaire to post-partum women (≤ 3 months)

Please **tick** the appropriate box below

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS

1. Age of respondent…….
2. Marital status

   A. Single B. Married C. Divorced D. Widowed
3. Educational level of respondent

   A. No schooling B. Primary C. .J.S.S/Middle D. S.S.S /O Level E.Post sec/ Tertiary

4.What is the educational level of your husband?

   A. No schooling B. Primary C. .J.S.S/Middle D. S.S.S /O Level E. Post sec/ Tertiary

4. Occupation of respondent

A. Unemployed B. Petty trader C. Farmer D. Civil/Public Servant E. Others (specify) …….

5. Respondents Religion

   A. Muslim B. Christian C. Traditional D. Others (specify) ……

6. Sex of baby

   A. Male B. Female

7. Distance to the nearest health facility…….(Km)

SECTION B: MATERNAL ANC HISTORY

7. How many children have you given birth to? ……..
8. Did you attend antenatal care during your last pregnancy?

   A. Yes B. No

9. If yes to the above question, number of visits before delivery (***Please confirm from Maternal Health Record Book***).

   A. Once B. Twice C. Thrice D. Four Times E. Four plus

10. How old was your last pregnancy when you made the first ANC visit?

    A. Zero to three Months B. Four Months C. Five and above

11. What were the ANC services received during your last pregnancy (Please probe and record all responses).

A. Urine for lab investigation
B. Blood for lab investigation
C. Scan
D. Palpation
E. Malaria prophylaxes (SP)
F. Health talk
G. Others (specify)……..

12. Were all your expectations of ANC services met?

A. Yes B. No

B. If no to the above question, what do you think should have been added?

……

……

SECTION C: SKILLED DELIVERY SERVICES

1. Which of the following places did you deliver your youngest child?

A. Home-self
B. Home-TBA
C. Home-SBA
D. Health facility-SBA
E. Other (specify)……..

2. If home or TBA's house, was delivery there planned? A. Yes B. No

3. If yes, what was the main reason for not delivering at a health facility?

A. No difficulty in previous deliveries
B. No health facility available
C. Long distance from health facility
D. Bad attitude of health workers
E. Cost of delivery (Bed preparedness)
F. Lack of Privacy during delivery
G. Presence of male staff members during delivery
H. Hospital staffs do not allow women to deliver in their preferred way (squatting)
I. Cultural/religious beliefs in conflict with hospital delivery
J. Fear of caesarean delivery
K. Transportation difficulties

4. If home delivery was not planned, what was your reason?

A. Spontaneous labour
B. Late night labour
C. Problems with previous home delivery
D. Others (specify)……

5. Who assisted or attended to you during your last delivery?

A. No attendant (self)
B. Doctor/Midwife
C. Mother-in-law /Relative

D. Health assistant
E. Traditional birth attendant

6. If your last delivery was in the health institution, why did you prefer to give birth there? (Multiple answers possible)

A. Friendly staff
B. Advice received from community opinion leader
C. Shorter waiting time
D. Quality of care
E. Facility is neat and clean
F. Respect for privacy
G. Adequate and complete medication
H. Health staff is available when needed
I. Cheaper services
J. Close proximity/easy to reach
K. Others (Specify)
……
L. Not Applicable (delivered at home)

7. Name the major factors that will make you not deliver at a health facility.

A. Cost of delivery not affordable
B. Transportation difficulties
C. Cultural/religious beliefs in conflict with hospital delivery
D. Fear of caesarean delivery
E. Hospital staff do not allow women to deliver in their preferred way (squatting)
F. Hospital staff slow in responding to patient needs
G. Fear of being abused by midwives
H. presence of male staff members during delivery
I. Lack of Privacy during delivery
J. Others
(specify)……
…….

8. How will you rate the quality/adequacy of delivery services received during your last pregnancy?

A. Poor
B. Fair
C. Good
D. Excellent
E. Not applicable

9. What was your level of satisfaction with delivery services received?

A. Dissatisfied
B. Satisfied
C. Very satisfied
D. Indifferent
E. Can't say

10. When there is an emergency obstetric problem in this community, where do you/people have to go?

A. Taken to hospital
B. Taken to a health center
C. Taken to a TBA

11. What mode of transport is usually used for emergency cases in this community?

A. Bicycle/motorcycle ambulance
B. Ambulance
C. Wheelbarrow
D. Car /lorry
E. Other (specify)_____

12. How much do the facilities charge you when you deliver?

A. No fee paid
B. Less than 5 GH
C. 5GH – 10 GH
D. 11 GH – 19 GH

E. 20 GH and above
F. Not Applicable

13. Mention two danger signs during delivery:

A. Prolonged labour
B. Excessive bleeding
C. Placenta retention
D. Breech presentation
E. Others (specify)……
……
……

C. What kind of preparations did you make before the birth of your child?

A. Saved money
B. Bought Clean Delivery Kit
C. Found Blood Donor
D. Arranged of Transport
E. Contacted Health Worker to Help With Delivery
F. Others (specify)

15.What are some of the cultural or traditional beliefs in this community regarding women giving birth at the health facilities? (Please state) ……

SECTION D: PHYSICAL ACCESSIBILITY TO HEALTH SERVICES

1. Distance to health facility where respondent receives health care? (Please estimate in Km) ☐☐

2. What is the usual means of transport to the health facility?

1. Lorry/truck/car 2. Animal drawn cart 3. Motor bicycle 4. Bicycle 5. Walking

3. What is the condition of the road leading to the health facility?

1. Very poor 2. Poor 3. Good 4. Very good 5. Excellent

SECTION E: SOCIOECONOMIC HOUSEHOLD WEALTH INDEX OF RESPONDENT

INSTRUCTION: These questions should be asked in the house of the respondent

33. What type of house do members of the household dwell in?

A. Block house
B. Brick house
C. Mud house
D. Others (specify)……

34. Does the household own a house?

A. Yes
B. No

35. How many rooms does the household have at their disposal? .....

36. What kind of toilet facility do members of the household usually use?

A. Own flush toilet
B. Public or shared flush toilet
C. own pit toilet
D. public or shared pit toilet
E. No facility

37. What is the source of lighting for the household?

A. Electricity
B. Gas
C. Kerosene
D. Others (specify) ……

38. What type of fuel does your household mainly use for cooking?

A. Electricity
B. LPG
C. Charcoal

D. Kerosene
E. Firewood
F. Others (Specify)……..

39. What is the main source of drinking water for members of the household?

A. Pipe water
B. Borehole
C. dug well
D. Bottle /Sachet water
E. Others (specify)……

40. Does your household have any of these assets? (Tick Yes or No)

ITEMS	YES	NO
Radio		
Clock or watch		
Colour TV		
Black and white TV		
Sewing Machine		
Mattress		
Cot or Bed		
Table		
Chair		
Refrigerator		
Computer		
DVD/VCD player		
Electric Fan		
Telephone/mobile		
Bicycle		
Motorcycle		

Animal-drawn cart Car/truck Ownership of livestock		

SECTION F: WOMEN AUTONOMY STATUS/EMPOWERMENT QUESTIONS

44. What is your family's main source of income?
    1. Husband's earnings
    2. Own earnings
    3. Yours and husbands earnings
    4. Others
    5. (specify)_____

45. Do you earn monthly income by your own? 1. Yes 2. No

46. How often do you have money that you alone can decide how to spend?
    A. Always
    B. Often
    C. Sometimes
    D. Never

47. Do you currently have any type of savings Scheme?
    A. Yes, partners savings
    B. Yes, mine and partners savings
    C. Yes, self savings
    D. No, we don't have any savings

48. Do you take part in decision making on household matters? (1) No (2) Yes

If yes

49. Which household matters do you decide together with your partner? (1) Own Health care, (2) large household purchases, (3) daily purchase, (4) children's education, (5) household expenditure

50. Do you have the right to decide how to spend your own money? (1) Yes (2) No

51. Who makes the decision if you need to buy clothes for you and the family?

A. Your Husband/partner
B. You and husband
C. Myself alone

52. Who makes the decision if you need to buy large household items/furniture?

A. Your Husband/partner
B. You and husband
C. Myself alone

53. Who makes the decision whether a child is sick enough to go for treatment?

A. Your Husband/partner
B. You and husband
C. Myself alone

54. Who makes the decision whether you should work outside of the home?

A. Your Husband/partner
B. You and husband
C. Myself alone

55. Who makes the decision when your children have stationeries /school needs to be addressed?

A. Your Husband/partner
B. You and husband
C. Myself alone

56. Who makes the decision on how to spend the family's income?

A. Your Husband/partner
B. You and husband
C. Myself alone

57. Who decides how the money you earn is spent?

A. Your Husband/partner
B. You and husband
C. Myself alone

58. Who in your household usually has the final say on the following decisions (Tick only one)

Decision	Respondent alone or with somebody else	Somebody else (Respondent not involved)
Your own health care?		
Making large household purchases?		
Making household purchases for daily needs?		
Visits to family or relatives?		

What food should be cooked each day?		
You should do work to earn money?		
What to do if a child falls sick?		
Having another child?		

B. Freedom of movement: Indicate yes or No in the following situations

59. If you are ill and need to see a doctor, do you first have to ask someone's permission?

A. Yes B. No

60. Are you usually allowed to go to the following places on your own**?**

Decision	Yes	No	
Just outside your house or compound?			
Local market to buy things?			
Local health center or doctor?			
In the neighborhood			

for recreation?			
Home of relatives or friends in the neighborhood?			

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UNIVERSITY FOR DEVELOPMENT STUDIES

Factors influencing the Uptake of skilled Delivery Services among women

FOCUS GROUP DISCUSSION GUIDE

CONSENT FORM

Thank you for agreeing to participate. I am very interested to hear your valuable opinion regarding the factors that influence the uptake of skilled delivery services.

- *The purpose of this study is to find out the factors that influence the uptake of skilled delivery services in the rural and urban areas.*
- *The information you give us is completely confidential, and I will not associate your name with anything you say in the focus group.*
- *I would like to tape/record the focus groups so that I can make sure to capture the thoughts, opinions, and ideas we hear from the group. No names will be attached to the focus groups and the tapes will be destroyed as soon as they are transcribed.*
- *You may refuse to answer any question or withdraw from the study at anytime.*
- *I understand how important it is that this information is kept private and confidential. I urge all participants to respect each other's confidentiality.*
- *If you have any questions now or after you have completed the questionnaire, you can always contact me or the district director of health service our names and phone numbers are on this form.*
- *It is a learning process as we are going to learn from each other/*
- *We would like the discussion to be informal, so there's no need to wait for us to call on you to respond. In fact, we encourage you to respond directly to the comments other people make. If you don't understand a question, please let us know. We are here to ask questions, listen, and make sure everyone has a chance to share.*

- *Please check the boxes on page 2 and sign to show you agree to participate in this focus group.*

Name of group interviewed ……..

Date ……..

Time discussion started ……..

Site ……..

Time ended ……..

Number of participants ……..

Name of facilitator……..

NO.	*Name*	*Age*	*Marital Status*	*Sign.*
1				
2				
3				
4				
5				
6				
7				
8				

9				
10				

QUESTIONS

1. Where did you deliver your index child?

2. Did you seek prenatal care during your pregnancy? How many ANC visits did you make before delivery and why?

3. Does place of delivery has any relevance in the survival of the child and her mother? Why?

4. Are there differences in the use of skilled delivery services among rural and urban women? Why?

5. What account for the differences in the use of skilled delivery services among rural and urban women?

6. What are the barriers to the use of skilled delivery services among rural and urban women?