

UNIVERSITY FOR DEVELOPMENT STUDIES

**BIRTH PREPAREDNESS AND COMPLICATION READINESS: A
COMPARATIVE STUDY OF MULTIPAROUS AND NULLIPAROUS WOMEN
IN THE NANDOM DISTRICT OF GHANA**

BY

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AUGUST, 2016



DECLARATION

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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:

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ABSTRACT

Awareness of birth preparedness plan and knowledge of obstetric complications can lead to the proper preparation of pregnant women for birth. The aim of this study was to compare the awareness of birth preparedness plan and complications readiness among nulliparous and multiparous women in the Nandom district of the Upper West region. A cross sectional comparative study was conducted with a sample size of 320 in which 160 nulliparous and 160 multiparous women were interviewed. Both qualitative and quantitative methods were used to collect data. The mean age of the respondents was 22.53 ± 4.91 years. Majority of the nullipara (53.8%) were within the age group of 20-24 years compared to 36.2% of multipara within the age group of 30-34 years. The education level of multiparous women was lower than that of nulliparous women as 69% (111) of multiparous women did not have any formal education compared to 50.6% (81) of the nulliparous women. The proportion of nulliparous women who initiated ANC in the first trimester of pregnancy was higher than that of multiparous women (66.9% versus 28.1). Majority of nulliparous women used skilled delivery services compared to multiparous women (77.5% versus 44.4%). The reasons for home deliveries were; lack of health facilities (83%), high cost of delivery pack (12%), preferred delivery position (16%) and poor attitude of nurses (8%). More of the nulliparous women (68.2%) were likely to follow the birth preparedness plan than the multiparous women (58%). However, multiparous women were found to have a higher knowledge of obstetric complications than nulliparous women (64% vrs 36%). In conclusion, nulliparous women prepare adequately for delivery and birth than multiparous women.



DEDICATION

This thesis is dedicated to my parents and my children for their endurance, support, and encouragement throughout my study period.



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LIST OF ACRONYMS

ANC	Antenatal Care
BPCR	Birth Preparedness and Complication Readiness
CI	Confidence Interval
DHD	District Health Directorate
GDHS	Ghana Demographic and Health Survey
MDGs	Millennium Development Goals
MICS	Multiple Indicator cluster Survey
OR	Odds Ratio
SPSS	Statistical Package for Social Sciences
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Emergency Fund
WHO	World Health Organization



OPERATIONAL DEFINITION OF TERMS

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

Birth preparedness: and complication readiness: This was assessed based on the birth preparedness plan as setup by the WHO. This includes the financial preparations by pregnant woman, identification of a blood donor, arrangement for a means of transport and identification of a healthcare provider to provide healthcare.



CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Adequate birth preparedness and complication readiness planning could determine the survival of a pregnant woman and her unborn child. According to Kuganab-Lem et al (2014), nurses, midwives and doctors need to have the knowledge and skills necessary to treat or stabilize and refer women with complications, and also must employ sound normal birth practices that reduce the likelihood of preventable complications in order to have birth preparedness and complication readiness at the provider level. The concept of birth preparedness and complication readiness (BP/CR) has been widely accepted as a key factor in improving maternal and child health. Cognizance of the importance of BP/CR, Stephenson et al (2008) intimated that BP/CR is a strategy to promote a timely utilization of skilled maternal and neonatal services. This is based on the theory that preparing for childbirth and being ready for complications reduces delays in obtaining maternal health care. Villar et al (2001) identified some forms of delay which are responsible for most of the maternal and neonatal mortalities that occur especially in developing countries. The delays that were identified were delays in deciding to seek care, delays in reaching care and delays in receiving care. Their study further reported that these forms of delay have their foundation on lack of adequate preparedness among pregnant women and their families for child birth and its associated complications. According to a report by Johns Hopkins Program for International Education in Gynecology and Obstetrics (JHPIEGO, 2009), birth preparedness includes identifying a skilled provider and making the necessary plans to receive skilled care for all births. They also stated that



Complication readiness includes availability of emergency funds, transport and blood donor. It also includes a designated decision-maker who decides for a pregnant woman to seek care during pregnancy.

Birth preparedness has been globally endorsed as an essential component of safe motherhood programs to reduce delays for care. For some of the complications like severe hemorrhage a few minutes matter to save life, while for others hours or even days may be tolerable but with the prognosis getting worse as time elapses (Kitilla, 2010).

There has been a conscious effort over the years to improve maternal and child health in Ghana. This is in pursuant of efforts to the achievement of the Millennium Development Goals 4 and 5 which seeks to improve maternal and child health. According to Impact (2007), 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 with 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.

Birth and emergency planning is important because of the unpredictability of obstetric complications. It has been acknowledged that receiving care from a skilled provider is the single most important intervention in safe motherhood but often women are confronted with delays in seeking care (Udofia, 2013). The level of birth preparedness and complication readiness is said to differ among pregnant women. Some of the factors that have been found to influence BP/CR were reported by Ekabua et al



(2011) which are the age of the pregnant woman, the economic status, educational level, place of residence thus whether urban or rural and the level of education of the woman. The World Health Organization (2011) in its assessment of the use of maternal health services among women found that education level of women and their spouses are significant determinants of birth preparedness among pregnant women. Little is known about the influence of parity on BP/CR among pregnant women. This study therefore sought to compare or assess the level of BP/CR among nulliparous and multiparous women in the Nandom District of Ghana.

1.2 Problem Statement

The principle and practice of BP/CR in a third world setting where there is prevailing illiteracy, inefficient infrastructure, poor transport system, and unpredictable access to skilled care provider have the potential of reducing the existing high maternal and neonatal morbidity and mortality rates in these developing countries.

A report by JHPIEGO (2011) stated that BP/CR promotes skilled care for all births and encourages decision making before the onset of labor. The BP/CR matrix raises awareness of danger signs, thereby improving problem recognition and reducing delay in deciding to seek care. It provides information on appropriate sources of care (promoters and facilities) making the care-seeking process more efficient. It also encourages households and communities to set aside money for transport and service fees, avoiding delays in reaching care caused by the search for funds.

Every pregnant woman faces the risk of sudden, unpredictable complications that could end in death or injury to herself or to her infant. Pregnancy related complications cannot be reliably predicted. Hence, it is necessary to employ strategies to overcome such problems as they arise.



The Nandom District has five sub-districts as demarcated by the Ghana Health Service. A total of 1,585 live births were recorded in all the health facilities in the district of which 3.8% (61) maternal and neonatal deaths were recorded as reported in the Annual report of the District Health Directorate for 2013. The report further revealed that 54.7% of pregnant women initiated antenatal care in the second trimester of pregnancy. The proportion of women who delivered in the health facilities was only 43.4%. Most of the maternal and neonatal deaths that were reported in the district were found to be nulliparous women. Proper preparation for child birth could prevent some of these maternal and neonatal deaths. This study sought to compare the level of BP/CR among nulliparous and multiparous women in the Nandom District.

1.3 Study Objectives

The objectives of the study are grouped into two. These are general and specific objectives.

1.3.1 General Objective

The general objective of the study was to compare the level of birth preparedness and complication readiness among nulliparous and multiparous women in the Nandom District of Ghana

1.3.2 Specific Objectives

Specifically, the study sought;

- i. To determine the timing of ANC among nulliparous and multiparous women in the Nandom District.
- ii. To assess the uptake of skilled delivery services among nulliparous and multiparous women in the Nandom and District.



- iii. To determine the level of birth preparedness among nulliparous and multiparous women.
- iv. To identify the factors that influence birth preparedness and complication readiness among nulliparous and multiparous women.

1.4 Significance of the Study

The study focuses on assessing the level of birth preparedness among nulliparous and multiparous women. There have been interventions such as the introduction of the National Health Insurance and the Free Maternal and Health Care Services delivered in health facilities in Ghana. All these are aimed at improving maternal and child health in order to reduce maternal and infant mortalities and morbidities in the country. The findings of this study will serve as a primary source of information in the Nandom District in the design and implementation of maternal health programmes especially those that are focused on antenatal care and skilled delivery. It will be of help to the Ghana Health Service and other Non-Governmental Organizations to educate women on birth preparedness during pregnancy.

1.5 Scope of the Study

The study will be conducted in the Nandom District among nulliparous and multiparous women. Assessment of the birth preparedness plan of nulliparous and multiparous women will be done. The health care providers in the Reproductive and Child Health Centres will be interviewed to elicit information on the skilled delivery services the measures that have been put in place to assist women in seeking obstetric care.



1.6 Conceptual Framework of Determinants of Maternal Health Services Utilization

The focus of this study is on the birth preparedness and complication readiness among nulliparous and multiparous women.

The framework looked at the socio demographic characteristics of the respondents and its effects or influence on birth preparedness and complication readiness.

Complications are usual occurrences in pregnancy and labour. These can be managed when there is proper preparedness plan by reducing the first and second delays in seeking care. The study will look at the ways adopted by the respondents in seeking early health care to prevent the two delays.

The WHO (1982) through the Safe Motherhood Programme requires that every pregnant woman should be prepared and be ready to mitigate obstetric complications. This is to be done through four main ways which are; financial savings towards delivery, identification of a blood donor towards complications, making transport arrangements towards delivery and emergency situations and identification of a health care provider to provide care during labour and complications. This study will therefore assess these requirements among nulliparous and multiparous women. The barriers to proper birth preparedness would also be assessed among the respondents. There will also be an assessment of the health facilities to ascertain the level of readiness in providing care to pregnant women during emergency situations.



Figure 1.1 below shows the conceptual framework of the study.

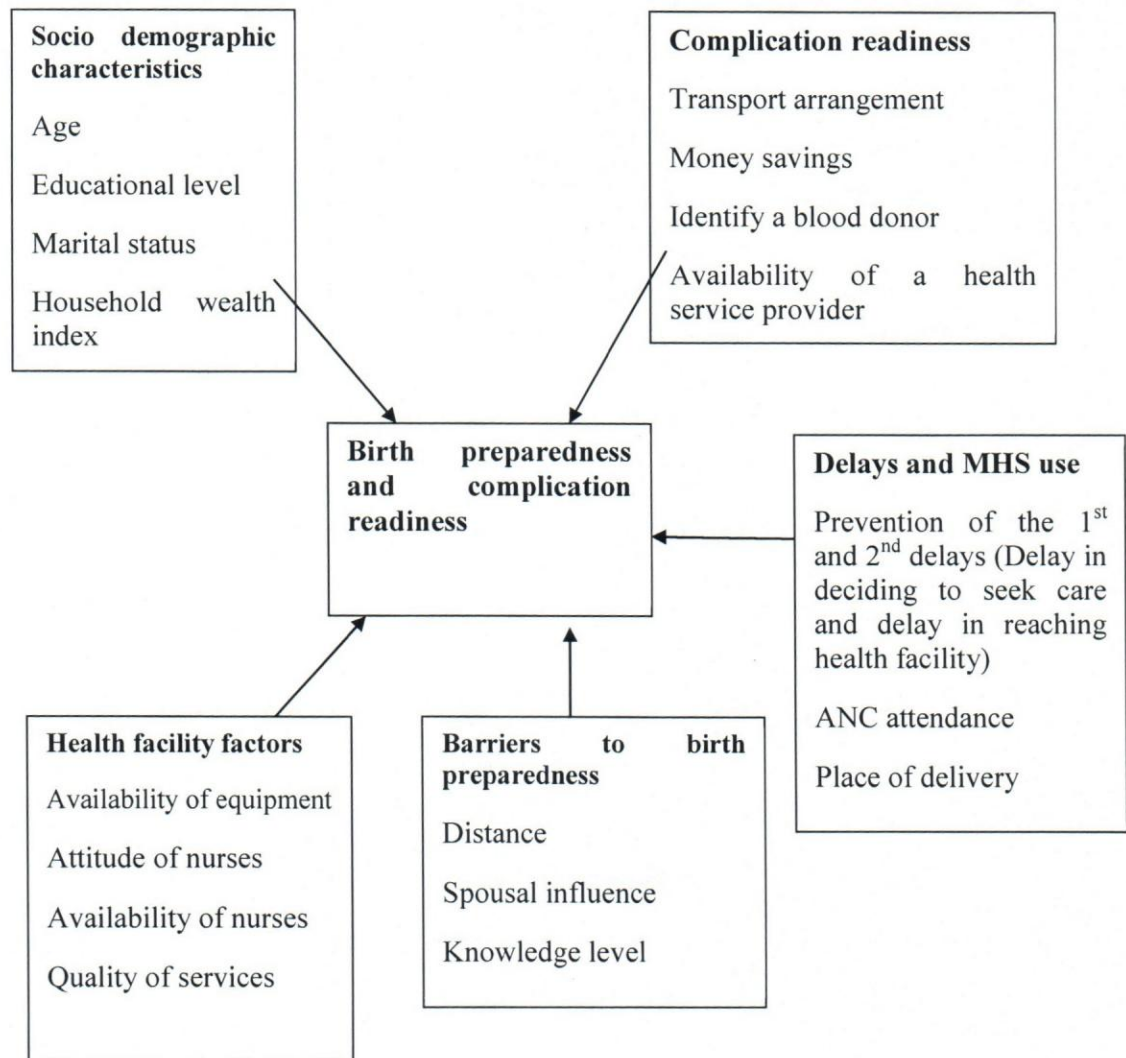


Fig 1.1: Conceptual Framework of birth preparedness and complication readiness.

1.7 Organization of the Thesis

This thesis was organized into six chapters. Chapter one contained the introduction and background to the study, the problem statement, the study objectives, the significance of the study, conceptual framework and the operational definition of key terms of the study.

The second chapter reviewed relevant literature in relation to the study. The literature review was based strictly on the study objectives and the study variables. Chapter three was made up of the methodology, which comprises the study design, a description of the study area, study type, study variables (independent and dependent variables), data collection instruments, sampling procedure and sample size, study population, data collection methods, quality control measures as well as ethical considerations.

The fourth chapter contained the results and findings of the study whilst the discussion of the results and findings of the study were done in chapter five. The conclusion and recommendations of the study were also presented in chapter six. The appendices of the study comprised of the references a sample of the study questionnaire and tables that may be referenced in the work where applicable.



CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter of the report reviews relevant literature in relation to the study. The literature review is done based on the conceptual framework and objectives of the study. The review is presented under various sections such as an overview of maternal health, birth preparedness, factors influencing birth preparedness and barriers to birth preparedness.

2.1 Overview of Maternal Health

World Health Organization (WHO) estimated that 529,000 women die annually from maternal causes. Ninety-nine percent of these deaths occur in the less developed countries. The situation is most dire for women in Sub-Saharan Africa, where one of every 16 women dies of pregnancy related causes during her lifetime, compared with only 1 in 2,800 women in developed regions (WHO, 2011).

According to the DFID (2005) about 120 million pregnancies occur each year while over half a million women and more than a million newborns die due to complications of pregnancy and childbirth.

The WHO (2006) reported that great disparities in perinatal health occur worldwide. About 7 to 8 million perinatal deaths occur globally each year with the majority occurring in developing countries where over 90% of all infants are born. About 50% of maternal deaths in the developing countries take place in Sub-Sahara Africa.



According to UNICEF (2008) and Sarah (2009) 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.

Most maternal deaths occur for different reasons. Van Lonkhuijzen et al (2009) stated that poor use of maternal health services is a result of barriers to accessing maternal health services which culminates into maternal and neonatal deaths.

Most maternal deaths would have been averted if they had access to a skilled attendant essential midwifery care and emergency obstetric care (EmOC) and for every woman who dies up to 50 more suffer avoidable and debilitating health problems such as fistulae, prolapse of the womb and infertility (DFID, 2005).

According to Lopez (2000) maternal and infant mortality rates have fallen over the recent decades, 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.

Black (2003) reported that if the Millennium Development Goals 4 and 5 in maternal and child health which are aimed at reducing child mortality are to be met, delays in seeking skilled delivery need to be addressed.

According the GDHS (2008), infant mortality in Ghana is 50 deaths per 1,000 live births and child mortality is 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. Neonatal deaths account for 60 percent of the deaths in infancy. Often however, the true burden of 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).

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 (WHO, 1999). 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 (UNSD, 2002).

Several interventions targeting the reduction of maternal mortality have been implemented in Ghana. Among these is the user fee exemption policy instituted in 2003. This policy exempts all pregnant women from paying for delivery costs at public, mission and private health facilities (Witter et al., 2007)

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).

Over the past 15 years, the international public health community has focused increased attention and resources on reducing maternal mortality and morbidity. The field has evolved considerably, and debate continues over what are the most effective strategies to improve maternal health and survival. Throughout this process, many have called for more investment in the systematic evaluation of programs for two



reasons. First, it is important to build the body of evidence showing that specific interventions do result in reduced mortality or morbidity. This task requires appropriate study designs and complex statistical analysis, which go beyond the scope of this document. Second, it is necessary for programs to have tools they can use in monitoring the interventions they carry out (JHPIEGO, 2011).

According to Bailey et al., (2002) the global Safe Motherhood Initiative (SMI) was launched to raise awareness about the scope and consequences of poor maternal health, and to mobilize action to address high rates of death and disability from the complications of pregnancy and childbirth. Between 1987 and 2003 the Initiative was co-sponsored by the Safe Motherhood Inter-Agency Group (IAG), a consortium of international and national agencies. The IAG organized international and regional conferences, produced a wide range of informational and advocacy materials, and served as a forum for forging consensus on key technical issues and disseminating messages on maternal health and safe motherhood.

In 2004 the IAG completed a transition into a broader group, the Partnership for Safe Motherhood and Newborn Health, which incorporates a larger set of organizations and includes the issue of newborn health (Kinzie and Gomez, 2004). Kureshi (2000) reported that during the SMI's first 5 to 10 years after the launch of the Initiative in 1987, many safe motherhood programs at the country level focused on the training of traditional birth attendants (TBAs) and on risk screening during antenatal care as the key interventions. However, research and analysis by a number of organizations worldwide began to call into question the effectiveness of these approaches at reducing maternal mortality. By the tenth anniversary of the Initiative's launch in 1997, technical experts concurred that TBA training and risk screening were of limited practical effectiveness at reducing maternal mortality, and ascribed the



relative lack of progress in reducing maternal mortality in part to the reliance on these approaches, as well as the inadequate investments in and commitment to safe motherhood more generally.

The birth of a baby is a major reason for celebration around the world. Societies expect women to bear children and honor women for their role as mothers. Yet in most of the world, pregnancy and childbirth is a perilous journey because unpredictable complications could end in death or injury to herself or to her infant (Ransom and Yinger, 2002). 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, 2004). The WHO (2006) strongly advocates for skilled care at every birth” to reduce the global burden of 536 000 maternal deaths every year.

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., 2007; Duffy, 2007; D’Ambruso, et al., 2005).

In Ethiopia, only 6% of the deliveries in 2008 were attended by health professionals. This situation well explains the maternal mortality ratio of 673 per 100,000 live births, which is one of the highest in the world (Central Statistical Agency, 2009). Studies revealed that hemorrhage, hypertensive disorders and ruptured uterus were among the causes of maternal deaths in Ethiopia (Kwast et al, 1986). Despite the great potential of Birth Preparedness and Complication Readiness in reducing the maternal



and newborn deaths its status is not well known in most of sub-Saharan Africa (UNFPA, 2010)

2.2 Birth Preparedness

Every pregnant woman faces the risk of sudden, unpredictable complications that could end in death or injury to herself or to her infant. Pregnancy related complications cannot be reliably predicted. Hence, it is necessary to employ strategies to overcome such problems as they arise (JHIPEGO, 2001).

Mihret and Mesganaw (2008) stated that lack of advance planning for use of a skilled birth attendant for normal births, and particularly inadequate preparation for rapid action in the event of obstetric complications, are well documented factors contributing to delay in receiving skilled obstetric care. They again stated that cultural beliefs and lack of awareness inhibit preparation in advance for delivery and expected baby. Since no action is taken prior to the delivery, the family tries to act only when labor begins. The majority of pregnant women and their families do not know how to recognize the danger signs of complications. When complications occur, the unprepared family will waste a great deal of time in recognizing the problem, getting organized, getting money, finding transport and reaching the appropriate referral facility (Mona et al, 2002).

Birth Preparedness and Complication Readiness (BP/CR) is a strategy to promote utilization of skilled maternal and neonatal care timely, based on the theory that preparing for childbirth and being ready for complications reduces delays in obtaining this care. In a skilled care approach, birth preparedness includes identifying a skilled provider and making the necessary plans to receive skilled care for all births. Complication readiness (*emergency funds, transport, blood donor and designated*



decision-maker) receive greater emphasis in emergency obstetric care programs. 2004)

Birth preparedness has been globally endorsed as an essential component of safe motherhood programs to reduce delays for care. For some of the complications like severe hemorrhage a few minutes matter to save life, while for others hours or even days may be tolerable but with the prognosis getting worse as time elapses (Kitilla, 2001). A study by Mihret and Mesganaw (2008) found that a woman is considered as prepared for birth and its complication if she reported that she or her family identified place of delivery, saved money and identified a means of transport to place of childbirth or for the time of obstetric emergencies ahead of childbirth.

According to Paul and Judith (2007), preventable maternal mortality is a violation of women's human rights. It violates women's right to life, to non-discrimination, to the highest attainable standard of health care and to information. In many cases, it results from violations of women's right to freedom from gender-based violence and violations of their right to decide freely and responsibly on the number and spacing of their children. All of these rights are set out in international human rights treaties which many countries have signed and ratified. According to the Amnesty International (2009) maternal mortality is the single biggest cause of death among women of child-bearing age in developing countries. The overwhelming majority of these deaths are preventable. The reasons why pregnancy and childbirth continue to cost the lives of so many women are embedded in the violation of human rights because access to maternal health services is a human right issue that should be considered by governments of all nations. Accurate data on the extent of maternal mortality and morbidity (illness) is scarce. However, the information which is available shows that the highest maternal mortality rates are invariably among women



living in poverty. Denied a voice in the allocation of resources and access to the type of health care that should be available, women living in poverty are dying and suffering on an alarming scale (Stephenson et al, 2005).

According to Ekabua et al., (2011), the principle and practice of birth preparedness and complication readiness (BP/CR) in a third world setting where there is prevailing illiteracy, inefficient infrastructure, poor transport system, and unpredictable access to skilled care provider have the potential of reducing the existing high maternal and neonatal morbidity and mortality rates in these developing countries. BP/CR promotes skilled care for all births and encourages decision making before the onset of labor (JHPIEGO, 2003). The BP/CR matrix raises awareness of danger signs, thereby improving problem recognition and reducing delay in deciding to seek care. It provides information on appropriate sources of care (promoters and facilities) making the care-seeking process more efficient. It also encourages households and communities to set aside money for transport and service fees, avoiding delays in reaching care caused by the search for funds (JHPIEGO, 2001).

According to Thaddeus and Maine (1994) the responsibility for BP/CR must be shared among all safe motherhood stakeholders—policymakers, facility managers, providers, communities, families, and women—because a coordinated effort is needed to reduce the delays that contribute to maternal and newborn deaths. Women and newborns need timely access to skilled care during pregnancy, childbirth, and the postpartum/newborn period. Too often, however, their access to care is impeded by delays—delays in deciding to seek care, delays in reaching care, and delays in receiving care. JHPIEGO (2001) stated that the delays have many causes, including logistical and financial concerns, unsupportive policies, and gaps in services, as well as inadequate community and family awareness and knowledge about maternal and



newborn health issues. Women and newborns need timely access to skilled care during pregnancy, childbirth, and the postpartum/newborn period. Too often, however, their access to care is impeded by delays—delays in deciding to seek care, delays in reaching care, and delays in receiving care. These delays have many causes, including logistical and financial concerns, unsupportive policies, and gaps in services, as well as inadequate community and family awareness and knowledge about maternal and newborn health issues (Thaddeus and Maine, 2004).

Villar et al., (2001) stated that delays are responsible for most of the maternal and neonatal mortalities. The delays they mentioned include;

Delays in deciding to seek care may be caused by failure to recognize signs of complications, failure to perceive the severity of illness, cost considerations, previous negative experiences with the healthcare system, and transportation difficulties.

Delays in reaching care may be created by the distance from a woman's home to a facility or provider, the condition of roads, and a lack of emergency transportation.

Delays in receiving care may result from unprofessional attitudes of providers, shortages of supplies and basic equipment, a lack of healthcare personnel, and poor skills of healthcare providers. They further reported that the causes of these delays are common and predictable and that these could be addressed if women and families—and the communities, providers, and facilities that surround them are prepared in advance and ready for rapid emergency action.

The principle and practice of BP/CR in a third world setting where there is prevailing illiteracy, inefficient infrastructure, poor transport system, and unpredictable access to skilled care provider have the potential of reducing the existing high maternal and neonatal morbidity and mortality rates. BP/CR promotes skilled care for all births and encourages decision making before the onset of labor (Ekabua et al, 2011). The



BP/CR matrix raises awareness of danger signs, thereby improving problem recognition and reducing delay in deciding to seek care (McDonagh, 1996). It provides information on appropriate sources of care (promoters and facilities) making the care-seeking process more efficient. It also encourages households and communities to set aside money for transport and service fees, avoiding delays in reaching care caused by the search for funds.

Del Barco, (2004) stated that, antenatal care in Sub Saharan Africa is provided along the lines of the traditional approach based on risk assessment and not on the goal-oriented interventions of focused antenatal care, which include BP/CR.

According to Family Care International (2012) birth preparedness is the advance planning and preparation for delivery which can do much to improve maternal health outcomes. It was further stated that birth preparedness helps ensure that women can reach professional delivery care when labour begins. In addition, birth preparedness can help reduce the delays that occur when women experience obstetric complications, such as recognizing the complication and deciding to seek care, reaching a facility where skilled care is available and receiving care from qualified providers at the facility.

In a skilled care approach, birth preparedness includes identifying a skilled provider and making the necessary plans to receive skilled care for all births. Complication readiness (*emergency funds, transport, blood donor and designated decision-maker*) receive greater emphasis in emergency obstetric care programs. Birth preparedness has been globally endorsed as an essential component of safe motherhood programs to reduce delays for care (Mona et al, 2002).



Khanum et al., (2000) stated that the key elements of birth preparedness include: attending antenatal care at least four times during pregnancy; identifying a skilled provider and making a plan for reaching the facility during labour and setting aside personal funds to cover the costs of travelling to and delivering with a skilled provider and any required supplies. Their study further stated that recognizing signs of complications; knowing what community resources emergency transport, funds, communications, etc. are available in case of emergencies and having a plan for emergencies i.e. knowing what transport can be used to get to the hospital are factors or key elements that determine birth preparedness.

Maine et al., (2009) stated that setting aside funds; identifying person(s) to accompany to the hospital and/or to stay at home with family; and identifying a blood donor are indices of birth preparedness. They further stated that because life-threatening complications can occur during the early postpartum period, birth preparedness also includes preparing/planning for accessing postpartum care during the first week after delivery and at six weeks after delivery. Their study again stated that birth preparedness involves not only the pregnant woman, but also her family, community and available health staff. The support and involvement of these persons can be critical in ensuring that a woman can adequately prepare for delivery and carry out a birth plan.

According to Stephenson et al (2004), in many societies in the world, cultural beliefs and lack of awareness inhibit preparation in advance for delivery and expected baby. Since no action is taken prior to the delivery, the family tries to act only when labor begins

Pregnancy related complications cannot be reliably predicted hence, it is a necessary to employ strategies to overcome such problems as they arise (JHIPEGO, 2001). Lack



of advance planning for use of a skilled birth attendant for normal births, and particularly inadequate preparation for rapid action in the event of obstetric complications, are well documented factors contributing to delay in receiving skilled obstetric care. Birth Preparedness and Complication Readiness (BP/CR) is a strategy to promote utilization of skilled maternal and neonatal care timely, based on the theory that preparing for childbirth and being ready for complications reduces delays in obtaining this care (JHIPEGO, 2004).

The majority of pregnant women and their families do not know how to recognize the danger signs of complications. When complications occur, the unprepared family will waste a great deal of time in recognizing the problem, getting organized, getting money, finding transport and reaching the appropriate referral facility. For some of the complications like severe hemorrhage, a few minutes matter to save a life, while for others hours or even days may be tolerable but with the prognosis getting worse as time elapses (Kitilla, 2001).

A report by the Federal Democratic Republic of Ethiopia, Central Statistical Agency (2006) birth preparedness involves not only the pregnant woman, but also her family, community and available health staff. The support and involvement of these persons can be critical in ensuring that a woman can adequately prepare for delivery and carry out a birth plan.

According to Ornella et al., (2009) ensuring a ready supply of the emergency-obstetric care package requires that health centres and hospitals are equipped to deal with the emergencies, causing most maternal deaths, that reach them, and that timely care is not hindered by the need to pay in advance for lifesaving treatments, or to purchase essential supplies and drugs from outside the facility, or organize blood donations.



Success of emergency obstetric care alone is also dependent on a means of distribution to ensure that its target - women with complications, particularly rapidly fatal intrapartum complications - can access such care, ideally within a couple of hours. This means overcoming delays in recognition of complications and referral to the facility (the so-called first delay) and in gaining timely access to appropriate emergency obstetric care services once at the facility (the second delay).

Knowledge of obstetric danger signs and birth preparedness are strategies aimed at enhancing the utilization of skilled care during low-risk births and emergency obstetric care in complicated cases in low income countries (Starrs, 2006). The presence of skilled attendants at births and availability of emergency obstetric care have been shown to greatly reduce maternal deaths due to obstetric complications (Paxton et al, 2005). The reduction of maternal mortalities depends on a functional referral system from rural communities to health facilities (Graham et al, 2008)

Facilities with skilled attendants and functional emergency obstetric care services are in most low-income countries located in urban centres whereas the majority of the population live in rural areas. Most maternal deaths in resource poor countries such as Uganda where the actual study was conducted, are attributed to the three delays; delay to make a decision to seek care, delay to reach place of care and delay in receiving appropriate and adequate care (Thaddeus and Maine, 2008). With the assumption that “every pregnancy faces risks” (Graham, 1998), women should be made aware of danger signs of obstetric complications during pregnancy, delivery and the postpartum (WHO, 1994).

The knowledge will ultimately empower them and their families to make prompt decisions to seek care from skilled birth attendants (Pembe et al, 2009). Moreover, in



order for women to reach the place where appropriate care is provided, certain preparations prior to birth are required. Birth preparedness for a woman entails identifying a skilled attendant/ health facility with delivery services, making transportation plans, saving money and identifying a blood donor (Hladik et al, 2006). The practice of individual women identifying blood donors is, however, discouraged in high HIV/AIDS prevalence countries where voluntary donation to centralized blood banks is preferred (Blood Safety: AIDE-MEMOIRE, 2011)

Studies conducted among women in Tanzania (Pembe et al, 2009], Ethiopia (Hiluf and Fantahun, 2007) and Burkina Faso (Moran et al, 2006) indicate low levels of awareness of obstetric danger signs during pregnancy, delivery and postpartum. Similarly studies have also indicated low rates of birth preparedness among women in Kenya (Mutiso et al, 2008), Ethiopia (Hailu et al, 2011) and Burkina Faso (Moran et al, 2006).

The low awareness of danger signs coupled with lack of preparedness contributes to the delay in seeking skilled care henceforth leading to high levels of maternal mortality and morbidity. With a maternal mortality ratio estimated to range from 215 to 558/100,000 live births and with only 42% of women assisted by skilled attendants during birth (Hogan et al, 2010), Uganda is one of the countries still facing the burden of unsafe motherhood.

The government of Uganda has embarked on a road map to accelerate the reduction of maternal/neonatal mortality and morbidity so as to achieve the MDG 5 (Ministry of Finance and Economic Development Uganda, 2010). One of the strategies laid down in this roadmap is to empower communities to ensure a continuum of care between the household and the health care facility. This is said to be done by promoting



knowledge of danger signs, birth preparedness and complication readiness (Ministry of Health Uganda, 2010).

A study by Kabakyenga et al (2011) to explore the association between knowledge of obstetric danger signs and birth preparedness among recently delivered women in Mbarara district of south-western Uganda through promoting increased skilled attendance showed a clear association between knowledge of key danger signs during pregnancy or during the postpartum period with birth preparedness. However there was a lack of a clear association between knowledge of danger signs during childbirth and birth preparedness. Other studies conducted in Ethiopia by and in India found no significant association between key danger signs and birth preparedness (Maine et al, 2010)

According to Kabakyenga et al (2011) high level of education modifies the relationships between knowledge of key danger signs during pregnancy/postpartum and birth preparedness in a synergistic direction. They attributed this to the fact that women who have attained high levels of education are able to better understand the health messages acquired from various sources.

Similarly studies conducted in other countries such as Tanzania and Kenya have separately showed a clear relationship between high education and awareness of danger signs (Mutiso et al, 2008 and Pembe et al, 2009)

In Kenya and Ethiopia Hailu et al (2011) and Mutiso et al, (2008) found that high levels of education among women is associated with increased birth preparedness practices.

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)

In areas where women and their spouses and community members were exposed to messages or information on danger signs of pregnancy and child birth the awareness and birth preparedness was high. Again, low levels of knowledge of danger signs and low levels of birth preparedness were found to be high in the rural population or among women living in rural areas.

Women with mobile phones and households with radios were strongly associated with birth preparedness and complications readiness. This was attributed to the messages that are given on radio programmes (Kabakyenga et al, 2011).

2.3 Use of Prenatal Care Services during Pregnancy to Avert Complications

Prenatal care is defined has been defined by the WHO (2000) as “the medical attention received from the time of conception up to, but not including, labor and delivery”. It is the care received during pregnancy from skilled health personnel. It further stated that prenatal care involves a set of services provided to improve pregnancy outcomes and engage the expectant mother in the healthcare decisions. The WHO (2007) again propounded a model called the goal oriented model which recommends 4-5 ANC visits for pregnant women who are not having medical problems.

Prenatal care refers to pregnancy related health care provided by a doctor or a health worker in a health facility or home (Srilatha et al, 2006). According to a report by



Cynthia Berg's in 1995 on Prenatal Care in Developing Countries, the goals of prenatal care include four basic components: (i) early detection of pregnant women at risk of any potential complications; (ii) action in order to prevent any future difficulties; (iii) diagnosis and treatment of preexisting medical conditions and (iv) prompt referral to the appropriate specialist when complications develop during pregnancy.

ANC utilization which is (65%) in the developing countries is low when compared to that of the developed countries which is 97%. Skilled attendance at delivery is 53% in developing countries while it is 99% in the developed countries and postpartum care utilization is 30% compared to 90% in developed countries (WHO, 2007).

According to Ornella et al (2009), antenatal care (ANC) coverage is a success story in Africa since over two-thirds of pregnant women (69 percent) have at least one ANC contact. They further stated that, ANC has a life-saving potential and guarantees the lives of women and babies.

According to Overbosch et al (2002), Ghana implemented a number of policies and strategies to achieve an improvement in the health of pregnant women and their babies and a reduction of maternal mortality which include policies on maternal health services.

Nyonator and Kutzin, (1999) stated that almost all antenatal care in Ghana is received from modern health care providers, such as midwives, nurses, medical assistants, or doctors and that traditional health practitioners play only a minor role in antenatal care (1 percent only), according to these survey data.

The Government of Ghana has adopted the WHO focused antenatal care (ANC) package in a move to improve access, quality and continuity of ANC services to



pregnant women. As part of these efforts, the Government has exempted fees for ANC clients. Refocusing ANC has resulted in significantly better quality of care, notably in prevention of diseases (e.g., malaria and anaemia in pregnancy), promotion of health (e.g., counseling on STI/HIV/AIDS) and continuity of care (Philomena et al, 2006).

There are factors that determine the use of prenatal care services. Pregnancy is a natural process and women with some experience might consider antenatal care less necessary. According to Elo (1992) and Raghupathy (1996) a higher number of previous pregnancies is associated with less use of antenatal care, while Magadi et al (2000) and McCaw-Binns et al (1995) reported a negative association between a higher number of previous pregnancies and early attendance to antenatal care. However, the latter also report that complications experienced during earlier pregnancies have a positive association with early attendance to antenatal care, suggesting that earlier problems with pregnancies make women more aware of the need for antenatal care.

According to AbouZahr and Wardlaw, (2004) prenatal care is the key entry point of a pregnant woman to receive a broad range of health promotion and preventive services which promote the health of the mother and the baby.

The WHO (2008) estimated that worldwide, more than 529,000 women die every year from complications of pregnancy, childbirth and abortion. Ninety nine percent (99%) of these deaths are from the developing countries. Less than 1% of these deaths occur in more developed countries making maternal mortality the health indicator with the greatest disparity between developed and developing countries. Accordingly, maternal health has emerged as global priority because of a great gap in the status of mother's well being between the rich and the poor countries.



Kunst and Houweling (2001) in citing WHO (2008) said that estimates suggest that 88 to 98 percent of all pregnancy-related deaths are avoidable if all women would have access to effective reproductive health care services. The utilization of maternal health care services is one of the important factors to reduce the incidence of maternal mortality. United Nations reported data of maternal health care from developing countries are as follows: the number of pregnant women who receive at least one antenatal care is approximately 74 percent in 2005 (UN, 2008); 40 percent of deliveries take place in health facilities (UNFPA, 2004); and skilled health personnel assist nearly 61 percent of births in 2006 (UN, 2008).

According to Abou et al., (1996) poor health outcomes among reproductive women concerns with the non-use of modern maternal health care services, such as antenatal care, delivery care and postnatal care. Antenatal care provides the opportunity for complications to be detected and gives women advice on the management of complications.

The UN (2008) postulated that antenatal care is an essential safety net for healthy motherhood and childbirth, where the well-being of both the prospective mother and her offspring can be monitored. Early and regular prenatal care optimizes both maternal and child health because it facilitates health promotion and illness prevention. When there is a relationship created between the healthcare provider and a pregnant woman, the provider is better able to treat the woman and help her to have a healthier pregnancy. Prenatal care allows for early diagnosis and treatment of medical problems (Cook et al, 1999).

According to Radhakrishnan (2010) during ANC visits both physical examination and laboratory test are made. Physical examination includes; height, weight, blood



pressure, systemic examination, examination of pregnant uterus, fetal heart sound and uterine contraction (at term). Laboratory test encompasses measurement of hemoglobin, Urine routine, HIV, hepatitis B surface antigen (HBSAG), Blood group RH typing, Blood glucose (random or GST), ultrasound if necessary, glucose tolerance test (GTT) to be done in patients suspecting to develop gestational diabetes. He further argued that ANC first visit should be as early as possible after confirmation of pregnancy. Subsequent visits at least one in 1st and 2nd trimester and two in 3rd trimester. Additional visits should be arranged depending on the condition.

Jeannette et al., (2003) stated that antenatal care presents an opportunity to deliver interventions for improving maternal nutrition, providing health education, and encouraging skilled attendance at birth and use of facilities for emergency obstetric care (EMOC). All of these interventions could contribute to reducing maternal mortality and improving infant survival. With the spread of HIV in many countries of the world, antenatal care also serves as an important conduit for HIV testing and counseling and thus has potential for the prevention of HIV transmission from mother to child. The prevention and treatment of malaria among pregnant women can also significantly improve maternal health and fetal outcomes.

Several studies have also shown that there exists an association between the use of antenatal care and positive maternal outcome. For example, a study in Vietnam, found that antenatal care reduced maternal mortality by improved nutrition and screening for high risk pregnancies (Swenson et. al 1993). In Zaire, antenatal care was found to reduce maternal mortality 17-fold. The main impact has been a reduction in severe anaemia, cases of obstructed labour, and treatment of medical conditions (Royal College of Obstetricians and Gynecologists 1979 cited in McDonagh (1996). In addition, the study by Coria-Soto et al (1996 cited in Magadi et. al 2000), found that



inadequate number of visits was associated with 63% higher risk of intra uterine growth retardation. Work from Tanzania stated that 81% of risk factors could be identified in the antenatal period (Essex & Everett 1977 cited in McDonagh 1996). The risk factors in here are associated with the women's medical obstetrical and social history or circumstances and those arising during the antenatal period.

Armstrong (2000) stated that antenatal care is an effective health intervention tool for reducing the risk of maternal morbidity and mortality, particularly in places where the general health status of women is poor. Studies indicate that the risk of maternal morbidity and mortality is significantly higher among women who do not receive prenatal health-care services compared to women who do so. Antenatal care is also associated with fewer complications during pregnancy, higher birth weights, and lower rates of perinatal, neonatal, infant and child mortality.

According to UNFPA (2004) antenatal care alone cannot prevent all obstetric emergencies, the antenatal care presents an opportunity to evaluate the mother's overall condition, diagnose and treat infections, screen for anaemia and HIV/AIDS and prevent low birth weight other potential benefits of antenatal care are counseling on nutrition and healthy pregnancy/delivery behavior; provide tetanus immunization, malaria prophylaxis, iron and folic acid tablets and helping women to select a trained birth attendant or institution to deliver their babies in.

2.4 Uptake of Skilled Delivery Services among Pregnant Women

According to Starrs (2007) use of antenatal care services, skilled birth attendance, access to emergency obstetric care and neonatal resuscitation skills are vital components needed to substantially reduce maternal, perinatal and neonatal mortality in developing countries.



The level of maternal health services utilization 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 because there are regional variations within countries. 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 districts⁶. 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 (Sheik-Mohamed and Velema, 1999).

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, 2005). 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. However, it is unclear how and why these factors are responsible for utilization of skilled birth attendants in pregnancy.

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

Deogaonkar (2004) also identified the autonomy of women to be a factor influences the uptake of skilled delivery services. He found that women in India find themselves in subordinate positions to men socially, economically and culturally. They are economically dependent on men. Women are largely excluded from making decisions, have limited access to and control over resources, are restricted in their mobility, and are often under threat of violence from male relatives.

In Tanzania, a study by Mrisho et al., (2007) 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

A study by AbouZahr (2003) showed 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 Ethiopia, 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 (Yared et al, 2003).

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).



2.5 Determinants of Birth Preparedness

A study by Ekabua et al., (2011) found that women experience emergency situations in pregnancy from reported danger signs that need skilled intervention, such as prolonged labor, stillbirths, and severe vaginal bleeding after delivery. Women who spend more than 24 hours in labor are more likely to undergo caesarean section than those who spend less than 12 hours in labour. They further stated that women who spend more than 24 hours in labour are more likely to notice difficult/fast breathing in their babies than those who spend 12 to 24 hours in labor. These prolonged labour situations need skilled attendance, so as to reduce morbidity and mortality in mother and baby. Their study also found that distance to a health facility is a predictor in seeking skilled attention. They stated that 41% of mothers in Nigeria who did not deliver in hospital or any health facility attributed it to inability to pay hospital bills, whilst 31% attributes it to transportation challenges. These women's commonest means of transport in the last confinement was the motorcycle which is a dangerous means of transportation for pregnant women, because the risk of serious morbidity following an accident is high.

A study by Wagle et al., (2004) from Nepal showed that a distance of more than one hour to the maternity hospital was statistically associated with an increased risk of home delivery.

According to Mihret and Mesganaw (2008) in a study in Ethiopia, married women were more likely to be prepared for birth and its complication than non-married. This could be because, married women may have wanted and planned pregnancies which enables them to demand better service and get prepared. Another explanation could be that those who are not married may not want to be known as pregnant where the culture discourages having pregnancy without being married. Also they found that



literate mothers were more likely to be prepared for birth/complication than illiterate mothers. Again, their study found that women with history of still birth were more likely to be prepared for birth and its complication than those who did not have history of still birth. Mothers who received advise about where to give birth and arrangements for money and transportation during ANC follow up were more likely to prepare for birth and its complication than their counterparts who did not such education.

A study by Ekabua et al., (2011) found that awareness of the concept of birth preparedness was high in some states of Nigeria. Their assertion was based on the fact that goal oriented interventions of focused antenatal care which include BP/CR, were incorporated in maternity services. Pregnant women were cared for on the basis of risk assessment in the traditional approach to antenatal care. They were usually counseled on the importance of recognizing danger signs, saving money for childbirth, and identifying a means of transport before delivery, among other issues of BP/CR matrix.

Ekanem et al., (2005) also found that here is a disparity between awareness of the concept of birth preparedness and knowledge of specific danger signs in pregnancy, labor, and after childbirth. They found that knowledge of danger signs is poor among women in Nigeria. Their study found that educational status of a woman is the best predictor of awareness of the concept of birth preparedness. However, they did not find any association between awareness of birth preparedness and place of residence.

Ekabua et al., (2011) also found no association between place of residence (urban or rural) and awareness of birth preparedness but they found that educational status was the best predictor of awareness of birth preparedness, and the more educated women



usually reside in the urban areas. They also found parity as a better predictor of knowledge of severe vaginal bleeding as a key danger sign during pregnancy than educational level. This they attributed to the fact that severe vaginal bleeding was a reported danger sign by women in the last pregnancy, and this experience was related more to parity than educational status.

In order for awareness of BP/CR to result in improved access to skilled attendance, Fajemilehin (1991) stated that there has to be action plan and service use. The type of action plan undertaken by women in preparation for childbirth as reported by his study will depend on right intention and appropriate behavior. The study showed that intention and plan to use maternity services were positively correlated. However, educational level, marital status and parity were not good predictors of intention and behavior, especially regarding plan to attend at least four ANC visits with a skilled provider. In another dimension, Waggle et al., (2004) found that women who attend ANC are more likely to deliver in hospital.

Awareness of birth preparedness was associated with a plan to identify a mode of transport to the place of childbirth before onset of labor. Ekwempu et al., (1990) stated that transportation is a challenge in Nigeria, especially to pregnant women and road networks are poor in many urban areas and virtually non-existent in rural areas. In addition, the transport system is inefficient and not always available when needed. They therefore advocated for the establishment of a community support system with regard to transportation to assist pregnant women, especially when an emergency arises.

Ekabua et al., (2011) found that financial constraint is a major obstacle to accessing skilled attendance in pregnancy among pregnant women in Nigeria. They therefore



stated that it is appropriate for pregnant women to save money for childbirth and to be able to access emergency funds when needed. They again found that parity is a highly significant predictor of planning to save money followed by awareness of birth preparedness. This finding was reported to be related to past experience of danger signs in pregnancy and childbirth. Also, intention to save money was associated with knowledge of community financial support system.

According to the WHO/UNFPA/UNICEF/World Bank (1999), the existence of community-level systems to provide emergency funds, transport, and blood donors, is vital in promoting maternal and newborn survival. Community leadership therefore has an important role to play in removing barriers in deciding to seek care and improving access to a skilled care provider/attendant for women and their newborn babies. The report stated that an emergency response system must be put in place in communities and made known to the public. If women living in a community are ignorant of the existence of these emergency response systems, then they are unlikely to use and benefit from them. They again proposed a system of identifying pregnant women through community-based health promoters to ensure that support/help is given when needed.

2.6 Use of Prenatal Care Services during Pregnancy to Avert Complications

Prenatal care is defined has been defined by the WHO (2000) as “the medical attention received from the time of conception up to, but not including, labor and delivery”. It is the care received during pregnancy from skilled health personnel. It further stated that prenatal care involves a set of services provided to improve pregnancy outcomes and engage the expectant mother in the healthcare decisions. The WHO (2007) again propounded a model called the goal oriented model which recommends 4-5 ANC visits for pregnant women who are not having medical



problems. Prenatal care refers to pregnancy related health care provided by a doctor or a health worker in a health facility or home (Srilatha et al, 2006).

According to a report by Cynthia Berg's in 1995 on Prenatal Care in Developing Countries, the goals of prenatal care include four basic components: (i) early detection of pregnant women at risk of any potential complications; (ii) action in order to prevent any future difficulties; (iii) diagnosis and treatment of preexisting medical conditions and (iv) prompt referral to the appropriate specialist when complications develop during pregnancy.

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Accordingly, maternal health has emerged as global priority because of a great gap in the status of mother's well being between the rich and the poor countries.

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According to Radhakrishnan (2010) during ANC visits both physical examination and laboratory test are made. Physical examination includes; height, weight, blood pressure, systemic examination, examination of pregnant uterus, fetal heart sound and uterine contraction (at term). Laboratory test encompasses measurement of hemoglobin, Urine routine, HIV, hepatitis B surface antigen (HBSAG), Blood group RH typing, Blood glucose (random or GST), ultrasound if necessary glucose tolerance test (GTT) to be done in patients suspecting to develop gestational diabetes. He further argued that ANC first visit should be as early as possible after confirmation of pregnancy. Subsequent visits at least one in 1st and 2nd trimester and two in 3rd trimester. Additional visits should be arranged depending on the condition.

Jeannette et al., (2003) stated that antenatal care presents an opportunity to deliver interventions for improving maternal nutrition, providing health education, and encouraging skilled attendance at birth and use of facilities for emergency obstetric care (EMOC). All of these interventions could contribute to reducing maternal mortality and improving infant survival. With the spread of HIV in many countries of the world, antenatal care also serves as an important conduit for HIV testing and counseling and thus has potential for the prevention of HIV transmission from mother to child. The prevention and treatment of malaria among pregnant women can also significantly improve maternal health and fetal outcomes.

Several studies have also shown that there exists an association between the use of antenatal care and positive maternal outcome. For example, a study in Vietnam, found that antenatal care reduced maternal mortality by improved nutrition and screening for high risk pregnancies (Swenson et. al 1993). In Zaire, antenatal care was found to reduce maternal mortality 17-fold. The main impact has been a reduction in severe anaemia, cases of obstructed labour, and treatment of medical conditions (Royal



College of Obstetricians and Gynecologists 1979 cited in McDonagh (1996). In addition, the study by Coria-Soto et al (1996 cited in Magadi et. al 2000), found that inadequate number of visits was associated with 63% higher risk of intra uterine growth retardation. Work from Tanzania stated that 81% of risk factors could be identified in the antenatal period (Essex & Everett 1977 cited in McDonagh 1996). The risk factors in here are associated with the women's medical obstetrical and social history or circumstances and those arising during the antenatal period.

Armstrong (2000) stated that antenatal care is an effective health intervention tool for reducing the risk of maternal morbidity and mortality, particularly in places where the general health status of women is poor. Studies indicate that the risk of maternal morbidity and mortality is significantly higher among women who do not receive prenatal health-care services compared to women who do so. Antenatal care is also associated with fewer complications during pregnancy, higher birth weights, and lower rates of perinatal, neonatal, infant and child mortality.

According to UNFPA (2004) antenatal care alone cannot prevent all obstetric emergencies, the antenatal care presents an opportunity to evaluate the mother's overall condition, diagnose and treat infections, screen for anaemia and HIV/AIDS and prevent low birth weight other potential benefits of antenatal care are counseling on nutrition and healthy pregnancy/delivery behavior; provide tetanus immunization, malaria prophylaxis, iron and folic acid tablets and helping women to select a trained birth attendant or institution to deliver their babies in.

2.7 Uptake of Skilled Delivery Services among Pregnant Women

According to Starrs (2007) use of antenatal care services, skilled birth attendance, access to emergency obstetric care and neonatal resuscitation skills are vital



components needed to substantially reduce maternal, perinatal and neonatal mortality in developing countries.

The level of maternal health services utilization 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 because there are regional variations within countries. 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 districts⁶. 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 (Sheik-Mohamed and Velema, 1999).

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, 2005).

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

Deogaonkar (2004) also identified the autonomy of women to be a factor influences the uptake of skilled delivery services. He found that women in India find themselves in subordinate positions to men socially, economically and culturally. They are economically dependent on men. Women are largely excluded from making decisions, have limited access to and control over resources, are restricted in their mobility, and are often under threat of violence from male relatives.

In Tanzania, a study by Mrisho et al., (2007) 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.

A study by AbouZahr (2003) showed 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 Ethiopia, 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 (Yared et al, 2003).

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).



CHAPTER THREE

METHODOLOGY

3.0 Introduction

The methodologies that were used in conducting this study are presented in this chapter. The subsections in this chapter includes a description of the study area, sampling and sample size determination, variables of study, data collection tools, data collection procedures, data analysis, ethical considerations and quality control measures.

3.1 Study Design

A cross sectional comparative study was conducted. The study variables were compared among nulliparous and multiparous groups.

3.2 Study Population

The study population was 3 months postpartum nulliparous and multiparous women. This is because they have already gone through all the process of pregnancy and delivery thus antenatal care and delivery. Three months postpartum women were chosen in order to reduce recall bias.

3.3 Sample Size Estimation

The sample size for this study was determined following a statistical formula (Cochran 1963:75, as cited by Israel, 1992), with the method of precision, which is given by:



$$n = \frac{z_{\alpha}^2(\bar{P}(1-\bar{P}))}{m^2}$$

Where:

n = required sample size

z = confidence level at 95% (standard value of 1.96)

$\bar{P}$ = population proportion representing the national CPR which is 18%

m = margin of error at 5% (standard value of 0.05)

Therefore by applying this formula and, taking $\alpha=5\%$, margin of error of 0.06 and proportion of usage of contraceptive among female adolescents of 0.5, we have the sample size given as:

$$n = \frac{1.96^2(0.5(1 - 0.5))}{0.06^2} = 267$$

From the computation, the sample size for the study was 267 respondents. A 10% of the above sample size calculated was added to cater for non-response and damaged questionnaires.

$$\frac{10}{100} * 267 = 27 + 267 = 294 \approx 300$$

A 10% of the sample size is $26.7 \approx 27$ which brought the final sample size to 294.

Hence, a sample size of 300 respondents was recruited for this study.

Since the study was a comparative study involving nulliparous and multiparous women, 150 women were interviewed from each group.

3.4 Sampling Techniques



The study used cluster sampling procedure to select the communities. The Nandom District was divided into clusters so that the selection of respondents was done in the selected clusters. The communities of the District served as clusters. The sampling interval was calculated so that Probability Proportionate to Size (PPS) was used in selecting the clusters. The procedures for selecting the respondents are explained below.

3.4.1 Selecting the Starting Household Using the EPI Method

The first household was selected from the Centre of each cluster. In each cluster, a Community based health volunteer (CBHV) together with the interviewer chose a starting location 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 counted all of the households until the end of the cluster was reached. The team then randomly chose a number between 1 and the number of houses counted as the starting point for the survey.

3.4.2 Selection of Subsequent Households

Systematic sampling procedure was used. Every third household from the previously selected household will form the basis of selecting respondents for interview. This approach of selecting households has been reported to reduce similarity in responses by the interviewees (that is, reduced homogeneity) (Bennett et al., 1994).

3.4.3 Procedure for Selecting Individual Survey Subjects

Multiparous women who delivered within the past three months prior to the study were selected from selected households for the study. Nulliparous women who also delivered within the past three months were selected through snowballing. Only one eligible woman within any of the study groups was randomly selected for interview in



any particular sampled household where there were more than one multiparous woman eligible for the study or interview. In any chosen household where two women fit that description, the mother or woman with the youngest child was interviewed.

3.5 Data Collection Tools

The main data collection tools used were a questionnaire and a focus group discussion guide. A tape recorder was used to record the discussion sessions whilst the main points were written in a note book. The structured questionnaire contained close-ended questions while the focus group guide contained open-ended questions.

3.6 Data Collection

Both quantitative and qualitative methodologies were used in the data collection. The qualitative design consisted of focus group discussions held among the respondents. This category was only involved in the focus group discussion and was not interviewed. The focus group discussions gathered data on the determinants or factors that influence birth preparedness among nulliparous and multiparous women.

This method is ideal because detailed information can be gathered through this procedure. The focus group discussions were organized in five clusters of the study area.

The quantitative method involved face-to-face interviews using structured questionnaires. These interviews gathered data on the socio-demographic characteristics of the respondents, knowledge of obstetric complications, use of



antenatal care, use of skilled delivery services and the level of birth preparedness among the women. The questionnaires consisted mainly of closed-ended questions.

3.7 Data Analysis

The recorded tapes from the focus group discussions were transcribed and analysed using thematic and content analysis. The themes of the discussions were extracted and supported with some statements directly representing the views of the respondents. This was done to identify the factors that influence birth preparedness among nulliparous and multiparous women.

Data collected through the face-to-face interviews with the structured questionnaires were coded and entered into SPSS (Statistical Product for Social Solutions). Two types of analyses (Univariate and bivariate) was done to answer the research questions. Univariate analyses were done to find the frequencies and percentages for the socio-demographic characteristics, knowledge of obstetric complications, use of ANC and skilled delivery services. The results from these analyses were presented in graphs and tables. Bivariate analyses in the form of cross-tabulation were done to find associations or relationships between socio-demographic characteristics of respondents and their level of birth preparedness. The test of statistical association or significance was conducted using Chi square test at a 95% confidence level. $P < 0.05$ was considered statistically significant.

3.8 Quality Control Measures

- **Training:** There was a training session for the nurses who assisted in the data collection to ensure that valid and reliable data were collected. The training



gave the data collectors much insight into the questionnaires and what it sought to achieve.

- **Pre-testing of questionnaires:** There was a pilot survey to pre-test the questionnaires in order to refine and restructure the questions where necessary. The pre-testing was done in three clusters. The pre-testing helped to compare the responses with the objectives of the study.
- **Double entries of data:** Double entry of data was done after which the two data sets were compared at the analysis stage. This helped in identifying some omissions and discrepancies during the data entry.

3.9 Ethical Considerations

Permission or approval was sought from the Department of Community Health of the University for Development Studies before conducting the study. Permission was also sought from Nandom District Health Directorate.

An informed consent of the respondents was also sought and in the consent form, the objectives and significance of the study were clearly stated and explained to the prospective respondents. Respondents were given the free will to decide whether to partake in the study or not.

Anonymity and confidentiality of the actual source(s) of information obtained from the study was ensured by not indicating the names of facilities and individuals who took part in the study. Names were not be provided on the data collection tools and therefore no clues were provided for someone to trace the source of information.



CHAPTER FOUR

RESULTS

4.0 Introduction

The results or findings of the study are presented in this chapter. The results of the quantitative arm of the study are presented in tables and graphs using descriptive statistics. The findings of the qualitative arm of the study are reported by presenting extracts from the focus group interviews. The themes are presented and supported with some direct quotations or statements from the discussants.

4.1 Socio-Demographic Characteristics of Respondents

The mean age of the respondents was 22.53 ± 4.91 (mean $\pm$ SD) with a range of 15-49 years. Majority of the nulliparous women representing 53.8% (86) were within the age group of 20 - 24 whilst majority of the multiparous women forming 36.2% (58) were within the age group of 30 - 34. None of the nulliparous women was older than 40 years whilst only 1.3% (2) of the multiparous women were within the age group of 15-19 years.

About 86.2% (138) of the nulliparous women were married whilst 97.5% (156) of the multiparous women were married. Compared to the multiparous women, the proportion of nulliparous women who were unemployed was higher thus 46.3% versus 26.9% as shown in table 4.1 below. Most of the multiparous women representing 24.4% (39) were into farming compared to only 8.1% (13) of the nulliparous women. Compared to the nulliparous women, the proportion of multiparous women who were into civil service was high thus (13.1% versus 4.4%) as shown in table 4.1 below.



Table 4.1: Socio-demographic characteristics of respondents

Variable	Nulliparous		Multipara	
	Frequency	Percentage	Frequency	Percentage
Age group				
15-19	41	25.6	2	1.3
20-24	86	53.8	27	16.9
25-29	26	16.3	29	18.1
30-34	5	3.1	58	36.2
35-39	2	1.3	24	15.0
40-44	0	0	12	7.5
45-49	0	0	8	5.0
Religion				
Christianity	31	19.4	18	11.3
Islam	129	80.6	142	88.7
Marital status				
Single	22	13.8	4	2.5
Married	138	86.2	156	97.5
Occupation				
unemployed	74	46.3	43	26.9
Trader	23	14.4	67	41.9
Civil service	21	13.1	7	4.4
Farming	13	8.1	39	24.4
Craftsmanship/Artisan	29	18.1	4	2.4
Ethnicity				
Dagaaba	103	64.4	116	72.5
Wala	36	22.5	24	15.0
Others	21	13.1	20	12.5

4.1.1 Educational Level of Respondents

With respect to the educational level of the respondents, majority of the nulliparous women were formally educated compared to the multiparous women. The proportion of nulliparous women without formal education was lower compared to that of multiparous women thus 50.6% (81) versus 69.4% (111). About 10.6% of the nulliparous women were educated to the tertiary level whilst 7 of the multiparous women were educated to the tertiary level as shown in figure 4.1 below.



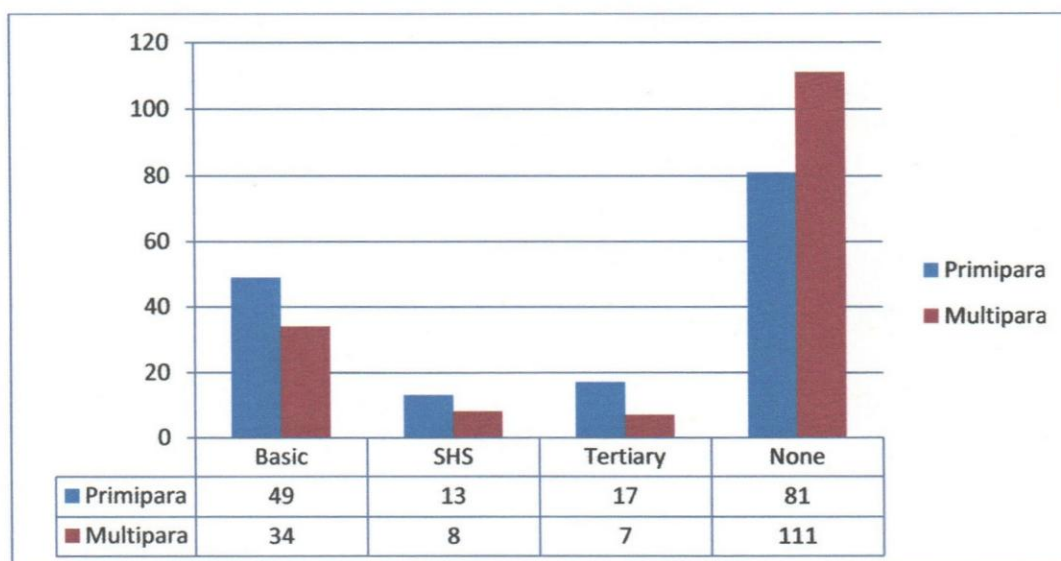


Fig 4.1: Educational level of respondents

4.2 Use of Antenatal Care Services

The study assessed the use of antenatal care services among nulliparous and multiparous women. The results showed that nulliparous women use antenatal care services more than multiparous women. Only 1.9% (3) of the nulliparous women did not make any ANC visit whilst 10% (16) of the multiparous women did not make any ANC visit. On the timing or initiation of antenatal care, the results show that majority of the primipara representing 66.9% (107) initiated ANC in the first trimester of pregnancy whilst 28.1% (45) of the multiparous women initiated ANC in the first trimester. Compared to nulliparous women, the number of multiparous women who started antenatal care was lower thus 25.6% (41) versus 42.1% (68) as shown in figure 4.2 below.

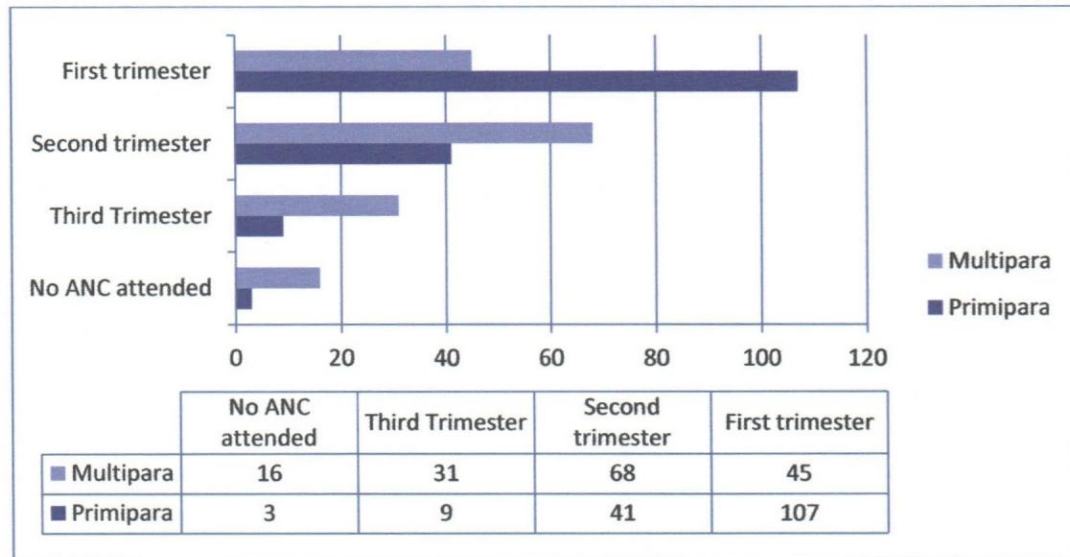


Fig 4.2: Use of ANC services

On the frequency of number of ANC visits made; majority of the multiparous women representing 40.6% (65) made at least 4 ANC visits whilst 11.2% (18) of the multiparous women made at least 4 ANC visits. More nulliparous women made fewer ANC visits compared to multiparous women. The proportion of multiparous women who made less than 4 ANC visits thus 1-3 visits was 78.8% (126) compared to 57.5% (92) of the nulliparous women as shown in table 4.2 below.



Table 4.2: Use of prenatal care services among respondents.

Variable	Nulliparous		Multipara	
	Frequency	Percentage	Frequency	Percentage
Number of ANC visits				
1-3	92	57.5	126	78.8
≥ 4	65	40.6	18	11.2
Not applicable	3	1.9	16	10.0
Reasons given for ANC attendance				
To improve child's health	68	42.5	51	31.9
To improve mother's health	43	26.9	59	36.9
For safe delivery	20	12.5	31	19.4
To prevent complications in pregnancy	29	18.1	19	11.9
Total	160	100.0	160	100.0

4.3 Utilization of Skilled Delivery services

The study assessed the use of skilled delivery services among the respondents. The results show that nulliparous women use skilled delivery services more than multiparous women. The proportion of nulliparous women who delivered in health facilities was 77.5% (124) compared to multiparous who were 44.4% (71). As shown in figure 4.3, it is well established that nulliparous women deliver at home more than multiparous women. The same trend was found in the use of TBAs, more multiparous women deliver by themselves or with TBAs than nulliparous women. The reasons for home delivery were espoused through qualitative study or focus group discussions.



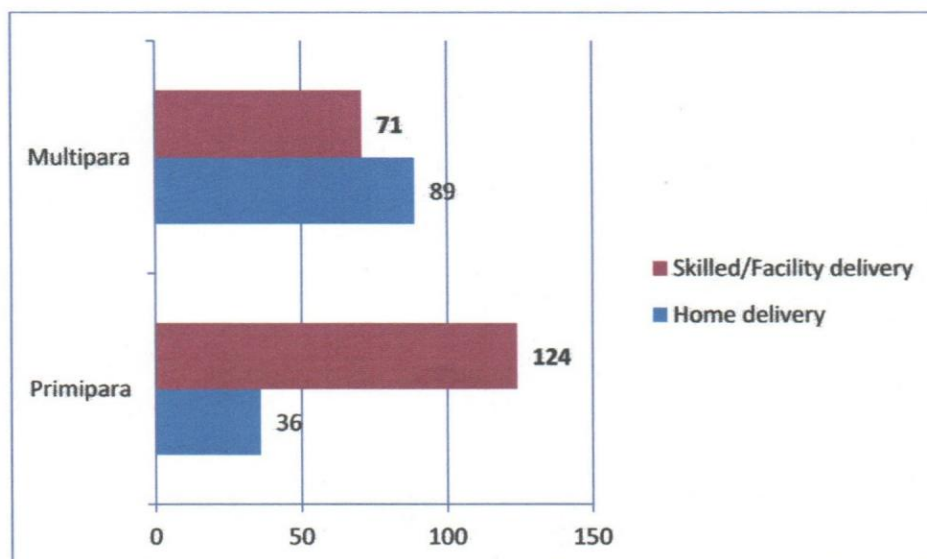


Fig 4.3: use of skilled delivery services

4.4 Reasons for Home Delivery

From the focus group discussions that were organized, it was realized that some of the women do not use skilled delivery services due to the following reasons;

Lack of health facilities in the communities: Majority of the women especially the multiparous 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 labor? This is the reason why we deliver at home.....".....(nulliparous woman)



..... "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....."(Multiparous woman)

"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" ".....(nulliparous woman)

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.".....
".....(nulliparous woman)

..... "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....(multiparous woman)



Ease or no difficulties in delivery among pregnant women: 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 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"(multiparous woman)

..... "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" ... ".....(nulliparous woman)

..... "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 the 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" ".....(multiparous woman)

..... "There are 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?" ".....(nulliparous woman)

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 lay and deliver on it. Nurses don't want you to squat and deliver which is the easiest method' ".....(nulliparous woman)

..... "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"(nulliparous woman)

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" ".....(nulliparous woman)

..... "When I lie down to deliver it is easier for me. Because you relax your muscles and joints"(multiparous woman)

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"(nulliparous woman)*

..... *"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"(multiparous woman)*

4.5 Knowledge of danger signs during labour and child birth

The knowledge of respondents on the danger signs of labour was assessed. It was established that multiparous women have more knowledge on the danger signs of labour than nulliparous women. The proportion of multiparous women who had knowledge of eclampsia was found to be 63.8% (102) compared to the 26.3%(42) of nulliparous women. With regards to retention of placenta during labour, multiparous women had more knowledge than nulliparous women thus 92.5% (148) versus 51.9 (83) as shown in table 4.6 below. Prolonged labour was also found as one the dangers of child bearing. Majority of the multiparous women representing 95% (152) had knowledge of it as compared to nulliparous women 22% (36).



Table 4.6: Respondents' knowledge of danger signs during labour and child birth

	Nulliparous		Multiparous	
	Yes	No	Yes	No
Severe Bleeding	87 (54.4)	73 (45.6)	134 (83.7)	26 (16.3)
Abortion	65 (22.1)	95 (77.9)	146 (91.2)	14 (8.8)
Severe waist pains	74 (46.2)	86 (53.8)	151(94.4)	9 (5.6)
Eclampsia	42 9 (26.3)	118 (73.7)	102 (63.7)	48 (36.3)
Retained placenta	83 (51.9)	77 (48.1)	148 (92.5)	12 (7.5)
Abdominal pain	96 (60.0)	64 (40.0)	84 (52.5)	76 (47.5)
Prolonged labour	36 (22.5)	124 (77.5)	152 (95.0)	8 (5.0)

4.6 Birth Preparedness and Complication Readiness

The birth preparedness and complication readiness of respondents was assessed by considering some of the preparations and arrangements that were made before labour and birth. The birth preparedness plan was considered based on arrangements that were made for a blood donor, transport, a delivery pack (items for the baby, mother and delivery) a caretaker and discussions that were made with the family before labour and child birth. From the results, none of the multiparous women arranged for a blood donor whilst only 1.3% (2) of the nulliparous women arranged for a blood donor. Compared to multiparous women, the number of nulliparous women who prepared a delivery pack were more thus 53.7(86) versus 31.8 (51) as shown in table 4.7 below



Table 4.7 Birth preparedness and complication readiness among respondents.

Variable	Nulliparous		Multiparous	
	Yes	No	Yes	No
Arranged Blood Donor	0 (0.0)	160 (100.0)	2 (1.3)	158 (98.7)
Made savings	98 (61.2)	62 (38.8)	71 (44.4)	89 (55.6)
Arranged for transport	43 (26.9)	117 (73.1)	24 (15.0)	136 (85.0)
Prepared a delivery pack	86 (53.8)	74 (46.2)	51 (31.9)	109 (68.1)
Discussed birth plan with family	28 (17.5)	132 (82.5)	11 (6.9)	149 (93.1)
Arranged for skilled birth attendant	35 (21.9)	125 (78.1)	7 (4.4)	153 (95.6)
Arranged for a caretaker	81 (50.6)	79 (49.4)	22 (13.7)	138 (86.3)

4.7 Composite index of Birth Preparedness and Complication Readiness

The study assessed how parity is associated with birth preparedness. A composite index of birth preparedness indicated that there is a strong (0.001) correlation between parity and birth preparedness. The study found that nulliparous women are more likely to prepare adequately for birth and emergency complications as compared to multiparous women. A practical explanation of this outcome was that about 43% variation was found between birth preparedness among nulliparous and multiparous women. The level of birth preparedness among nulliparous women was 43% higher than that of multiparous women.



Table 4.6: Correlation between birth preparedness among nulliparous and multiparous women

Correlation between parental income and total aggregate obtained at the BECE.			Aggregate score of satisfaction	Total Aggregate
Spearman's rho	Multiparous	Correlation Coefficient	1.000	0.001
		Sig. (2-tailed)	.	.000
		N	108	109
	Nulliparous	Correlation Coefficient	-.400**	1.000
		R ²	0.43	
		Sig. (2-tailed)	.000	.
		N	108	109
	**. Correlation is significant at the 0.01 level (2-tailed).			



CHAPTER FIVE

DISCUSSION OF RESULTS

5.0 Introduction

This chapter contains a discussion of the results and findings of the study. The discussion is based mainly on the objectives of the study. A comparison of the findings is made with results of similar studies in Ghana and the entire world. Where the findings differed or

5.1 Utilization of Prenatal Care

The WHO (2007) recommends that pregnant women make a minimum of 4 ANC visits through the entire duration of her pregnancy. This is aimed at identify dangers or health risks associated with the pregnancy. In this study, only 34.7% of the respondents made a minimum of 4 plus ANC visits. This figure is far lower than that of the MICS (2011) which found that 84.7% of pregnant women in Ghana attended the minimum number of four visits. The proportion of pregnant women who made a minimum of 4 ANC visits in the Upper West region for the year 2008 was 73.4% as reported by the GDHS. The findings of this study does not support the findings of the 2011 MICS and 2008 GDHS reports due to the rural nature of the study area because both surveys also identified that there are variations in the use of ANC and other maternal health services among rural and urban dwellers.

Only 1.5% of the respondents did not seek any antenatal care in the entire duration of their pregnancy which is lower than the 4% of pregnant women in Ghana who were found not to seek antenatal care in the 2008 GDHS. This could be attributed to the intense education through community durbars and the media.



The results showed that 58.0% sought prenatal care during the first trimester of pregnancy whilst 38.0% (152) sought prenatal care in the second trimester. Only 2.5% (10) of the respondents sought prenatal care in the third trimester of their pregnancy whilst 1.5% (6) did seek any prenatal care in the entire duration of their pregnancy.

The reasons for the use of antenatal care services differ among women. In this study majority of the women sought antenatal care to protect their life which was earlier found by Mahama et al (2012) that most women seek antenatal care to protect their health. Some of them representing 19% also said that they sought antenatal care to protect both the health of the mother and the foetus which supports the earlier findings of Stephenson et al (2004) that antenatal care when sought at the right time helps to protect the foetus and the mother's health.

5.2 Utilization of Skilled Delivery services

The use of skilled delivery services helps in reducing mortalities among mothers and the infants. Complications are also well managed when women deliver in health facilities. In this study, 64.2% of the women delivered their latest child at the time of the survey at home whilst 35.8% delivered in health facilities. These findings are does not support the findings of the 2008 GDHS and 2011 MICS which found that skilled deliveries in the Upper West region for 2008 was 46% and 60% respectively. The 35.8% found by this study which is lower than the figures established by both surveys could be attributed to the rural nature of the Nandom District which has very deplorable roads and inefficient transport system which prevents women in labour from accessing health facilities.



The findings of this study are however consistent with that of the WHO (2005) 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.

Assistance during delivery was assessed by the study and it was established that TBAs conducted 31.7% of all deliveries whilst 32.5% of the deliveries were self-delivery or assisted by relatives such as mothers, grandmothers and mother in-laws of the women. These findings when compared with the national average of 59% of delivery assistance by a health professional show that majority of women in the study area deliver without assistance from health professionals. These findings supports the assertion by the GDHS 2008 that assistance from health professionals during delivery is high in urban areas than rural areas thus 84% versus 43%. This implies that a woman giving birth in an urban area is twice as likely to be delivered by a health professional as a woman giving birth in a rural area.

The main reason for home delivery was the unavailability of health facilities in the study communities as stated by majority of the respondents which was also stated by Stephenson et al (2009) that women in rural areas deliver at home because of the distance they have to travel before accessing a health facility. Deogaonkar (2004) also found that rural women deliver with ease as compared to their counterparts in the urban areas. This study also found that some of the respondents delivered at home because they did not encounter any difficulty with the previous deliveries and therefore have the notion that they can deliver with ease. High cost of delivery pack also hinders pregnant women from seeking skilled delivery. This reaffirms the findings of McCarthy and Maine (1992), UNICEF (2010) and the GDHS (2008) that wealth index of households or socio-economic status of pregnant women is a major



determinant of the place of delivery. Women with higher economic status easily access and use skilled delivery services as compared to those with lower socio-economic status. This could be explained by their ability to afford transport services, buy a delivery pack and most importantly majority of them live in urban centers. This is because poverty is more endemic in rural areas than urban areas.

5.3: Relationship between place of delivery and socio-demographic characteristics

Socio-demographic characteristics of a pregnant woman have an association with the use of skilled delivery services. Several studies have established the relationship between a woman's socio-demographic characteristics and the use of maternal health services.

Results of this study found that age of a pregnant woman is significantly linked with the use of skilled delivery services. As a woman increases in age the less likely she is to seek assistance from health professionals in delivery i.e younger woman use skilled delivery services more than older women. This assertion supports the findings of GDHS (2008) and Abioye et al (2008) who found that age of a woman has a significant relationship with the use of skilled delivery services. This relationship could be attributed that older women tends to have experience in delivery and feel that they can deliver safely without the help of any health professional.

Religion and tribe were found not have any positive association or relationship with the use of skilled delivery services which is consistent with the findings of Baral et al (2010) who reported that these two variables are not significant determinants of skilled delivery services utilization but rather educational status and wealth index



(socio-economic status) of the woman. These they explained that as a woman's level of education increases, awareness of dangers of pregnancy also increases and would not take any risk in labour. Socio-economic status was also said to influence the use of skilled delivery services due increase accessibility (financial, social and physical/geographical accessibility). Mrisho et al (2007) also stated that as a woman's level of education increases she becomes more empowered and can take decisions that affect her health and the health of her children.

AbouZahr (2003) and Shariff et al (2002) in their studies found that parity is a significant factor in the use of skilled delivery services. As the number of deliveries by a woman increases the less likely she delivers at home whilst those with their first delivery or second deliveries are more likely to deliver in health facilities. This association was confirmed by the results of this study. About 90% of the women in the study sample with more than three children delivered at home. This could be attributed to the fact that they have experience in delivery and are not scared by the dangers of home delivery.

5.4 Knowledge of Danger Signs during Pregnancy

The knowledge of dangers of pregnancy was high among the respondents. Most of women intimated that there could be severe bleeding during pregnancy which supports the findings of the survey conducted by JHPIEGO (2004) among pregnant women in Nigeria and found that the most common danger that is known among pregnant women is excessive or severe bleeding during pregnancy. This they attributed to the fact that TBAs and relatives who assist pregnant women to deliver at home usually encounter such conditions. Only some few people in the study sample



mentioned other conditions such as oedema, severe headache and waist pains as some risks of pregnancy. According to Starrs (2006) knowledge of this signs is low because they are not considered as being very serious dangers that can kill a woman or her unborn baby. The findings of this study affirms that of Starrs (2006) because in rural communities some health conditions or risks are not considered as being serious conditions that need to be treated or prevented.

5.5 Knowledge of Danger Signs during Labour

Knowledge of danger signs during labour and child birth was also high among respondents. Majority of the respondents thus 72.8% (291) mentioned eclampsia as one of the dangers or risks during labour. This confirms the findings of Thaddeus and Maine (2004) who reported that eclampsia is a condition that kills most pregnant women who go into labour in rural areas. Their study asserted that lack of transport services to health facilities exacerbates the rate at which pregnant women lose their lives through eclampsia. Other danger signs of labour that were mentioned include prolonged labour, rupture of membranes, the vaginal tract and severe bleeding. The knowledge of this signs is high among women who have multiple deliveries or high number of children. As the number of children increases the knowledge of danger signs during labour also increases. This is consistent with the findings of Del Barco (2004) who said that knowledge of danger signs in labour is positively associated with parity and education.



5.6 Birth Preparedness and Complication Readiness

The preparedness and complication readiness of respondents was assessed by considering some of preparations and arrangements that were made before labour and birth. The birth preparedness plan was considered based on arrangements that were made for a blood donor, transport, a delivery pack, a caretaker and discussions that were made with the family before labour and child birth. This study found that most of the women made some financial savings before delivery. Compared to transport and blood donors arrangement, most of the respondents made financial savings before delivery. These findings are consistent with that of Ekabua et al (2011) who found that women make financial preparations or savings towards delivery more than considering making arrangements for blood donors in terms of emergencies. The reason for this is the fact that the cultural influence and societal perception that a woman should wear white clothes and decorate her room makes it imperative for every woman to save money towards these activities. Awareness and preparations for obstetric complications is always down trodden.

Women who arranged for a skilled birth attendant were in the minority because of the number of health facilities and skilled birth attendants in the district. This was earlier reported by Ekanem et al (2005) who stated that the number of skilled birth attendants and health facilities in rural areas prevent pregnant women from making personal arrangement for birth attendants.

Fajemilehin (1991) also reported that transport arrangements are not made by pregnant women before delivery. Women who live in rural areas have challenges with transport to access health care services. In this study about 53.3% of the women made transport arrangements before delivery. Those who made the arrangements were mostly women whose husbands or relatives had means of transport such as



motorbikes or tricycles. This supports the assertion by Ekwempu et al (1990) that most pregnant women lose their lives during labour through transportation challenges. The transportation challenges faced by pregnant women in accessing health care services is an economic problem of the nation because of the poor road network that links the health facilities to the communities in which these women live.

5.7 Composite index of Birth Preparedness and Complication Readiness

A composite index of birth preparedness and complication readiness was created using seven variables which include financial savings, transport arrangement, blood donor arrangement, caretaker arrangement, and arrangement with a skilled birth attendant. The other variables that were added are discussion of birth plan with the family and purchased of a delivery pack. These variables were selected based on the birth preparedness matrix as recommended by the Safe Motherhood Project of the World Health Organization. A binary scale was drawn by scoring respondents who made any of these variables ready before labour as 1 whilst the respondents who did not make any arrangement for the variables were scored 0. The scale therefore had a total score of 7. Respondents who had a mean score of 3.5 and above were considered to be adequately prepared for birth whilst those with a mean score of less than 3.5 were regarded as not prepared for birth and complications. From the above assessment less than one-third of the women were prepared for birth and ready to mitigate any complication that could possibly show up.

Ekabua et al (2011) in their study in Nigeria found that less than half of pregnant women who deliver in are adequately prepared for birth and to handle complications of birth. The lack of preparedness was blamed on their lack of awareness of the birth



preparedness plan or birth preparedness matrix. When pregnant women are properly educated on the birth preparedness steps it would increase their preparedness before labor and delivery. The findings of this current study support that of Ekabua et al (2011) because most of the women were not aware of the need to look for a blood donor before labour and delivery.

5.8 Factors that Determine Birth Preparedness and Complications Readiness

In multivariate regression analysis to find the factors that determines birth preparedness and complications readiness, factors that were found to be significantly associated with birth preparedness and complications readiness are number of deliveries (previous deliveries, wealth index, level of education, number of ANC visits and knowledge of danger signs of pregnancy).

The results showed that the number of deliveries by respondent had a significant influence on birth preparedness and complication readiness. Women who were delivering for the first time was found to have a birth preparedness plan and made financial savings and more importantly made some transport arrangements before delivery. This confirms the statements by Mihret and Mesganaw (2008) that women who are delivering for the first time always have the anxiety and expectation for the baby to be born. Married couples make a lot of preparations in anticipation of their first child. The anxiety however reduces after the first delivery. Women who had multiple deliveries were found to be less prepared in terms of financial savings, transport arrangements and blood donors for emergency situations.

Women with a higher wealth index or socio-economic status were found to be prepared before delivery. As reported by Deogbankar (2004) that socio-economic status of women have an influence of their use of maternal health services. His study



further established that women with high socio-economic status are able to make transport arrangements, pay bills for any kind of health care and also make savings for delivery. Compared to women with low socio-economic status who are not able to pay their bills for care in health facilities women with high wealth index are able to seek care from private health facilities because they can afford it.

Other variables that were found to be positively associated with birth preparedness and complications readiness include level of education which supports the findings of Starrs (2008) and JHPIEGO (2009, number of ANC visits which is consistent with the findings of WHO (2006) and Mona et al (2010) and knowledge of danger signs which confirms the findings of the study by Ekabua et al (2011) and Ekanem et al (2010). The study also found that marital status of respondents is significantly associated with birth preparedness and complication readiness. This could be attributed to the fact that married women receive financial support from their husbands. They also have the opportunity to discuss their birth preparedness plan with husbands to enhance making proper decisions towards labour and delivery.

5.9 Community Support Services for Pregnant Women

According to the WHO/UNFPA/UNICEF/World Bank (1999), the existence of community-level systems to provide emergency funds, transport, and blood donors, is vital in promoting maternal and newborn survival. Community leadership therefore has an important role to play in removing barriers in deciding to seek care and improving access to a skilled care provider/attendant for women and their newborn babies. The results of this study show that only 4.5% of the respondents said that their communities have transport services to support pregnant women during labour



however; none of the communities had financial services to support pregnant women during labour or emergencies. This findings show that the communities do not meet the criteria and proposition by the WHO/UNFPA/UNICEF/World Bank (1999) that communities should have some emergency support services for pregnant women to help reduce the maternal mortalities in the world. The lack of these support services in the communities is attributable to the high poverty levels of rural communities in Ghana and also government's inability to provide such services.

As reported by Ekabua et al (2011), identifiable blood donors were conspicuously missing in the communities because of the lack of awareness of the need to have such people during emergency situations.



CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

The aim of the study was to compare the level of birth preparedness and complication readiness among nulliparous and multiparous women in the Nandom District of Ghana.

The study found the following;

- ❖ About 58.0% (232) of the respondents sought prenatal care during the first trimester of pregnancy whilst 1.5% (6) did not seek any prenatal care in the entire duration of their pregnancy.
- ❖ Majority of the respondents representing 63.75% (255) made 1-3 ANC visits or made less than 4 ANC visits whilst 34.75% (139) made a minimum of 4 ANC visits in the entire duration of their pregnancy.
- ❖ About 63.25% of the respondents delivered at home. Whilst 35.7% delivered in health facilities.
- ❖ The main reason for home delivery was the unavailability of health facilities in the study communities as this was the reason given by 31.5%. Other reasons include ease of delivery (22.75%) and high cost of facility delivery pack (5.75%)
- ❖ Age of respondents is significantly associated with the use of skilled delivery services. As the age of respondent increases, the use of skilled delivery services decreased (Chi-square (χ^2) = 31.2, $p = 0.001$).



- ❖ Religion of respondents was found not have any positive association or relationship with the use of skilled delivery services (Chi-square (χ^2) = 1.8 , p < 0.09)
- ❖ Educational level of respondents was also found to be significantly associated with the use of skilled delivery services. As the educational level of a woman increases the probability of her using delivering in health facility increases (χ^2 = 43.6, p < 0.001).
- ❖ In an assessment of the danger signs during pregnancy, about 79.0% (316) of the respondents were aware of the possibility of severe bleeding during pregnancy.
- ❖ Majority of the respondents thus 72.8% (291) mentioned eclampsia as one of the dangers or risks during labour
- ❖ Only 3.0% (12) of the respondents said that they arranged for a blood donor before delivery. About 46.0% (184) said that they made some financial savings towards delivery whilst 39.2% (157) also bought a delivery pack before labour.
- ❖ Factors that influence birth preparedness and complication readiness include ; number of deliveries (P<0.001, OR= 1.54, 95%, CI: 0.78-0.98), wealth index (P<0.001, 95%, OR=2.31, CI: 4.24-5.10), level of education (P<0.001, OR=2.41, 95%, CI: 1.45-1.62), marital status (P<0.001, OR=2.41, 95%, CI: 1.45-1.62), number of ANC visits ((P<0.004, OR=1.15, 95%, CI: 0.43- 3.03) and knowledge of danger signs (P<0.001, OR=3.69, 95%, CI: 1.44-1.65)
- ❖ Only 4.5% (18) of the study communities had transport services to support pregnant women during labour but none of them had financial support services for pregnant women.



- ❖ The focus group discussions showed that there is high knowledge of the need to make transport arrangements and financial savings. However, knowledge of arrangement for blood donors during pregnancy and arrangement for a skilled birth attendant was very low.

6.2 Conclusions

The study found that nulliparous women use ANC services more than multiparous women. The number of nulliparous women who made more than 4 ANC visits was higher than that of multiparous women.

The knowledge of danger signs in pregnancy and labour was high among multiparous women than nulliparous women.

However knowledge of steps of birth preparedness was high among nulliparous women than multiparous women.

Nulliparous women use skilled delivery services more than multiparous women.

6.3 Recommendations

Based on the findings of the study, the following recommendations are directed to the various stakeholders;

- i. The Ghana Health Service should intensify health education in the district to increase the awareness of the need for ANC attendance, use of skilled delivery services and birth preparedness.
- ii. The Nandom District should commit resources to improve the road network of the district to ease the transportation challenges faced by pregnant women



- iii. Community leaders and members of the communities should device ways of giving emergency support to pregnant women in their various communities.
- iv. Non-Governmental Organizations should support governments' should put measures in place to empower women economically, socially and culturally to enable them to take decisions to enable them seek health care by themselves.

6.4 Suggestion for Further Studies

The study found that knowledge of eclampsia was high among the women but knowledge on malpresentation, bleeding during labour and retained placenta was low. It is therefore recommended that further studies should be conducted to assess the knowledge of pregnant women on the danger signs of pregnancy and labour.



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APPENDIX

BIRTH PREPAREDNESS AND COMPLICATION READINESS; A COMPARATIVE STUDY OF MULTIPAROUS AND NULLIPAROUS WOMEN IN THE NANDOM DISTRICT OF GHANA.

Study Questionnaire

INFORMED CONSENT

Hello, my name is **Evelyn Abeekpeng**; a student of the University for Development Studies offering a Masters degree programme in community Health and Development. I am conducting a study on the above topic.

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 how to improve birth preparedness among pregnant women.

The interview would last between 25 to 30 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?



SECTION A

Socio-Demographic Background

1. Status of respondent A. Multiparous B. Nulliparous
2. Age of respondent.....
3. Religion
 - a) African Traditional Religion
 - b) Christianity
 - c) Islam
 - d) Others (specify)
4. Ethnicity
 - a) Wala
 - b) Sissala
 - c) Dagaaba
 - d) Others (specify).....
5. Marital status
 - a) Single
 - b) Married
 - c) Divorced
 - d) Separated
6. Educational level
 - a) Primary
 - b) JHS
 - c) SHS
 - d) Tertiary
 - e) None of the above
7. Occupation
 - a) Housewife
 - b) Trader
 - c) Public sector
 - d) Farming
 - e) Private sector

SECTION B

Obstetric History

8. Number of pregnancies.....
9. Number of deliveries.....
10. How many months was your pregnancy when you started seeking
ANC?.....



11. How many times did you received antenatal care before delivery?

.....

12. Where did you deliver your current child? A. Home B. TBAs house D. Health facility

13. Who assisted you to deliver? A. TBA B. Self/relative C. Skilled birth attendant (nurse, doctor)

14. If home or TBA's house, was delivery there planned?

A. Yes B. No

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

- A. No difficulty in previous deliveries B. No health facility
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

Knowledge on Danger Signs During Pregnancy and Child Birth

15. Have you ever heard of any serious health problems that can occur during pregnancy, :

A) YES B) NO C) DON'T KNOW

IF YES.

16. What are they?

- a)
b)



- c)
- d)

17. Where did you get this information from

- a) Health care provider
- b) Mother in law
- c) Mother
- d) Sister
- e) Friends / neighbors

18. Have you ever heard of any serious health problems that can occur during labour and child birth

19. What are they?

- e)
- f)
- g)

20. Where did you get this information from

- f) Health care provider
- g) Mother in law
- h) Mother
- i) Sister
- j) Friends / neighbours

21. What will you do if you develop any of the serious health problems during pregnancy, labour and childbirth?

Knowledge on Steps of Preparing for Birth and Complications

22. Have you ever heard of the term birth preparedness and complication readiness?

A) YES B). NO

23. If yes, which key steps would you take in planning for birth?

- a)
- b)
- c)

24. Which key steps would you take in planning for an emergency during labour and child birth?

- a)
- b)

25. Who gave you the above information?



.....

26. At what stage of your pregnancy did she/he first share this formation with you

- a) 1st trimester
- b) 2nd trimester
- c) 3rd trimester
- d) At first visit

27. Does the health provider routinely discuss birth preparedness and complication readiness plans at/during

- a) Every ANC visit
- b) Month before delivery
- c) Delivery month

Attitudes, Perceptions and Cultural Norms

28. Is it necessary for a pregnant woman and her family to plan for birth and emergency during labour and child birth?

A) YES B) NO

If No what are your
reasons.....

29. If Yes what are your
reasons.....

25. Do some pregnant women fail to attend health facilities for delivery?

A. Yes B. No

If yes, which of the following can be attributed to that? (tick as many apply)

- a) It is too expensive
- b) Access to health facility
- c) Attitude of health staff to pregnant women
- d) Cultural/religious factors
- e) Others

26. Do you think child birth is only a woman's matter?

A) YES B) NO

27 If YES, give reasons.....

28If NO, what roles should husbands or partners play?.....



29 In your community, which of the following aspects of planning for birth and complications do your cultural norms encourage?

A. Birth preparedness plan:

- Place of birth
- Choice of a skilled provider
- How to get to the place when in labour
- Who will accompany her when in labour
- Who will care for the home and her family in her absence
- Preparation of necessary items for herself, the birth and the baby

B. Complication readiness plan

- Discuss how much money will be required and how to get the funds
- Establish a saving plan
- In the absence of decision maker (husband or landlord), who will stand in to make decisions in case of emergency
- Arrange for a blood donor
- Arrange for transport

30 Which aspects are discouraged?

Birth Preparedness Plan for the Pregnant Woman

Tick the appropriate answer to the question (✓)

31. Who delivered you when you were in labour?

- a) Mother
- b) Mother in law
- c) TBA
- d) Healthcare provider/Midwife, CHN, CHO

32. Where did you planned to give birth when you were pregnant?

- a) TBA
- b) CHPS Compound
- c) Home
- d) Health Centre
- e) Hospital
- f) Maternity home

30. Which of these items did you put together ready for delivery?

- a) Maternal Health Record Book
- b) Cloths to be used for delivery
- c) Baby dresses
- d) Clean old clothes/wrappers for yourself and baby
- e) Toiletries
- f) Sanitary pads

34. How do you planned to contact your health care provider when in labour



35 Did you make arrangements to be transported to a health facility any time labour set in? YES..... NO.....

36 Which of the following means of transport did you arranged to transport you to a health facility?

- a) Walking
- b) Bicycle
- c) Donkey cart
- d) Motor king
- e) Motorbike
- f) Private car
- g) Taxi
- h) Others (specify)

Did you make arrangements for someone to accompany you to a health facility when labour set in YES.....NO.....

Did you make arrangements for someone to take care of your home and family in your absence? YES.....NO.....

Complication Readiness for Pregnant Woman

31. Did you make arrangements for a blood donor in case of emergency?

A. Yes B. No

37 id you make savings to prepare for delivery and in case of complication?

A. Yes B. No

39. Who in the family is the key decision maker regarding use of health services and delivery care?

40. Did you discussed with family decision maker about planning for birth and complications.? A. Yes B. No

Who takes decisions in the absence of the key decision maker?



Community Support System

42. Which of these services does your community provide to support pregnant women in preparation for birth and in case of complications?

- a) Transportation services
- b) Community financial support system.
- c) Identifiable blood donors.

Socioeconomic Household Wealth Index of Respondents

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

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

2. Does the household own a house?

- A. Yes
- B. No

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

4. 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

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

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

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

- A. Electricity
- B. LPG
- C. Charcoal



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

7. 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).....

