

[www.udsspace.udsa.edu.gh](http://www.udsspace.udsa.edu.gh)  
**UNIVERSITY FOR DEVELOPMENT STUDIES, TAMALE**

**DETERMINANTS OF ANTENATAL CARE UTILISATION AMONG  
ADOLESCENT MOTHERS IN THE YENDI MUNICIPALITY OF NORTHERN  
REGION, GHANA**

UNIVERSITY FOR DEVELOPMENT STUDIES



**ABDUL-RASHID MOHAMMED**

**2017**

DETERMINANTS OF ANTENATAL CARE UTILISATION AMONG ADOLESCENT  
MOTHERS IN THE YENDI MUNICIPALITY OF NORTHERN REGION, GHANA

BY

ABDUL-RASHID MOHAMMED (BSC. COMMUNITY NUTRITION)

(UDS/CHD/0147/13)

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

FEBRUARY 2017



**Student:**

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

**Candidate's signature:**..... **Date:**.....

ABDUL-RASHID MOHAMMED

**Supervisor:**

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

**Supervisor's signature:**..... **Date:**.....

DR. SHAMSU-DEEN ZIBLIM



Antenatal care provides an opportunity to empower pregnant adolescents to recognise and respond to the signs and symptoms of obstetric complications. Adolescent pregnancy is a high-risk situation because of these mothers' physical and psychological immaturity for reproduction. In rural Ghana especially in the northern part of the country adolescent women are reluctant to access antenatal care. This study therefore examines the various determinants that may result their inability to attend antenatal care at the various health facilities in the Yendi Municipality. In conducting this study a cross sectional, non-experimental descriptive study design was employed with both quantitative and qualitative data collected and analysed. The main tools for data collection were questionnaires and interview guides. Data was collected from 126 adolescent mothers using a non-probability sampling; purposive sampling technique. The study revealed among others that majority of adolescent mothers in the Yendi municipality attributed long distance travel to health facilities, mother's and partner's level of education, unfriendly attitude of health workers, cultural beliefs and income as the main determinants for the utilisation of antenatal care services. Chi square analysis performed, also identified a number of factors that have significant association with the utilisation of antenatal care services, these include place of residence, ethnicity, religion, marital status, partner's education level and distance to health facility. The study recommended, a comprehensive, action-based approaches are needed in rural communities, including providing public transportation and increased availability of different types of health facilities by government. Also there is a need for community-based interventions that can create awareness and can change these social groups, cultural norms and behaviours.



## ACKNOWLEDGEMENTS

I wish to give glory and praise to the Almighty Allah who gave me good health, strength, courage and commitment to complete this dissertation.

I am also grateful to Dr. Shamsu-Deen Ziblim, my supervisor, for his constructive criticism and the support, encouragement and his preparedness to guide and share his knowledge and expertise with me right from the start of this dissertation to the end.

The same goes to Mr. Fatawu Malik, my co-worker who gave me his unflinching support during the period of data collection. He accompanied me to the field and enumerated most of the questionnaires to the respondents.

The Yendi municipal health directorate and the heads of all the sub-municipal health centres is not left out considering the invaluable support they extended to me in the area of making document of relevance to my study available and also for granting me the permission to conduct the study in their facilities .

I will also like to express my deepest appreciation to all participants in the study for their maximum cooperation and patience they exhibited for providing the required information that has invariably aided in my smooth accomplishment of this dissertation. Finally, this work wouldn't have been possible without the fullest support and contribution of my wife who use to financially support and single handedly provide the needed care for our beloved daughter, Zainab during the time of my study so I say a big thank you to my lovely wife, Arahamatu may Almighty Allah grant you success in all your endeavors and to the entire family I say a big thank you for your support throughout the years of conducting the study.



I dedicate this dissertation to my late dear dad, Mr Mahamadu Mohammed who did not live to witness the completion of this dissertation.



**Table of Contents**

DECLARATION ..... i

ABSTRACT.....ii

ACKNOWLEDGEMENTS ..... iii

DEDICATION .....iv

LIST OF TABLES ..... viii

LIST OF FIGURES ..... ix

LIST OF ABBREVIATIONS ..... x

CHAPTER ONE ..... 1

INTRODUCTION ..... 1

    1.1 Background to the Study ..... 1

    1.2 Problem Statement ..... 3

    1.3 Objectives of the study ..... 4

        1.3.1 Main objective ..... 4

        1.3.2 Specific objectives ..... 4

    1.4 Relevance of the Study ..... 4

    1.5 Conceptual Framework ..... 4

    1.6 Structure of Thesis ..... 7

CHAPTER TWO ..... 8

LITERATURE REVIEW ..... 8

    2.1 Introduction: ..... 8

    2.3 Adolescent ..... 8

    2.4 Adolescent mother ..... 8

    2.5 Traditional Birth Attendant (TBA)..... 8

    2.6 Safe delivery ..... 9

    2.7 Concept of antenatal care ..... 9

    2.9 Antenatal Care services provided by health workers ..... 11

        2.9.1 Antenatal Care Coverage ..... 11

        2.9.2 Urine and blood test ..... 14

        2.9.3 Safe delivery ..... 14

        2.9.4 Tetanus toxoid Injection ..... 16

        2.9.5 IPT Coverage ..... 17

    2.10 Determinants for the utilization of ANC services ..... 18

        2.10.1 Demographic, socio-cultural and socio-economic factors ..... 18



2.10.2 Knowledge on Antenatal Care services .....	23
2.10.3 Health care workers perspective .....	24
CHAPTER THREE .....	26
METHODOLOGY .....	26
3.1 Study Area.....	26
3.1.1. Geography of the Area .....	26
3.1.2. Demography of the Area .....	28
3.1.3. Distribution of health facilities .....	28
3.1.4. Economic status .....	29
3.2. Research design.....	30
3.4. Population and sampling .....	33
3.5. Methods and Tools of data collection.....	34
3.6. Techniques of data analysis .....	36
3.7. Research Ethics.....	37
CHAPTER FOUR.....	38
RESULTS .....	38
4.0 Introduction .....	38
4.1 Demographic Characteristics of respondents .....	38
4.2 Knowledge levels of adolescent mothers on ANC services.....	39
4.3 Antenatal care services provided by health workers .....	41
4.4 Determinants for utilization of antenatal care services .....	45
4.5 Determinants Associated With Antenatal Care Utilisation.....	50
CHAPTER FIVE .....	53
DISCUSSION OF STUDY RESULTS .....	53
5.0 Introduction .....	53
5.1 Knowledge levels of adolescent mothers on ANC services.....	53
5.2 Antenatal care services provided by health workers .....	54
5.3 Factors influencing ANC service utilisation .....	56
CHAPTER SIX.....	62
CONCLUSION AND RECOMMENDATION.....	62
6.0 Conclusion.....	62
6.1 Summary of the study .....	63
6.2 Recommendations .....	65





6.3 Future Directions.....	<a href="http://www.udsspace.udsa.edu.gh">www.udsspace.udsa.edu.gh</a>	66
REFERENCES .....		67
APPENDIX.....		77
Appendix 1: Research questionnaire.....		77
Appendix 2: In –depth interview guide.....		83



Table 3.1 Health facility and the ownership, Yendi.....	28
Table 4.1 Demographic Characteristics of respondents .....	39
Table 4.2 Knowledge of Antenatal Care (ANC) among respondents.....	40
Table 4.3 Services received at the antenatal clinics .....	44
Table 4.4a Cost of antenatal, service and respondents preparedness for the cost at facility attended.....	46
Table 4.4b Determinants of Utilisation of antenatal care (ANC) services .....	47
Table 4.5a Association between socio-demographic characteristics and antenatal attendance among respondents .....	51
Table 4.5b Association between socio-demographic characteristics and antenatal attendance among respondents .....	52
Table 4.6 Facility and care givers characteristics and antenatal attendance.....	52



Figure 1.1 Andersen’s behavioural model of Health Care Utilisation.....	5
Figure 2.1 Trend in ANC indicators from 2010-2013 in the Yendi municipality.....	13
Figure 2.2 Trend in ANC trimester at registration from 2010-2013 in the Yendi municipality.....	13
Figure 2.3 Trend in supervised delivery from 2010-2013 in the Yendi municipality.....	15
Figure 2.4 Trend in TBA delivery from 2010-2013 in the Yendi municipality.....	16
Figure 2.5 Trend in TT2+ from 2010-2013 in the Yendi municipality.....	17
Figure 2.6 Trend in IPT performance from 2010-2013 in the Yendi municipality.....	18
Figure 3.1 Map of Yendi Municipal.....	27
Figure 3.2 Map of Yendi Municipality showing Sub-municipal and location of Health Facilities.....	29
Figure 4.1 Distribution of ANC attendance during the last pregnancy.....	41
Figure 4.2 Distribution of time of ANC initiation among respondents.....	42
Figure 4.3 Distribution of number of ANC visits among respondents.....	43



ANC	Antenatal Care
CHNs	Community Health Nurses
CHPS	Community-based Health Planning and Services
CHWs	Community Health Workers
DLHS	District Level Household Survey
FANC	Focused Antenatal Care
GARHP	Ghana Adolescent Reproductive Health Policy
GCNH	Ghana Coalition of NGOs on Health
GDHS	Ghana Demographic and Health Survey
GHS	Ghana Health Service
GSS	Ghana Statistical Service
HC	Health Centre
HIV	Human Immunodeficiency Virus
ICF	International Classification of Functioning
IPT	Intermittent Preventive Treatment
IPTp	Intermittent Preventive Treatment for malaria during pregnancy
KNUST	Kwame Nkrumah University of Science and Technology
MHS	Maternal Health Service
MOHCW	Ministry of Health and Child Welfare of Zimbabwe
NGOs	Non-Governmental Organizations
SIAs	Supplementary Immunization Activities
SP	Sulfadoxine-pyrimethamine
STIs	Sexually Transmitted Infections
TB	Tuberculosis



[www.udsspace.udsa.edu.gh](http://www.udsspace.udsa.edu.gh)

TBA	Traditional Birth Attendant
TT	Tetanus Toxoid
TV	Television
UNFPA	United Nation Population Fund
UNICEF	United Nations Children’s Fund
USAID	United States Agency for International Development
WHO	World Health Organization



## INTRODUCTION

### 1.1 Background to the Study

The World Health Organization estimated that 16 million girls globally at aged 15 to 19 years and 12 million girls under the age of 15 give birth every year (WHO, 2012). It also added that one in five girls give birth by the age of 18. Additionally, the United Nation Population Funds (UNFPA) (UNFPA, 2012) has revealed that more than 16 million adolescent girls aged between 19 and 25 become mothers every year with almost 40 percent of them acquiring HIV. In Ghana, according to a report by the Ghana Coalition of NGOs on Health (GCNH), an estimated number of 750,000 teenagers aged 15 to 19 years become pregnant annually. The UNFPA statistics further identify complications from pregnancy and childbirth as the leading cause of death in this age group especially in developing countries (Robert, 2014).

In addressing the complications these adolescents face during pregnancy and deliveries, the WHO with the UNFPA published in 2011 guidelines on preventing early pregnancies and reducing poor reproductive outcomes which recommends the need for increasing use of skilled antenatal, childbirth and postnatal care among adolescents (WHO, 2014). Furthermore, the Ghana Statistical Service (GSS) (2015) is also of the view that antenatal care (ANC) sought from a skilled provider is important to monitor pregnancy and reduce morbidity and mortality risks for the mother and child during pregnancy, at delivery, and during the postnatal period (within 42 days after delivery).

Antenatal care provides an opportunity to empower pregnant adolescents to recognise and respond to the signs and symptoms of obstetric complications. Adolescent pregnancy is a high-risk situation because of these mothers' physical and psychological immaturity for reproduction (Reynolds et al., 2004). Furthermore, antenatal Care is more beneficial in



preventing adverse outcomes when it is sought early in the pregnancy and is continued through to delivery. Under normal circumstances, the WHO recommends that a woman without complications have at least four antenatal care visits, the first of which should take place during the first trimester (GSS, 2009). In addition, pregnant adolescents are less likely than older women to receive good ANC and skilled medical care at delivery and to be able to provide adequate care for an infant (WHO, 2006).

Traditional birth attendants (TBAs) provide the majority of primary maternity care in many developing countries, and may function within specific communities in developed countries. TBAs are found widely in low and middle-income countries. In Ghana, TBAs have been in existence for a very long time, helping in delivery system especially in areas where there are no health centers or midwives. Currently, there are various divergent views on the significance of TBAs to the reduction of maternal deaths but the fact still remains that they are in existence and some pregnant women are patronizing their services especially in hard-to-reach areas either because of bad nature of roads or island communities (Socioserve Ghana, 2012). Unfortunately, conflict or poor communication among formal health care providers, traditional birth attendants (TBA) and other community health workers (CHWs) may be the cause of low utilisation of ANC services in certain communities (WHO, 2006).

Various social factors such as culture, low literacy level, inadequate reproductive health knowledge and inadequate ANC attendance affect pregnant adolescents' health-seeking behaviours, which usually increases the chances of pregnancy-related complications and poor pregnancy outcomes (Matua, 2004; Singh & Khare, 2001; Ziyani et al., 2004, as cited in Banda, 2013). The vulnerability of these pregnant adolescents to morbidity and mortality is increased if they delay initiating ANC or if they do not attend ANC at all. However, studies in developing countries have also shown that the use of health-care services is related to the





availability, quality and cost of [services](http://www.udsspace.uds.edu.gh), as well as to the social structure, health beliefs and personal characteristics of the users (Awusi et al., 2009). In addition, family and community involvement is crucial for healthy home behaviours during pregnancy and has been shown to be a major determinant of use of ANC services. Establishing links between the community and the facility can increase utilisation of services, including ANC, and impact maternal and neonatal mortality as well as stillbirths (WHO, 2006).

## 1.2 Problem Statement

In Africa, 80% of women in the richest quintile have access to three or more ANC visits, while only 48% of the poorest women have the same level of access. A similar disparity exists between urban and rural women (WHO, 2006). Also, across sub-Saharan Africa there is wide variation in antenatal care (ANC) attendance, although 71 % of pregnant women attend formal ANC at least once, only 44 % attend ANC four or more (Waiswa et al., 2008 as cited in Christopher et al., 2013).

Subsequently, the Ghana Statistical Service (2015) also revealed that among women age 15-49 years who had a live birth in the five years, about nine in ten women (87%) had four or more ANC visits.

However, findings reported in the Yendi municipal's 2013 annual report of the health directorate revealed that 49.5% of women in the reproductive age (15-49) had four or more antenatal visits as recommended by the WHO, as against 68.2% the previous year. These figures as per the national data are not encouraging. It is therefore against this background that the study is deemed necessary.



### **1.3 Objectives of the study**

#### **1.3.1 Main objective**

The study generally sought to assess the determinants of antenatal care services utilisation among adolescent mothers in the Yendi municipality.

#### **1.3.2 Specific objectives**

1. To investigate the factors that determine the utilisation of ANC among adolescent mothers in the Yendi Municipality.
2. To assess the knowledge level of adolescent mothers on ANC services
3. To examine the services that are provided by nurses and midwives at ANC Clinic
4. Establish whether or not there is association between the determinants and the utilisation of ANC services among adolescent mothers in the Yendi municipality.

#### **1.4 Relevance of the Study**

Effective utilisation of ANC services by adolescent mothers through early ANC initiation, attending ANC at least four times and ensuring that a pregnant adolescent mother delivers at a health facility is crucial to enhancing maternal and foetal health during pregnancy and reducing mortality and morbidity statistics.

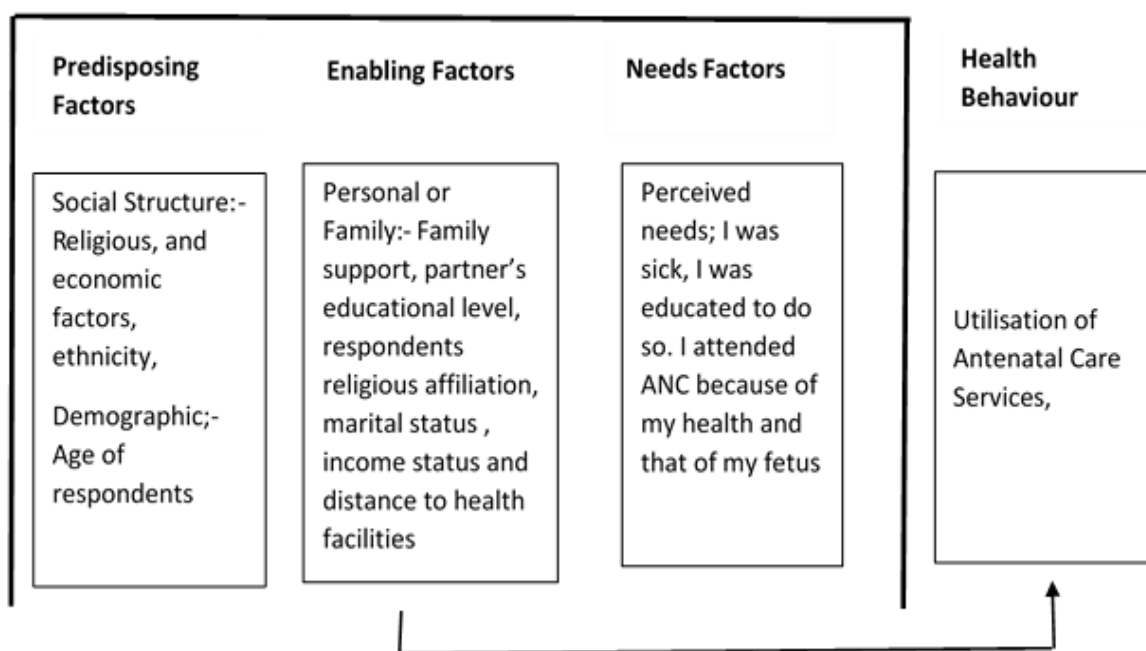
#### **1.5 Conceptual Framework**

The theoretical framework for this study is adopted from the Andersen's behavioural model. The model examines health factors that determine health care utilisation. It indicated that health care utilisation depends on several factors. In adopting this model in this current study, it limits to the factors that determines ANC utilisation in the Yendi municipality in the northern region of Ghana. The goal of this framework is to develop a behavioral model that



provides measures of access to medical care. The framework was first developed in the 1960s and has since gone through four phases. Developed in the 1990s, the framework below represents the fourth phase (Lix et al, 2005).

Figure 1.1 Andersen Behavioural Model



Source: Adopted from Andersen. 2005

The model suggests an explanatory process or causal ordering where the predisposing factors might be exogenous (especially the demographic or social structure), some enabling resources are necessary but not sufficient conditions for use, and some need must be defined for use to actually take place. Predisposing characteristics include all factors that influence utilisation in an indirect way. They describe the “propensity” of individuals to use health care services. Predisposing characteristics can be categorised into demographic variables, social structure, and health beliefs, as well as factors like genetic disposition or psychological factors. Demographic variables such as age and sex represent “biological imperatives”





suggesting the likelihood that people will need health services ([www.udsspace.udsa.edu.gh](http://www.udsspace.udsa.edu.gh) (Hulka and Wheat, 1985). Even though age and sex can hardly be separated from physical circumstances, which influence utilisation, it is also confirmed that age and sex can influence utilisation in various ways related to social dimensions (Thode et al., 2004).

1. Predisposing Factors: The socio-cultural characteristics of individuals that exist prior to their illness.
  - Social Structure: Education, occupation, ethnicity, social networks, social interactions, and culture
  - Health Beliefs: Attitudes, values, and knowledge that people have concerning and towards the health care system
  - Demographic: Age and Gender
2. Enabling Factors: The logistical aspects of obtaining care.
  - Personal/Family: The means and know how to access health services, income, health insurance, a regular source of care, travel, extent and quality of social relationships
  - Community: Available health personnel and facilities, and waiting time
  - Possible additions: Genetic factors and psychological characteristics
3. Need Factors: The most immediate cause of health service use, from functional and health problems that generate the need for health care services. "Perceived need, will better help to understand care-seeking and adherence to a medical regimen, while evaluated need will be more closely related to the kind and amount of treatment that will be provided after a patient has presented to a medical care provider." (Andersen, 1995)
  - Perceived: "How people view their own general health and functional state, as well as how they experience symptoms of illness, pain, and worries about

their health and whether or not they judge their problems to be of sufficient importance and magnitude to seek professional help." (Andersen, 1995)

- Evaluated: "Represents professional judgment about people's health status and their need for medical care." (Andersen, 1995)

## 1.6 Structure of Thesis

The dissertation is organized into six chapters.

Chapter 1 discussed the introduction and background to the study, the statement of the problem, the research questions guiding the study and the objectives. The significance of undertaking the study, key concepts and the theoretical framework (Andersen's behavioural model) guiding the study were also discussed.

Chapter 2 focuses on the review related literature on the topic and assess the determinants for the utilisation of ANC services among adolescent mothers within the context of the three major components of the Andersen's behavioural model.

Chapter 3 was devoted to the methodology that was employed in the study. It includes; the research Study Design, Sample Size and Characteristics, Sampling Technique, Research Variables, Data Collection and Study Instrument, Quality Control, Research Ethical considerations and data analysis techniques will also be explained.

Chapter 4 outline the analysis and presentation of research results using tables and graphs in different categorizations, demographic characteristics, knowledge on ANC, utilisation of ANC among adolescent mothers, and selected determinants for the utilization of ANC services.

Chapter 5 discusses the research results obtained in chapter 4 and interpretation/implication of the results

Finally chapter 6 was devoted to the conclusions and recommendations for policy implementation and service improvement in the study area and beyond.



## LITERATURE REVIEW

### 2.1 Introduction:

This chapter is devoted to the review of relevance literature on the topic under investigation. The review will inform the gap in knowledge so as to enhance the quality of work. In doing this literature was review in line with the stated objectives of the study.

### 2.3 Adolescent

WHO identifies adolescence as the period in human growth and development that occurs after childhood and before adulthood, from ages 10 to 19. It represents one of the critical transitions in the life span and is characterized by a tremendous pace in growth and change that is second only to that of infancy (WHO 2014).

According to the Ghana Adolescent Reproductive Health Policy, GARHP (2000), the adolescent stage is defined as the second decade of life; that is the 10-19 years of age. Demographically, a young person is a person aged 15-24 years while socially; adolescence is the period between childhood and adulthood.

### 2.4 Adolescent mother

The term “adolescent mother” refers only to women who have had the experience of childbirth in their teens (age 15– 19 years) during the time of the study.

### 2.5 Traditional Birth Attendant (TBA)

A Traditional Birth Attendant (TBA), also known as a traditional midwife, community midwife or lay midwife, is a pregnancy and childbirth care provider (Socioserve Ghana, 2012).



## 2.6 Safe delivery

Delivery conducted either in a medical institution or home delivery assisted by a doctor/nurse/midwife/auxiliary nurse (WHO, 2006).

## 2.7 Concept of antenatal care

Antenatal care refers to the regular medical and nursing care recommended for women during pregnancy. Furthermore, it is a type of preventive care with the goal of providing regular checkups that allow doctors or midwives to prevent, detect as well as treat potential health problems that may arise in a pregnant woman, (WHO, 2005). ANC offers a woman advice and information about appropriate place of delivery, depending on the woman's condition and status. It also offers opportunity to inform women about the danger signs and symptoms, which require prompt attention from a health care provider. Furthermore, ANC may assist in abating the severity of pregnancy related complications through monitoring and prompt treatment of conditions aggravated during pregnancy, such as pregnancy induced hypertension, malaria, and anaemia which put at risk both the life of the mother and unborn baby (Bloom et al., 1999; Bhatia and Cleland, 1995).

## 2.8 Models/Approaches to Antenatal Care

ANC has long been considered a basic component of any reproductive health care programme. Different models of antenatal care have been put into practice all over the world. These models are the result of factors such as socio-cultural, historical, traditional nature as well as economy of the particular country. Moreover, human and financial resources of the specific health system substantially play a part in building the model (Shah and Say, 2007). Most developed countries use traditional model of prenatal care, which is based on larger number of visits, approximately 7-10 visits. They include starting antenatal as early as possible, monthly visits up to 28 weeks, followed by weekly up to 36 weeks until





delivery, (Say and Raine, 2007). [www.udsspace.uds.edu.gh](http://www.udsspace.uds.edu.gh) Pregnant women in these high-income countries receive adequate prenatal care, which includes frequent tests, and ultra sound evaluation. They also give birth under supervision of medically trained personnel and have prompt access to emergence treatment if complications arise. On the contrary, most low income countries incorporated in their health systems a new model called focused antenatal care (Shah and Say, 2007).

The WHO developed ten principles reflecting effective prenatal care (Chalmers et al., 2001). The principles emphasize that care for normal pregnancy and birth should be comprehensive and simplified whenever possible. Furthermore, care should be based on the use of appropriate technology, without overusing sophisticated or complex technology when simpler procedures may be sufficient. One of the principles reiterates that scientific evidence should be the basis of care and implementation should be decentralized based on an efficient referral system. Multidisciplinary and holistic approaches should be incorporated in caring for pregnant women's biological, intellectual, emotional, social, and cultural needs. The WHO principles also considered the need to make care family centered, culturally appropriate and also aim at women empowerment. The final principle stipulates that care should be based on respect for privacy, dignity and confidentiality of pregnant women, (Chalmers et al. 2001).

The modern approach to antenatal care recommended by WHO emphasizes quality over quantity of visits. The approach, focused antenatal care, recognizes three key realities: First, frequent visits do not necessarily improve pregnancy outcomes, and in developing countries they are often logistically and financially impossible for women to manage and a burden on the healthcare system (Munjanja, Lindmark, and Nyström 1996; Villar and Bergsjö, 2003; Villar et al., 2001). Second, the majority of pregnancies progress without complication, so antenatal care providers must support women with normal pregnancies and help prevent complications. Third, many women who have risk factors never develop complications, while

women without risk factors often do (Kasongo Project Team 1984; Vanneste et al., 2000; Yuster, 1995). When antenatal care is planned using a risk approach, scarce healthcare resources may be devoted to unnecessary care for “high-risk” women who never develop complications, and “low-risk” women may be unprepared to recognize or respond to signs of complications (Family Care International, 1998)

## **2.9 Antenatal Care services provided by health workers**

### **2.9.1 Antenatal Care Coverage**

Singh et al. (2014), in a study Utilization of maternal healthcare among adolescent mothers in urban India: evidence from DLHS-3 revealed that 22.9% of mothers received full antenatal care. In addition, Okutu (2006) in his study access to and utilization of antenatal care services in Uganda also revealed that less than 46.9% of the women less than 20 years in Uganda made a minimum of four antenatal visits almost relatively proportionate to those who made between 1-3 visits (47.3%). Only about 3.2% were non-users antenatal care services. However a study conducted by Wasunna et al. (2002) on the topic; low birth weight babies: socio-demographic and obstetric characteristics of adolescent mothers at Kenyatta National hospital, Nairobi, indicated that adequate antenatal attendance was low (14% among the adolescent; 8.2% among the older mothers ( $p=0.004$ ) more adolescent mothers (about 98.6%) compared to the older mothers (91.9%) had inadequate or intermediate antenatal clinic attendance. In addition, Rai et al. (2012), in the study Utilisation of Maternal Health Care Services among Married Adolescent Women: Insights from the Nigeria Demographic and Health Survey, 2008 shows that out of 2,434 eligible women who gave birth in the 15 to 19 year-old age group, 35.1% had at least four ANC visits. A study conducted by Daniels (2013); Factors Influencing the Utilisation of Maternal Health Services: The Perspective of Rural Women in Ghana, revealed that majority (97%) of the





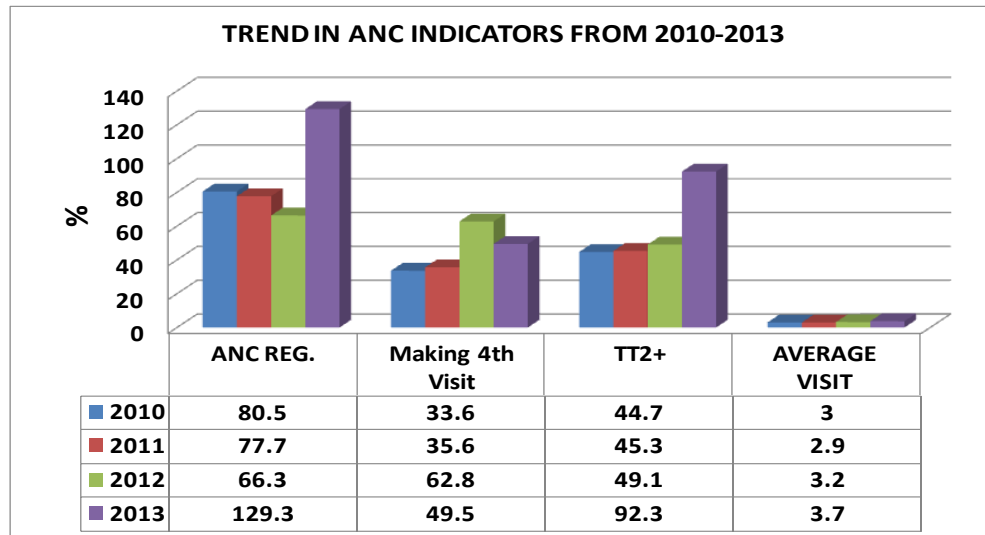
women underwent antenatal care during pregnancy. In a related study by Awusi et al. (2009), (67%) of the respondents age less than 20 utilised antenatal care services in the community, while 87(43%) did not. The same study also revealed that majority about 47.9% made visits to a health facility for antenatal treatment during the first trimester (1-3 months) of the pregnancy. With only a few women who refused antenatal treatment did so because of financial constraints (25%), absence of sickness (50%), or for no particular reason (25%).

According to the GSS (2009), over nine in ten mothers (95%) age 15 - 49 and 97.3% of mothers < 20 receive antenatal care from a health professional (doctor, nurse, midwife, or community health officer). Almost no mothers receive antenatal care from a traditional midwife, and 4 of mothers do not receive any antenatal care. Furthermore, (77.7%) of women had visited the hospital at least four times during their period of pregnancy Daniels (2013).

According to the (2013) annual health report, the Yendi municipal recorded 6776 registrants giving a coverage of 129.8% as against 6741 (66.3%) in 2012 and 7476 (77.7%) in 2011 as shown in fig 2.1. These achievements according to the report can be attributed to the Zoning of communities for Community Health Nurses (CHNs) and the activation of outreach antenatal care. The report however revealed a decrease of 49.5% in the proportion of women making fourth visit in the year under review as against 62.8% recorded over that of 2012 which had an increase in coverage.



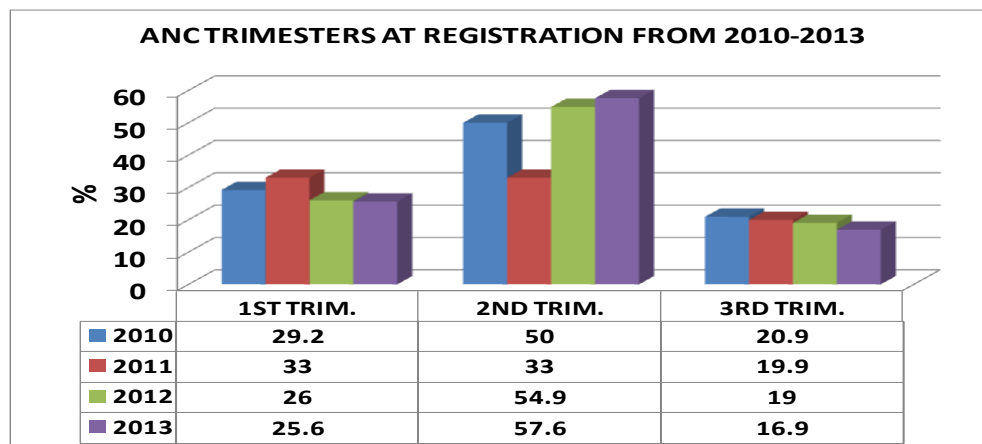
**Fig 2.1** Trend in ANC indicators from 2010-2013 in the Yendi municipality



Source: Annual report 2013

It is observed that the percentage of women reporting during the first trimester also decreased from 26% in 2012 to 25.6% in 2013. Again, about 57.6% of all the registrants reported in the second trimester of their pregnancies.

**Fig 2.2** Trend in ANC trimester at registration from 2010-2013 in the Yendi municipality



Source: Annual report 2013



### 2.9.2 Urine and blood test

The findings from the GSS (2009) indicate that, while at the national level access to urine and blood testing for pregnant women is 90%, only six in ten pregnant women in the Northern region have access to these components of care, and in the Upper West region, about two in three pregnant women have access to urine testing and three in four have access to blood testing.

### 2.9.3 Safe delivery

Singh et al. (2014), in a study Utilisation of maternal healthcare among adolescent mothers in urban India: evidence from DLHS-3 revealed that 70.5% of adolescent mothers utilized safe delivery care. Also Rai et al. (2012), in the study Utilisation of Maternal Health Care Services among Married Adolescent Women: Insights from the Nigeria Demographic and Health Survey (2008) shows that out of 2,434 eligible women who gave birth in the 15 to 19 year-old age group, 28.1%, had safe delivery, A study conducted by Daniels (2013); Factors Influencing the Utilisation of Maternal Health Services: The Perspective of Rural Women in Ghana, revealed that women (39.9%) delivered in a health facility while about 60% delivered at home. With regards to the women who delivered at home, only two got the assistance of a midwife or nurse; a great number of them were assisted by a neighbour (43.8%) and a Traditional birth attendant (40.4%). Some (14.6%) delivered all by themselves.

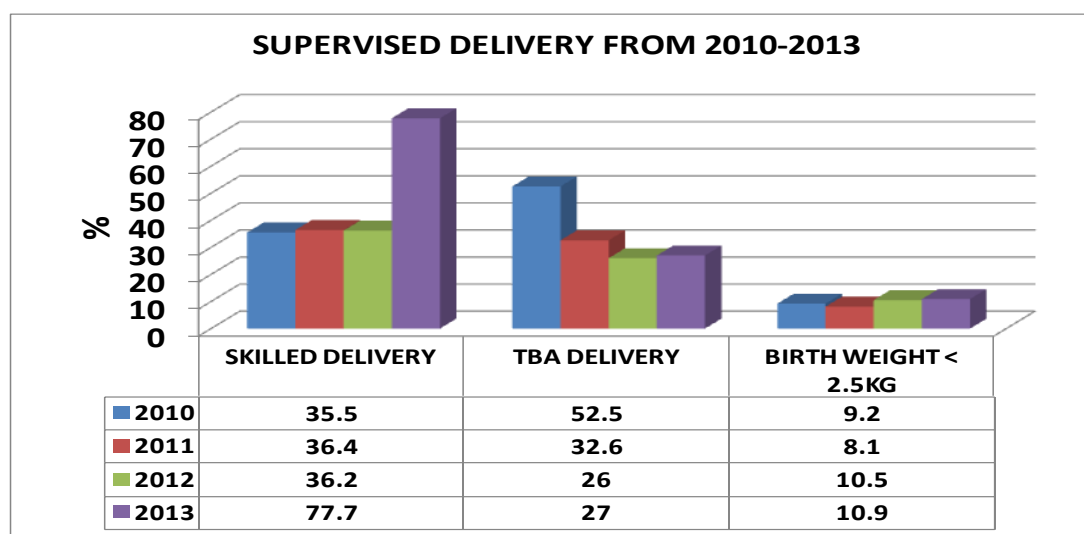
In Ghana, ninety-one percent of births to urban mothers were assisted by a skilled provider and 91% were delivered in a health facility, as compared with 59% and 58%, respectively, of births to rural women. The proportions of women who were assisted by a skilled provider and delivered in a health facility were highest in the Greater Accra region (92% and 93%, respectively) and lowest in the Northern region (36% and 35%, respectively). This figures included 71.3% of mother's with birth age <20 delivered in a health facility (GSS, 2015)



The municipal recorded 3707 (77.7%) skilled deliveries in 2013 as compared to 3355 (36.2%) in 2012 and 3122 (36.4%) 2011. However, TBAs delivery has generally been on the decline as shown in the figure below while skilled delivery rises (Annual report, 2013).

Delivery assistance by a health professional shows little association with women’s age, but it is related to how many children a woman has: the more children a woman has the less likely is she to have a health professional attending to her delivery. A woman giving birth in an urban area is twice more likely to be delivered by a health professional as compared to woman giving birth in a rural area. Professional assistance at birth also tends to increase with mother’s level of education and wealth quintile (GSS, 2009).

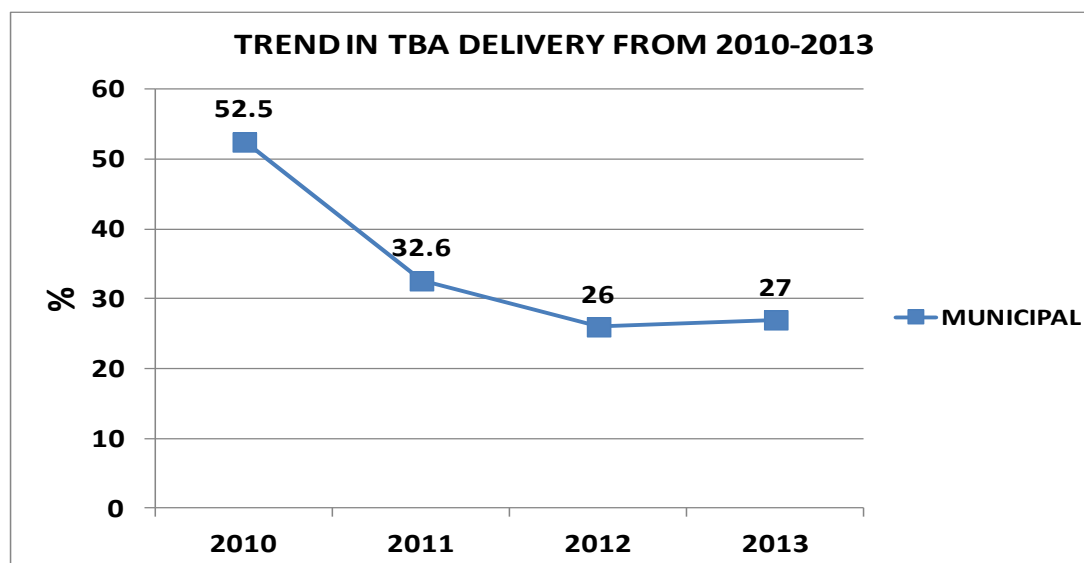
**Fig. 2.3** Trend in supervised delivery from 2010-2013 in the Yendi municipality



Source: Annual report 2013



**Fig. 2.4** Trend in TBA delivery from 2010-2013 in the Yendi municipality



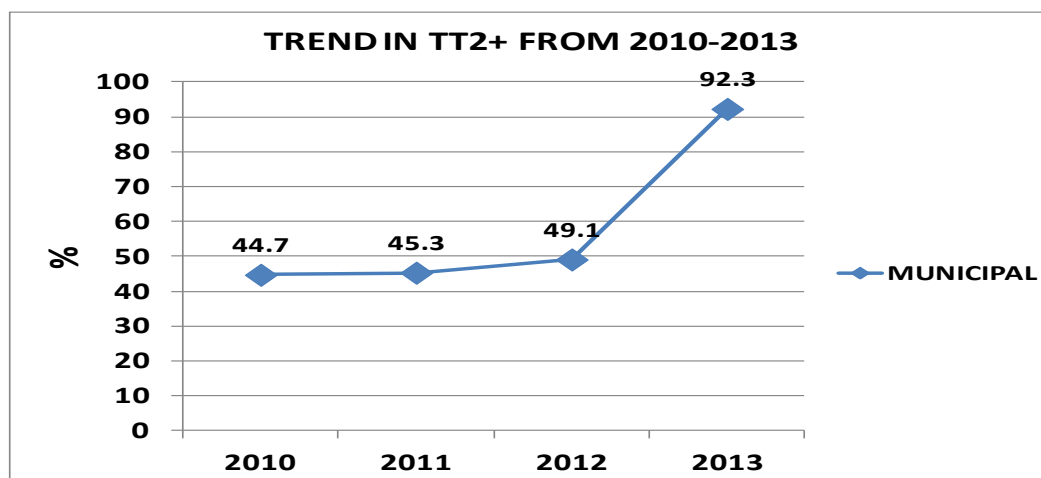
Source: Annual report 2013

#### 2.9.4 Tetanus toxoid Injection

According to the GSS (2015), more than half of adolescent mothers (66.0%) in Ghana receive two or more tetanus injections during pregnancy to protect against neonatal tetanus. However, the (2013) annual report of the Yendi municipality revealed a steady increase in the coverage of TT2 plus from 49.1% in 2012 to 92.3% in the year of review. This according to the report was due to the fact that the region has carried out a number of TT SIAs that should raise the status of the women in the reproductive age, but it has been observed that, midwives were still counting the injections being given to the women instead of their status (number of times the woman has had in her life irrespective where she got the doses from).



**Fig. 2.5** Trend in TT2+ from 2010-2013 in the Yendi municipality



Source: Annual report 2013

### 2.9.5 IPT Coverage

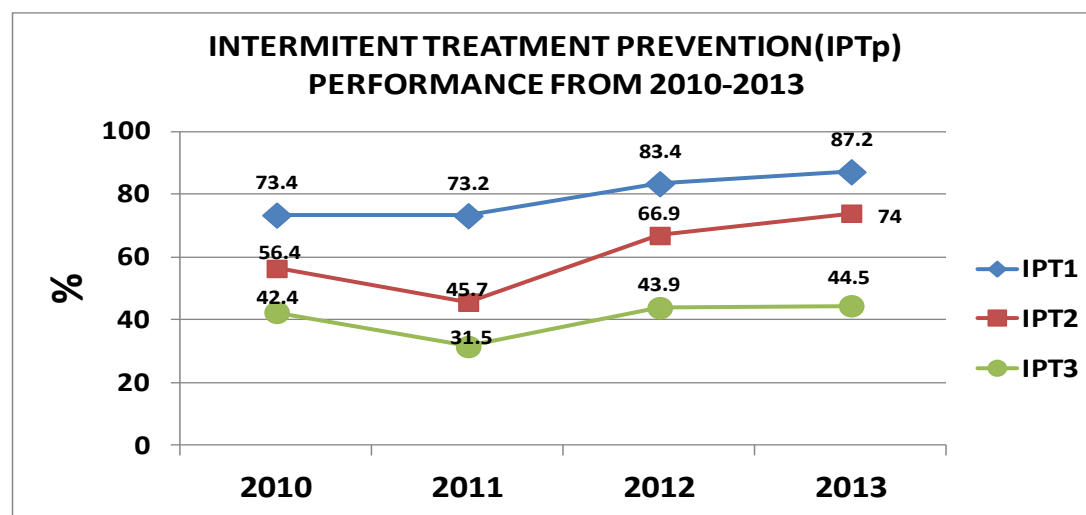
According to the GSS (2009), nearly two-thirds (65%) of women 15-49 with a live birth in the two years preceding the survey took some kind of anti-malarial medicine for prevention of malaria during the last pregnancy. Over half (58%) of the women said they took SP/Fansidar the recommended drug for prevention of malaria during pregnancy in Ghana at least once during the pregnancy. Less than half (46%) of pregnant women said they took SP twice during the pregnancy.

Women in urban areas (74%) are more likely to take anti-malarial drugs during pregnancy than rural women (60%). Northern regions (45%) have the lowest proportions. The use of anti-malarial drugs during pregnancy increases with increasing levels of education and increasing wealth quintile.



There has been a gradual increase in IPT performance in the municipality. The municipality recorded an overall coverage of 87.2% in 2013 as against 83.4% in the previous year as shown in the figure below (Annual report, 2013).

**Fig. 2.6** Trend in IPT performance from 2010-2013 in the Yendi municipality



Source: Annual report 2013

## 2.10 Determinants for the utilization of ANC services

### 2.10.1 Demographic, socio-cultural and socio-economic factors

ANC coverage is lower among women who need it the most: those who are poor, less educated, and living in rural areas. An important barrier is the inability to pay for ANC or the treatment prescribed in ANC, where user fees are in place and safety nets for the poor do not exist (WHO, 2006). Furthermore, its utilisation can be influenced by demographic and socio-cultural factors. Maternal age has been shown to both negatively and positively influence utilization of ANC in general. Several demographic and socio-economic factors have been found to be associated with the use of MHS. Education has been found to be associated with the use of MHS (Elo, 1992; Chakraborty et al., 2003). Maternal age has been identified as a factor (Elo, 1992; Sharma et al., 2007; Magadi et al., 2007). Several studies



have found a strong association between birth order and use of health care services (Wong et al., 1987; Elo, 1992). Sharma et al. (2007) and Magadi et al. (2000) lay emphasis on the employment status of women. The educational level of husbands has been found to be associated with the use of MHS (Shariff and Singh, 2002). Also Rai et al. (2012), in the study Utilisation of Maternal Health Care Services among Married Adolescent Women: Insights from the Nigeria Demographic and Health Survey, 2008 shows that there is strong association between maternal healthcare utilisation and the level of education of women and their husbands ( $p=0.000$ ). Paul and Rumsey (2002) identify place of residence to have an influence on the use of MHS. Rahaman et al. (1982) found that geographical distance was one of the most important determinants of health care service utilisation in rural areas.

A study conducted in Turkey demonstrated that teenage mothers were statistically less likely to use FANC services (Ciceklioglu et al., 2005). However, in other studies teenage mothers were more likely to start utilising ANC services earlier than their older counter parts (Bhatia and Cleland, 1995). Other than age, maternal education has also been shown to influence utilization of FANC.

Singh et al. (2014), indicated that woman's education, husband's education, religion, caste, economic status, parity, exposure to antenatal care massages and region of residence turned out to be significant determinants of the utilization of antenatal care services among urban adolescent mothers. Also, a study conducted in Cape Coast indicated that maternal age, marital status, education and living arrangements are all significantly associated with the likelihood of initiating an early prenatal visit (Yaboah, 2012). The educational level and occupation of partner had a significant association between delivery in a health facility and assistance at delivery by trained medical personnel ( $p < 0.05$ ) (Daniels, 2013).

Sijuwade (2015), in his study: Social Support and Access To Prenatal Health Services Among Pregnant Teenagers in Lagos, revealed that that maternal age, marital status,





education and living arrangements are all significantly associated with the likelihood of initiating an early prenatal visit. The percent use of early prenatal care is significantly lower among teenage mothers and mothers in consensual union as well as those with no education.

Matsumura and Gubhaju (2001) in study conducted in Nepal demonstrated that women with higher education were more likely to utilize FANC than those with lower education. Pallikadavath et al. (2004) found similar results, in their study they had demonstrated that both maternal and paternal education positively influence utilization of FANC. In addition, education of the mother is positively related to tetanus toxoid coverage in Ghana; 83% of births to women with secondary or higher education are protected against neonatal tetanus, compared with 64% of births to women with no education. Similarly, use of delivery facilities rises with level of mother's education from 35% of births among women with no education to 91% among women with at least a secondary education (GSS, 2009).

Studies on social factors influencing utilisation of FANC demonstrates that, desirability of pregnancy, is a statistically significant determinant of FANC use. Pregnant women with unplanned pregnancies were found to make less FANC visits (Magadi et al. 2000, Eric, 2003, Paredes et al., 2005). Place of residence has also been shown to influence FANC utilisation, women in urban areas were more likely to use FANC more than rural women in Ecuador (Paredes et al. 2005) and Nepal (Sharma, 2004). On the other hand, a study by Navaneetham and Dharmalingam (2002) in India found that women in urban areas of Karnataka were less likely to receive ANC than those living in rural areas. Distance to the health facility is inversely associated with ANC utilisation (Glei et al. 2003). A study conducted by Magadi et al. (2000) in Kenya demonstrated that an increase in distance to the nearest healthcare facilities was associated with fewer antenatal visits. Moreover, uncomfortable transport, poor road conditions and difficulties in crossing big rivers have also been shown to be barriers to





utilisation of FANC in studies conducted in [www.udsspace.udsa.edu.gh](http://www.udsspace.udsa.edu.gh) Zimbabwe (Mathole et al. 2004) and in Pakistan (Mumtaz and Salway, 2005).

Some cultural beliefs have also been found to influence utilisation of ANC. For instance, a lack of awareness exists about the extent and impact of traditional household and community beliefs and customs, such as suboptimal maternal nutrition and infant feeding practices. In one tribe in Nigeria, pregnant women cannot say they are pregnant, and if they feel unwell, they have to say that they have “swallowed a cockroach” (WHO, 2006). In a study conducted by Simkhada et al. (2010) in Nepal found that mother in laws negatively influenced utilisation of FANC by their daughter in-laws. In this study Simkhada et al. (2010) found that mother in laws tend to persuade their daughter in laws to fulfill household duties instead of visiting ANC care. Lee et al. (2009) in a study conducted in Taiwan also found that mother in laws and spouse, heavily influence decision about where and whether to go for antenatal care. Engaging men as partners is a critical component of FANC, but their involvement has been low (Byamugisha et al., 2011) and there’s hence a need to encourage male participation to promote the uptake of FANC by pregnant women. The influence of male involvement on utilization of FANC would then be established from qualitative studies which may be designed to investigate the direction of the influence (Mullick et al. 2005). Furthermore, in Zimbabwe Mathole et al. (2004), found that the early period of pregnancy was the most vulnerable to Witchcraft associated fears, which was the reason for pregnant women not attending FANC in first trimester. A study conducted in Malawi also demonstrated that cultural beliefs negatively influence utilisation on FANC (Chiwaula, 2011 as cited in Banda, 2013).

Okutu (2006), also concluded that rural-urban disparity in access to antenatal care is clearly pronounced in Uganda. Sixty two percent of urban women compared to 46.1% for their rural counterparts made a minimum of four visits and so is the non-use indicating 1.8% of urban

women compared to 4.9% of the rural women did not make any visit during pregnancy for their most recent births. This suggests that rural women are more disadvantaged than their urban counterparts when accessing health care. Also, the most outstanding problem in accessing health care with slightly more than two-thirds (65.3%) of the women reported so and followed by distance to health facility with more than half (54.5%) and then having to take transport (48.9%). Tawiah's, (2011) study revealed that in Ghana rural women were 7.7 times less likely than their urban counterparts to make antenatal care visits and that the rural-urban disparities were more pronounced in Ghana than in Nigeria, Kenya, Zambia and Uganda further suggesting that rural women are more disadvantaged than their urban counterparts.

In Ghana, a child born in an urban area is twice more likely to have been delivered at a health facility than a child living in a rural area. One in four children in the Northern region is delivered at a health facility, compared with four in five children in the Greater Accra region. Also, there is little variation in tetanus toxoid coverage by age at birth and birth order; however, there are differences by residence. For example, 76% of births in urban areas are protected against tetanus, compared with 70% of births in rural areas (GSS, 2009).

Rai et al. (2012), in the study Utilisation of Maternal Health Care Services among Married Adolescent Women: Insights from the Nigeria Demographic and Health Survey, 2008 shows that there is strong association between maternal healthcare utilization and income levels of respondents ( $p=0.000$ ). Similarly, women living in wealthier households are more likely to have received two or more tetanus toxoid injections during their last pregnancy and their births are more likely to be protected against tetanus than women in the lowest wealth quintiles. The same pattern is seen by wealth status; births in health facilities increase from 24% among women in the lowest wealth quintile to 93% among those in the highest wealth quintile (GSS, 2009). A study conducted by Anita, 2013; Factors Influencing the Utilisation



of Maternal Health Services: The Perspective of Rural Women in Ghana, revealed that Age, marital status, occupation of respondent and family size seem to play a significant role in the use of both ANC within the first trimester and four (4) or more ANC visits ( $p < 0.01$ ).

### **2.10.2 Knowledge on Antenatal Care services**

A study conducted by Banda (2013); barriers to utilisation of focused antenatal care among pregnant women in Ntchisi district in Malawi, showed almost all participating mothers (96%) had any knowledge of FANC with the major sources of information on knowledge of FANC cited were the radio (96%), nurses (85%) relatives (82%) and traditional birth attendants (62%). Also, Rai et al. (2012), in the study Utilization of Maternal Health Care Services among Married Adolescent Women: Insights from the Nigeria Demographic and Health Survey, 2008 shows that 62.3%,  $n = 1424$  eligible women who gave birth in the 15- to 19-year-old age group, 35.1% had a knowledge on ANC any media exposure.

Knowledge on ANC is critical in determining pregnant women's use of antenatal services (Simkhada et al., 2007). Studies have shown that exposure to mass media particularly television and radio significantly predicts utilisation of FANC. Pallikadavath et al. (2004) and Sharma (2004) in studies done in India and Nepal, respectively, found that pregnant women who were watching television every week were more likely to use FANC. Moreover, studies have shown that adequate knowledge of ANC has a positive and statistically significant effect on FANC use (Paredes et al. 2005, Nisar and White, 2003). In the study conducted by Ndyomugenyi et al. (1998) in rural area of Uganda indicated that pregnant women with inadequate knowledge of Maternal and child health were likely not to utilise ANC. A similar study was conducted in Nigeria by Amosu et al. (2011), the findings indicated that health care provider and pregnant women ignorance about FANC was one of the factors affecting utilisation of FANC.



### 2.10.3 Health care workers perspective

The attitudes and behaviours of health care providers in ANC clinics compound this problem by failing to respect the privacy, confidentiality, and traditional beliefs of the women. This may negatively influence the use of ANC services (WHO, 2006). Mathole et al. (2004) explains that poor attitude of health care providers towards pregnant women contributes to low utilisation of FANC services in Zimbabwe. He further contends that many of these mothers prefer to deliver with unskilled birth attendants in the villages. Conrad et al. (2011) substantiate this finding in a multicentre study conducted in Tanzania, Uganda and Burkina Faso where it was noted that health care workers did not comply with the procedures stipulated in FANC guidelines and this had a tremendous effect on the utilisation of FANC. Conversely, Yengo (2007) refuted the claim that health workers (nurses) perception affects implementation and utilization of FANC in Tanzania. She argued that health care workers perceive FANC as beneficial both to the pregnant mother and the unborn, but rather shortage of human and material resources impede successful implementation of FANC. WHO (2002) report on the opportunities for African newborns also revealed that health care providers' attitudes and behaviours in ANC clinics compound this problem by failing to respect the privacy, confidentiality, and traditional beliefs of the women.

As reported in Atuyambe et al. (2005), among adolescents on the experiences that often medical staffs have poor receptions with such intimidating mentality that would deter one from returning for health care service at a health facilities or receive assistance from skilled attendants but would rather prefer TBAs.



## 2.11. Conclusion

Chapter 2 discussed ANC, guided by the research objectives and the Andersen's behavioural model, attempting to explain the determinants of antenatal care utilisation among adolescent mothers. Determinants likely to influence ANC utilisation from related literature sources were identified, namely:

- Predisposing factors: such as religion, ethnicity, economic factors, age, marital status, parity and educational level of the individual pregnant adolescents
- Enabling factors: such as family support, partner's educational level, religious affiliation, economic status, distance to health facility, marital status and variables including cultural beliefs.
- Perceived needs factors: knowledge about pregnancy, nutrition and attitude of health workers.

The next chapter discusses the research methodology adopted to conduct this study in attempting to identify determinants that could influence antenatal care utilisation among adolescent mothers in the Yendi Municipality.



## METHODOLOGY

### 3.1 Study Area

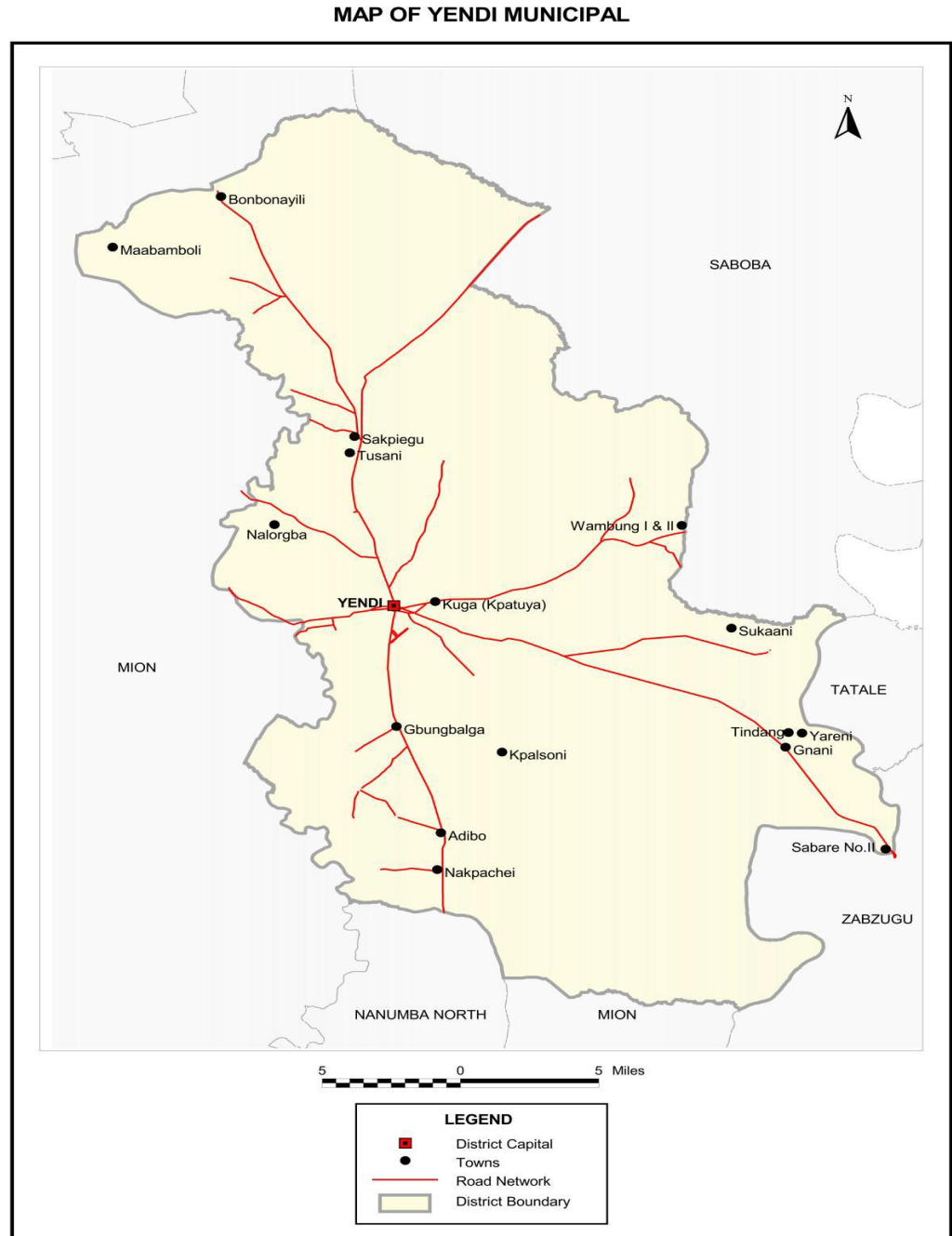
#### 3.1.1. Geography of the Area

The Municipality is located in the eastern corridor of the Northern Region of the Republic of Ghana between Latitude  $9^{\circ} - 35^{\circ}$  North and  $0^{\circ} - 30^{\circ}$  West and  $0^{\circ} - 15^{\circ}$  East. The Greenwich Meridian thus passes through a number of settlements – Yendi, Bago, Laatam, Lumpua, Gbetobu, Gbungbaliga and Nakpachei.

The Municipality shares boundaries with 8 districts:- to the East – Saboba / Chereponi and Zabzugu / Tatale, to the South – Nanumba North and East Gonja, to the West – Mion District and to the North – Gushegu and Karaga



Fig. 3.1 Map of Yendi Municipal



Source: 2010 population and housing census report GSS





### 3.1.2. Demography of the Area

The population of the Municipality is about 173,973 projected from 2010 population and Housing Census and is varied in terms of ethnicity with the Dagomba constituting the majority. The other ethnic groups include Konkomba, Akan, Ewe, Basare, Chokosi, Hausa and Moshie.

The centrality of the Municipality within the Eastern Corridor puts it in a better position to sap the energies of the remaining districts. This is manifested by the concentration of major developmental projects in the Municipality e.g. Hospital, Telecommunication facilities, Pipe borne water and banking services. The advantages inherent in the centrality of the district notwithstanding, undue pressure are often brought to bear on the facilities mentioned above due to the large catchment area of the district.

### 3.1.3. Distribution of health facilities

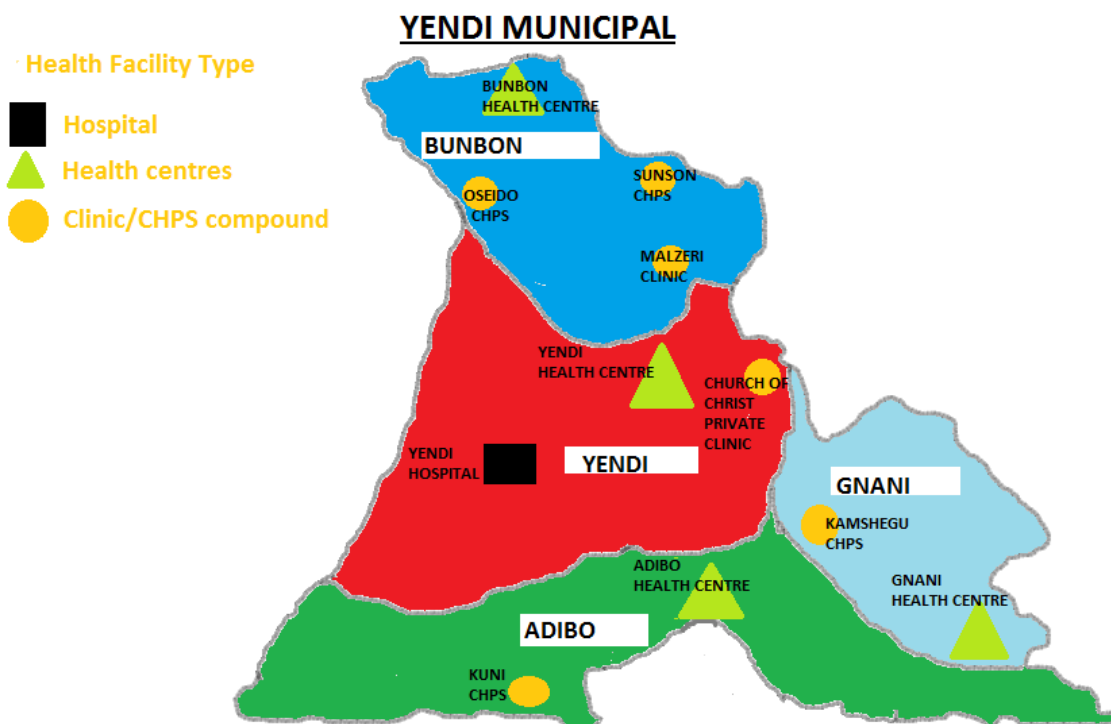
**Table 3.1:** The table below shows the number of health facility and the ownership:

No.	Facility	Location	Water	Electricity	Ownership
1.	Hospital	Yendi	Pipe	Yes	GHS
2.	Health Centre	Adibo	Rain Harvest	Yes	GHS
3.	Health Centre	Bunbon	Pipe	Yes	GHS
4.	Health Centre	Ngani	Rain Harvest	Yes	GHS
5.	Health Centre	Yendi	Pipe	Yes	GHS
6.	Church of Christ Clinic	Yendi	Pipe	Yes	Private
7.	CHPS Compound	Sunson	Rain Harvest	Yes	GHS
8.	CHPS Compound	Kuni	Rain Harvest	No	GHS
9.	CHPS Compound	Oseido	Rain Harvest	No	GHS
10.	Clinic	Malzeri	Rain Harvest	Yes	GHS
11.	CHPS Compound	Kamshegu	Rain Harvest	Yes	GHS

Source: Annual Health Report 2013



**Fig 3.2:** Map of Yendi Municipality showing Sub-municipal and location of Health Facilities.



Source: Annual Health Report 2013

### 3.1.4. Economic status

The Economy of the people is largely subsistence with Agriculture being their main occupation. Over 80% of the people depend on Agriculture for their livelihood.

Other economic activities include weaving, agro-processing (Shea butter extraction), meat processing, fish mongering, wholesale and retail of general goods, transport and many others. These activities are on a medium and small scale.

The potential of the district in Agriculture is enormous. The land is suitable for the cultivation of cereals, tubers and rearing of animals. Animals reared include cattle, sheep, goats, pigs and poultry birds for domestic and commercial purposes.





A good number of the [populace](http://www.udsspace.udsa.edu.gh) is engaged in small scale manufacturing business. They include smock weavers, blacksmiths, bakers, mechanics, Shea butter and groundnut oil extractors.

### **3.2. Research design**

The research design is a complete strategy that provides the plan for the overall structure that the researcher follows, namely the data collected and the data analyses conducted. Decisions on methods to be used should aim at achieving greater control over factors that may interfere with the validity and reliability of the study findings. (Burns & Grove 2005; Brink & Wood 2001; Leedy & Ormrod 2001 as cited in Mlilo-Chaibva 2007).

A cross sectional, non-experimental descriptive study design was adopted in which both qualitative and quantitative data were collected using questionnaires and in-depth interviews. The purpose for employing this approach was to obtain data on different variables at a given point in time so that the variables will be measured, compared and eventually assist in drawing inferences on the research findings.

According to Polit and Beck (2006), quantitative designs can be experimental, quasi experimental or non-experimental and they use descriptive or inferential statistics. They can be cross-sectional in nature or longitudinal over an extended period of time. This study utilised non-experimental and cross-sectional designs because data were collected at specific points in time and there was no experimental manipulation of the subjects. Data were collected from the natural environments, namely questionnaire and in-depth interviews.

Non-experimental designs are often used in nursing studies because some human characteristics are not subject to experimental manipulation because of ethical implications (Polit & Beck 2004 as cited in Mlilo-Chaibva 2007). The non-experimental descriptive

[www.udsspace.udsa.edu.gh](http://www.udsspace.udsa.edu.gh)

design was used in the study in order to observe, describe and document factors influencing adolescent mothers' utilisation of ANC services.

Descriptive designs are used to obtain information about the characteristics of phenomena within a particular field of study. Descriptive designs can be used to develop a theory, identify problems in current practice, justify current practice, make judgments and determine what others are doing in similar situations (Burns & Grove 2005 as cited in Mlilo-Chaibva 2007). Descriptive designs can be used in both qualitative and quantitative approaches. Both quantitative and qualitative descriptive research design were used in the study because it provides detailed information about the variables under study, namely adolescent mothers and ANC utilisation. According to Burns and Grove (2005) and Polit and Beck (2004) as cited in Mlilo-Chaibva (2007), the purpose of the descriptive design is to provide a true picture of situations as they naturally happen by observing, describing and documenting. The descriptive design was expected to yield a true picture of ANC services in Yendi, identify challenges influencing the adolescent mothers' utilisation of ANC services in Yendi and make recommendations on ANC services that would meet the pregnant adolescents' needs.

### **3.3. Source of data**

Primary data for this research was sourced with the use of the following;

Questionnaires; a closed-ended well-structured questionnaire was design purposely for this study. The main instrument of data collection was the questionnaire which sought to collect information on the following sections: socio-demographic and socio-economic background of respondents, respondents' knowledge of ANC, ANC services provided by nurses and midwives and determinants of ANC service utilisation. The categorization of the questionnaire was done to ensure that the information gathered from the respondents meet the research objectives. The survey instrument was pre-tested to ascertain whether the concepts





and language (Dagbani) [www.udsspace.udsu.edu.gh](http://www.udsspace.udsu.edu.gh) used were understood by respondents. The exercise also offered opportunity to find out about the flow and logical sequencing of questions. The pretesting was undertaken at both the Balogu and Guntingli communities. The administration of the instrument was of the canvassing type where respondents were visited at their homes for the interview. A strategy adopted to locate respondents was by probing residents of adjacent homes. At the nearest health center, the midwife through the delivery register extracted the names of all adolescent mothers and their residential address (if any) but communities that lack health facilities the community volunteer aided in the identification process. Guided by the names on the list, inquiries were made in these houses about any adolescent mother who has recently been attending any of the child welfare clinics. Since such information is generally public knowledge in most Ghanaian communities, it was possible to locate some respondents in this manner. By this method, adolescent mothers who had been successfully interviewed in a locality were used, through probing, to help locate other adolescent mothers in their area who were on the list. The identification number on a clinic registration card was cross-checked with that on the list to be certain of the true identity of a respondent who was located in this manner. The strategy proved effective and all 120 respondents sampled for the study were successfully interviewed.

Interview guides; an in-depth interview guide was designed which enables one to conduct in-depth interviews on the additional six adolescent mothers drawn from the various sub municipalities. This was done to obtain in-depth additional information that could not be unearthed by the questionnaire.

Secondary data were collected from published journals and thesis related to the topic under investigation. Apart from this other relevant documents such as Annual Health Reports of the Yendi Municipal Health Directorate and the Ghana Statistical Service 2009 and 2015 were also relied on as secondary source of data.

### **3.4. Population and sampling**

The population of adolescent mothers of the study comprised of all adolescent women who have had the experience of childbirth in their teens (age 15– 19 years) during the time of the study.

For the purpose of this study, a non-probability, purposive sampling technique was adopted. The sample population was drawn from the six (6) sub municipals in line with the Ghana Health Service and the Yendi Municipal Assembly demarcation of the municipality into six sub municipals; Yendi Central, Yendi East, Yendi West, Bombon, Gnani, and Adibo.

The health facilities in the sub municipalities were strategically located to act as catchment areas for adolescent mothers who completed attending antenatal and postnatal health care within the Yendi municipality and its environs. The combined list of the delivery registers from the clinics was used as the sampling guide which was duly followed to identify the respondents. The sampling guide contained information of client identification number, name of mother, age of mother and home address (if any). On the basis of information provided in the sampling guide, the first adolescent mother is contacted and interviewed who then assist in locating the next respondent this is continued until the last respondent is contacted. In all 126 adolescent mothers, 20 each of adolescent mothers were selected for the administration of questionnaires and additional one respondent for in-depth interview.

#### **3.4.1. Study population**

A sample size of 126 respondents were interviewed, using questionnaires and in-depth interviews. The sample size comprises 120 adolescent mothers who were interviewed through the use of questionnaires and additional 6 adolescent mothers through an in-depth interview.



### **3.4.2. Sample size determination and/justification**

The initial proposed sample size at 95% confidence level, margin of error of 0.4, z-value of 1.96 and p-value of 0.2 was 385 adolescent mothers but due to time and resource constrain, the sample size was reduced to 126 respondents.

### **3.4.3. Sampling strategy or procedure**

The non-probability method, purposive sampling was used to collect qualitative data from 120 adolescent mothers. The proposal was to sample twenty (20) adolescent mothers from each of the six (6) sub municipals that participated in the study until a total of 120, (20 x 6 = 120) adolescent mothers had been met. These 120 adolescent mothers were taken through the structured interviews. While an additional six (6) adolescent mothers were sampled of which qualitative data collected from them, one adolescent mothers from each of the six (6) sub municipals that participated in the study until a total of 6, (1 x 6 = 6) adolescent mothers taken through an in-depth interview.

## **3.5. Methods and Tools of data collection**

The tools listed below were used throughout the study for the purpose of data collection.

### **3.5.1 Questionnaires**

A structured interview schedule was used to collect quantitative data from the adolescent mothers aged 15-19 who attended the ANC clinic in their last pregnancy in the six (6) participating sub municipals of the Yendi municipality. Structured interviews were conducted by the researcher and research assistants. The researcher checked every completed structured interview schedule for completeness at the site so that any missing information could still be gathered from the adolescent concerned.





[www.udsspace.uds.edu.gh](http://www.udsspace.uds.edu.gh)

The structured interview uses formal and written questions which are asked orally in face-to-face or telephone interviews (Polit & Beck 2004 as cited in Mlilo-Chaibva 2007). The structured interview is widely used in descriptive quantitative studies (Burns & Grove 2005 as cited in Mlilo-Chaibva 2007). Although the structured interview is time consuming and might be subject to bias, it was used in this study (Burns & Grove 2005 as cited in Mlilo-Chaibva 2007). The structured interview has the advantage of accommodating the semi-literate subjects and those who may find it difficult to understand technical terms (Polit & Beck 2004 as cited in Mlilo-Chaibva 2007). The help of the interviewer is needed, especially when the literacy level of the subjects may be unknown to the researcher, as in this study.

The selection of questions for the interview schedule included factual and non-factual aspects.

According to Brink and Wood (2001) as cited in Mlilo-Chaibva (2007), factual questions focus on knowledge of self, situations or phenomena. In this study socio-demographic information and knowledge about ANC services were elicited from the pregnant adolescents, while non-factual information aimed at identifying their perceptions and opinions about ANC services in Yendi. The structured interview's items attempted to elicit the following information, in terms of the Andersen's behavioural model's major tenets (see Annexure 1)

### **3.5.2 Interview guide**

An interview involves communication between the researcher and the participants in order to elicit the required information. The structured interview's items attempted to elicit and gather qualitative information in line with the study objectives 1, 2 and 3 major tenets (see Annexure 2). The interview was conducted on one-on-one and face-to-face between the researcher and all the six selected respondents. All the structured questions were written in English and translated in Dagbani to the respondents. Dagbani was the common local language the respondents could understand.



### 3.5.3 Tape recorders

Tape recorder was used to record proceedings of the interviews for onwards transcription. It was done by seeking the consent or approval of the respondent(s). Before the use of the device, it has to be tested to ascertain the quality of the device. Also if a third party is to use the device he/she has to be trained as to how to use the device.

### 3.6. Techniques of data analysis

Data gathered through the structured interviews conducted with adolescent mothers were encoded, presented in tables, bar and pie charts and analysed using the SPSS version 20.0-32bit computer program. To identify factors associated with selected ANC services utilisation among adolescent women, Chi-square test was employed.

Data from open-ended questions were analysed using simple descriptive analyses and the help of the statistician was sought throughout the data management process.

#### ➤ Outcome Variables

The study measures two outcome variables, namely, at least four ANC visits and safe delivery. The ANC policy in Ghana follows the WHO's recommendation that a woman without complications have at least four antenatal care visits, the first of which should take place during the first trimester (GSS, 2009). Furthermore, ANC records should be reviewed after delivery because by then they would provide a complete picture of the care rendered during pregnancy and whether the pregnant adolescents complied with the recommended four to six ANC visits when there were no risk factors Ministry of Health and Child Welfare of Zimbabwe (MOHCW) (2001) as cited in Mlilo-Chaibva (2007).



The analysis was restricted to 120 women, who experienced childbirth in their teens (age 15–19 years) during the time this study was conducted.

➤ Independent Variables

Important demographic characteristics such as, place of residence (rural or urban), maternal age (<18, and 18–19), religion and mother’s marital status was considered. Some selected determinants to ANC service utilisation were not left out. These included women’s education (no education, basic, secondary and above), husband’s education (no education, basic, secondary and above), knowledge, distance, support, mother’s occupation, first time experience and attitude of health staff.

### **3.7. Research Ethics**

Access approval to conduct the study was sought and obtained from the Yendi Municipal Health Directorate. Verbal consent was also obtained from participating adolescent mothers. To maintain confidentiality for participating mothers, codes were used instead of names on the questionnaires. While that of the in-depth interviews conducted respondents were assigned with names either than their usual names.



## RESULTS

### 4.0 Introduction

Chapter four presents the data analysis and result of the study, assessing the determinant for the utilization of ANC services among adolescent mothers in the Yendi municipality. It also presents a chi square analysis to ascertain whether or not there is statistical association between the outcome variables and the independent variables.

### 4.1 Demographic Characteristics of respondents

Table 4.1 depicts the demographic characteristics of the adolescent mothers by selected background variables. The majority of adolescent mothers 87 (72.5%) were residing in rural areas while 33 (27.5%) of them reside in the urban areas. Over one quarter of adolescent mothers 33 (27.5%) were younger than 18 years of age while 87 (72.5%) of the adolescent mothers have their ages above 18years at the time of collecting the data. For ethnicity, more than three quarters 101 (84.2%) of them had their ethnic background being Dagombas and the minor ethnic groups per this study were Konkombas 17 (14.2%) andFulanis 2 (1.6%). A large percentage 95 (79.2%) of the respondents indicated that they were Muslims while 25 (20.8%) belonged to the Christian religion, the traditional and other denominations. The study however revealed 61 (50.8%) single adolescent mothers as against 59 (49.2%) married adolescent mothers.



**Table 4.1: Demographic Characteristics of respondents**

Demographic characteristics	Number (n)	Percentage (%)
<b>1. Community type</b>		
Rural	87	72.5
Urban	33	27.5
<b>2. Age of respondent</b>		
<18	33	27.5
18-19	87	72.5
<b>3. Ethnicity</b>		
Dagomba	101	84.2
Konkomba	17	14.2
Fulani	2	1.6
<b>4. Religion</b>		
Muslim	95	79.2
Christian	19	15.8
Traditional	5	4.2
None	1	0.8
<b>5. Marital status</b>		
Single	61	50.8
Married	59	49.2

Source: field survey, 2015.

#### 4.2 Knowledge levels of adolescent mothers on ANC services

Table 4.2 below showed that 110 (91.7%) of adolescent mothers responded yes when they were asked whether they heard of antenatal care before while 10 (8.3%) responded the negative. About one third 38 (34.5%) had their source of knowledge of ANC from their parents while 36 (32.7%) from the health facility, 30 (27.3%) from friends, 3 (2.7%) from the school while less than 1% from radio, TV and husband. In order to ascertain the knowledge levels of the mothers a follow up question was posed to them, which issues are being discussed at ANC, 54 (49.1%) of the respondents said nutrition education, 29 (26.4%) said the importance of ANC is discussed, 13 (11.8%) said the need of early ANC initiation, while 6 (5.6%) said Management of pregnancy related complications and 4 (3.6%) said both



services available at ANC and the importance of postnatal care were issues being discussed during ANC.

**Table 4.2: Knowledge of Antenatal Care (ANC) among respondents**

<b>Knowledge of antenatal care (ANC) service</b>	<b>Number (n)</b>	<b>Percentage (%)</b>
1. Heard of antenatal care (ANC) before?		
Yes	110	91.7
No	10	8.3
2. Source of knowledge		
Friends	30	27.3
Parents	38	34.5
School	3	2.7
Health facility	36	32.7
Radio	1	0.9
TV	1	0.9
Husband	1	0.9
3. Issues being discussed at ANC		
The importance of ANC	29	26.4
Nutrition	54	49.1
Services available at ANC	4	3.6
The need for early ANC initiation	13	11.8
Management of pregnancy related complications	6	5.5
The importance of postnatal care	4	3.6

Source: field survey, 2015

In an individual interview with Amina one of the respondents reported as follows:

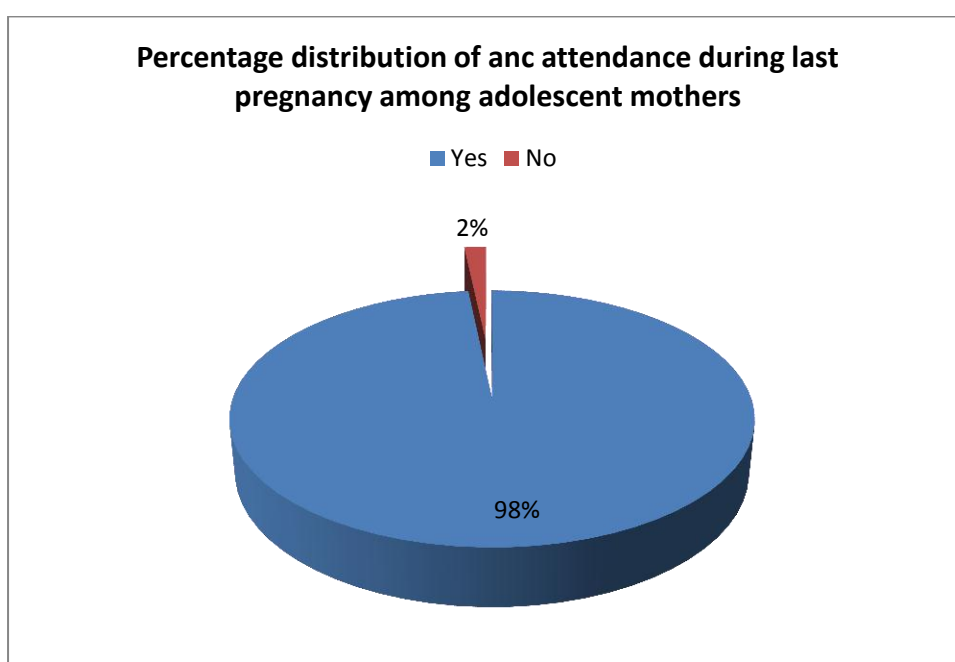
*I heard of ANC when I got pregnant. I was informed by my sister that pregnant women are the ones who attend ANC. She indicated that ANC services are for pregnant women, she encouraged me to attend ANC regularly. Since then I have been attending ANC at the village health post. Is good for me because they educate me on what do and what not to do. Source: (Amina a nursing mother at Guntingli)*



### 4.3 Antenatal care services provided by health workers

Out of 120 eligible women who gave birth in the 15 to 19-year-old age group, Fig 4.1 shows that 118 (98%) of them attended ANC during their last pregnancy proceeding to the time this study was conducted and only 2 (2%) of them were unable to attend. The few respondents (2%) who could not attend ANC throughout their pregnancy said either they lack money to access service or they did not want the public to know that they were pregnant.

**Fig 4.1 Distribution of ANC attendance during the last pregnancy**

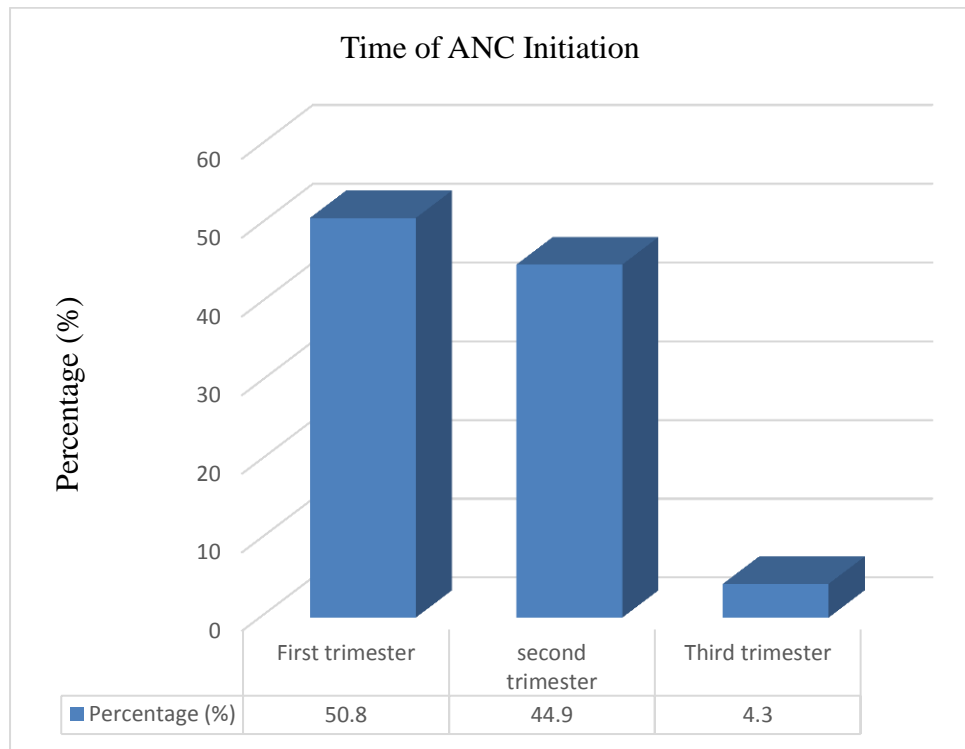


Source: field survey, 2015

Figure 4.2 below shows the distribution of time of ANC initiation among adolescent mothers in the Yendi municipality. The figure reveals that the 118 (98%) adolescent mothers who attended ANC during their last pregnancy, 50.8% initiated ANC in their first trimester while 44.9% and 4.3% initiated in the second and third trimesters respectively.



**Fig 4.2 Distribution of time of ANC initiation among respondents**

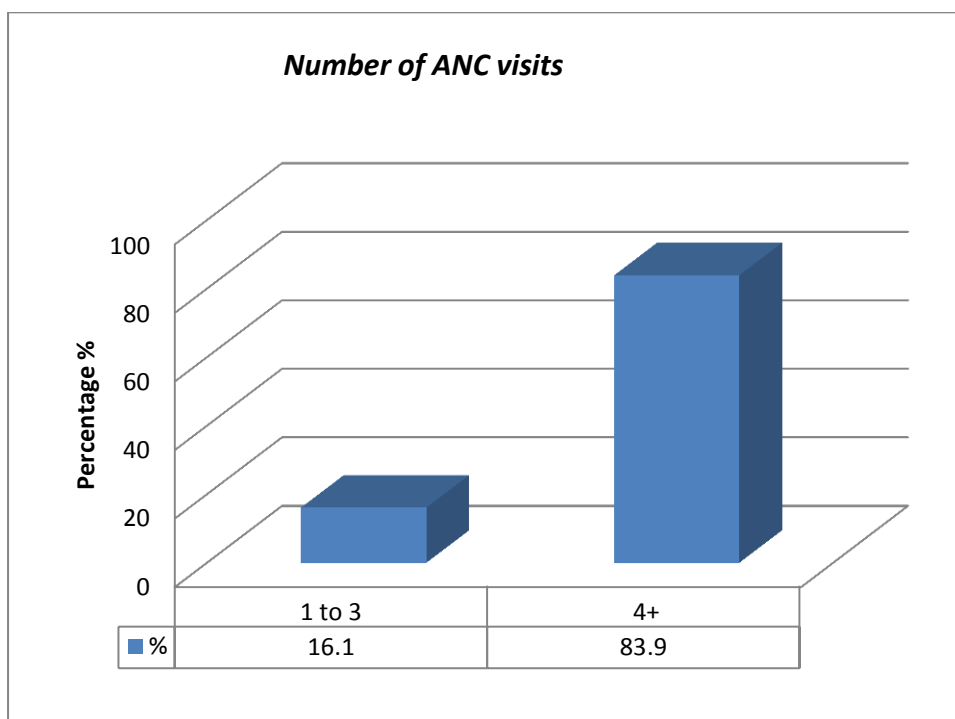


Source: field survey, 2015.

The figure below shows that 99 (83.9%) of respondents had at least four ANC visits while 16.1% of them had 1-3 numbers of visits. In order to achieve the full life-saving potential that ANC promises for women and babies, four visits provides essential evidence based interventions as recommended by WHO. In this regards a pregnant adolescent mother is considered to have fully utilised most of the ANC services if she had at least four visits.



**Fig 4.3 Distribution of number of ANC visits among respondents**



Source: field survey, 2015.

Table 4.3 below shows that of the 98% who attended ANC during their last pregnancy, 106 (89.8%), 111 (94.1%) and 96 (80.0%) had TT injection, took SP tablets and had safe delivery respectively. It also shows that 101 (91.5%) of the respondents had their urine and blood samples taken and analysed.





**Table 4.3: Services received at the antenatal clinics**

Services received	Number (n)	Percentage (%)
1. Urine sample analysis		
Yes	101	91.5
No	10	8.5
2. Blood sample analysis		
Yes	108	91.5
No	10	8.5
3. TT injection taken		
Yes	106	89.8
No	12	10.2
4. Number of times TT injections taken		
Once	60	56.6
Twice or more	45	42.5
Don't know	1	0.9
5. SP tablets taken		
Yes	111	94.1
No	7	5.9
6. Number of times SP tablets taken		
Once	31	27.9
Twice	21	18.9
Thrice	59	53.2
7. Delivery		
Home	24	20
Hospital/HC/CHPS C	96	80

Source: Field survey, 2015.

*I initiated ANC in the second three months of my pregnancy and made in all a total of two (2) visits before delivery. Hahaha! Bro on my first day, I was issued ANC card and given an injection on my upper arm. The nurse at the facility also gave me a bottle to take my urine and stool sample for analysis. I was instructed to lie on the bed and a funnel-like thing placed on my stomach from there a photograph of my stomach was taken (scanning). ANC attendance is very good for pregnant women (narrated by Asana a nursing mother at Balogu).*

Another respondent, Asana from Balogu during an individual interview also narrated her ANC attendance in the following:

*I initiated ANC during the fourth month of my last pregnancy and continued until I delivered. I was told by my uncle to wait until the fourth month before I initiate ANC. My uncle took me*



*to the ANC clinic did almost all the necessary arrangement for me. He went for my ANC card and paid for the necessary charges that were incurred. I only paid GH¢5 for my urine and stool samples to be analysed. I was given mosquito net. I was also given the following items, powder, medicines, empty bread flour sack. I was also given injection on my upper arm. The ANC attendance is very good and I entreat all pregnant women to do. It is not expensive as I was anticipating.*

#### **4.4 Determinants for utilization of antenatal care services**

Table 4.4 shows that out of the 120 eligible women who gave birth in the 15 to 19-year-old age group, when asked whether they were being charged any amount before accessing the service, 81 (68.1%) responded the affirmative while 38 (31.9%) responded the negative. Also, in order to confirm whether the adolescent mothers were being charged, a question as to how much was taken from them as cost of the service was asked, 48 (58.5%) said they were charged GH¢5.00, 21 (25.6%) said they were charged GH¢10.00 while 13 (15.9%) said they were charged above GH¢10.00. Of the 21 (17.5%) respondents who were engaged in income generating activities, 3 (14.3%) of them were engaged in farming activities and teaching while 15 (71.4%) were engaged in petty trading. When a question of how much the respondents earn at the end of the month from their occupations, 17 (81.0%) of them said they earn less than GH¢200.00 per month while 4 (19%) between GH¢200.00- GH¢400.00 per month. On the issue of support, 93 (77.5%) of them responded they had support. Of this figure, 91 (96.8%) from family while the rest from friends and NGOs.

For education, 70 (76.1%) of the mothers had basic education, 21 (22.8%) of them had secondary education while 1 (1.1%) had tertiary education. In the case of partner's educational level, 41 (50.6%) of them had secondary education; the remaining half of them had either basic or tertiary education. More than half of the respondents travel more than a kilometer to the nearest health facility to utilize antenatal care services and majority 84 (71.2%) of them travel to the facility by walking. Timing for initiating ANC was not left out



almost half of the respondents initiate ANC in the first trimester while the other half initiate ANC in either the second or third trimester as shown in fig 4.2 above. In addition, 109 (92.4%) of the respondents said the health workers were friendly to them at service delivery point while 9 (7.6%) of them responded the opposite. The study also revealed that majority 109 (92.4%) of the respondents was receiving ANC for the first time.

**Table 4.4a: Cost of antenatal, service and respondents preparedness for the cost at facility attended**

Cost of care	Number (n)	Percentage (%)
1. ANC service charged		
Yes	81	68.1
No	38	31.9
2. Amount charged for service		
GH¢5	48	58.5
GH¢10	21	25.6
Above GH¢10	13	15.9
1. Occupation		
Farming	3	14.3
Petty Trading	15	71.4
Teaching	3	14.3
2. Income		
<GH¢200	17	81
GH¢200- GH¢400	4	19
3. Support		
Yes	93	77.5
No	27	22.5
4. Source of support		
Family	91	96.8
Friend	2	2.1
NGO	1	1.1

Source: field survey, 2015



**Table 4.4b: Determinants of Utilisation of antenatal care (ANC) services**

Determinants of antenatal care ANC utilisation	Number (n)	Percentage (%)
5. Mother's level of education		
Basic	70	76.1
Secondary	21	22.8
Tertiary	1	1.1
6. Partner's level of education		
Basic	31	38
Secondary	41	50.6
Tertiary	9	11.1
7. Distance to health facility		
Less than 1 km	54	45.8
Between 1 to 2 km	27	22.9
More than 2 km	37	31.4
8. Attitude of health workers during ANC		
Friendly	109	92.4
Unfriendly	9	7.6
9. First ANC visit		
Yes	109	92.4
No	9	7.6

Source: field survey 2015.

From the table it was clear that some of the respondents are not aware of the free maternal and child health services in Ghana. Most of the respondents indicated their delay in attending ANC due to financial constrain. As reported by Abiba as follows a nursing mother in Meindogu in the Yendi municipality:

*I was not having money that was why I did not initiate ANC early. You see when you go for ANC for the first time, you will be made to pay GH¢ 12 at the spot and later pay GH¢ 2 at the laboratory. My husband did not give me money to go for the service. He is supposed to give me money to go for the service and now that he tells me he has no money what can I do? The distance to the health facility is a major barrier for the utilisation of ANC. When you don't have money to board car and you know the distance from our community to Yendi is quite a distance and considering my condition at that time it will be difficult for one to walk to Yendi*





for ANC. For me TBAs [www.udsspace.udsa.edu.gh](http://www.udsspace.udsa.edu.gh) only assist us to deliver when we are in labour and help bath our children.

The report of Abiba support that of Nazzar (2005) that financial constrain and distance to health facility are the major challenges facing rural women in accessing effective health care which has resulted in most of the rural folk resorting to other alternatives like traditional medicine and traditional birth attendants.

Distance to health facility is also noted in this study to be one of the most important determinant in the utilisation of ANC in the study area. As was reported by a respondent during an individual interview in one of the study communities:

*You know when you attend ANC regular it makes you deliver your baby with ease. There was a day I planned going for ANC but that very morning, my brother passed away. I used to walk to the hospital for ANC and always find it difficult when my appointment is due. For me I believe that if the distance to the health facility is far it discourages others to utilize ANC services. I also believe that the cultural practice performed to outdoor the pregnancy of first time mothers to the family could be a barrier to utilizing ANC services because the process takes time. You may have appointment for ANC but due to the practice you may fail to honour it. You know you are only pronounce pregnant if and only if the cultural practice is performed or else no member of the family can do so not to even taught of initiating ANC. The TBAs sometimes help us by advising us to always stick to our ANC appointments given by the nurses and assist in the delivery of babies. Source: Samata 19 year old nursing mother at Sunsong in the Yendi municipality of the northern region of Ghana.*

The narration of Samata supports the work of Hatcher (2008) that distance to health facility is a major hindrance to health care utilization in the developing world.



[www.udsspace.uds.edu.gh](http://www.udsspace.uds.edu.gh)

Another respondent Ayishatu narrated how helpful is the husband in assisting her any time she want to attend ANC. She reported as follows: *Hmmm! My husband played a vital role towards my ANC attendance. He always motivates me to honour my ANC appointments. At times he picks me on his motor bike when am due for ANC. My husband completed senior high school and I believe his level of education might have contributed to the support he always gives me because my colleagues whose husbands are not educated don't get similar favours. The crowded nature and the long awaiting queues at the ANC clinic is always a demotivation towards accessing better and quality service. At times you go for ANC and wait for so long that you become frustrated and even when your next appointment is due you feel reluctant to attend. I also observed that the charge levied at service delivery point is a major disincentive to the utilization of ANC services as being expressed by some of my colleagues. Some of my colleagues also complained that the inability of their husbands to pay for their transportation often discourages them from utilizing ANC services.* Source: (Ayishetu, a 19 year old pregnant woman in Adibo in the Yendi Municipality).

This findings is in resonant to that of Shaikh, 2005 that long queue in most health facilities in the developing world has discouraged people from attending modern health care in the most third world countries.

*Hahaha! Some of my colleagues including myself were advised by outsiders that unless they perform the cultural rituals that outdoors the pregnancy of a young lady, it is not advisable to initiate ANC at the early stages. My colleagues heeded to that call but I refused. So to me these are some of the factors that hinder the utilisation of ANC services among adolescent mothers.* Source: Adishetu 19 year old nursing mother at Adibo in the Yendi municipality of the northern region of Ghana.

Another respondent, Comfort a 19 year old Konkomba nursing mother at Gnani during an individual interview narrated how culture could be a determinant of ANC utilisation:

*Hmmm! On the issue of cultural rituals, to the best of my knowledge it's only Dagombas who perform some rituals on their pregnant young women to outdoor their pregnancy. I learnt*

*that it is even a taboo to refer to public the pregnancy of a young lady unless the ritual is performed. But for us Konkombas there is nothing of that sort.*

This finding is in support to the WHO, 2006 where some cultural beliefs are found to influence the utilisation of ANC services.

#### **4.5 Determinants Associated With Antenatal Care Utilisation**

Table 4.5 shows that except maternal age and mother's educational level, the results of chi-square tests showed that all demographic and some selected variables significantly influence the utilisation of antenatal care services among adolescent mothers. A large difference was observed by place of residence, mother's and husband's education, religion, mother's income levels and region of residence.



**Table 4.5a: Association between socio-demographic characteristics and antenatal attendance among respondents**

<b>Determinants of antenatal care ANC utilisation</b>	<b>At least 4 ANC visits</b>	<b>p-value</b>	<b>Safe Delivery</b>	<b>p-value</b>
1. Community type		0.064		0.000*
Rural	57.6		54.2	
Urban	26.3		25.8	
2. Age of respondent		0.134		0.259
<18	21.2		20.8	
18-19	62.7		59.1	
3. Ethnicity		0.001*		0.000*
Dagomba	74.6		69.2	
Konkomba	9.3		10	
Fulani	0.8		0.8	
4. Religion		0.012*		0.000*
Muslim	67.8		66.7	
Christian	14.4		10.9	
Traditional	0.8		1.7	
None	0.8		0.8	
5. Marital status		0.741		0.018*
Single	43.2		44.2	
Married	40.7		35.8	
6. Knowledge of antenatal care		0.603		0.762
Yes	78		73.4	
No	5.8		6.6	
7. Occupation		0.497		0.811
Farming	9.5		14.3	
Petty Trading	61.9		66.7	
Teaching	14.3		14.3	

Source: (field survey 2015) Note:\*statistically significant for  $\chi^2$  test at  $p \leq 0.05$





**Table 4.5b: Association between socio-demographic characteristics and antenatal attendance among respondents**

Determinants of antenatal care ANC utilisation	At least 4 ANC visits	p-value	Safe Delivery	p-value
8. Support		0.836		0.183
Yes	64.4		60	
No	19.5		20	
9. Mother's level of education		0.907		0.695
Basic	67		58.7	
Secondary	20.9		19.6	
Tertiary	1.1		1.1	
10. Partner's level of education		0.211		0.026*
Basic	30		25.9	
Secondary	46.2		45.6	
Tertiary	11.2		8.6	

Source: field survey, 2015

Note: \*statistically significant for  $\chi^2$  test at  $p \leq 0.05$

**Table 4.6: Facility and care givers characteristics and antenatal attendance**

Determinants of antenatal care ANC utilisation	At least 4 ANC visits	p-value	Safe Delivery	p-value
1. Distance to health facility		0.008*		0.001*
Less than 1 km	43.2		37.3	
Between 1 to 2 km	18.6		21.2	
More than 2 km	22		22.9	
2. Time of ANC initiation		0.946		0.095
First trimester	42.4		41.6	
Second trimester	38.1		37.3	
Third trimester	3.4		2.5	
3. Attitude of health workers		0.603		0.591
Friendly	78		76.4	
Unfriendly	5.9		12.7	
4. First time experience		0.143		0.455
Yes	78.8		74.6	
No	5.1		6.7	

Source: field survey, 2015

Note: \*statistically significant for  $\chi^2$  test at  $p \leq 0.05$



## DISCUSSION OF STUDY RESULTS

### 5.0 Introduction

This Chapter presents the discussion of the results of the study, assessing the determinant for the utilization of ANC services among adolescent mothers in the Yendi municipality. It is done in line with the study objectives.

### 5.1 Knowledge levels of adolescent mothers on ANC services

This study indicated that about 91.7% of adolescent mothers in the Yendi municipality had knowledge of ANC services. Of this figure, 34.5% of the respondents had their source of knowledge from parents, 32.5% from the health facility, 27.5% from friends, and 2.7% from the school while less than 1% had theirs from radio, TV and husband. Which is less than the finding gathered in a study conducted by Banda (2013); barriers to utilisation of focused antenatal care among pregnant women in Ntchisi district in Malawi, which showed almost all participating mothers (96%) had any knowledge of FANC with the major sources of information on knowledge of FANC cited were the radio (96%), nurses (85%) relatives (82%) and traditional birth attendants (62%). But this notwithstanding was far better than findings of Rai et al. (2012), in the study Utilisation of Maternal Health Care Services among Married Adolescent Women: Insights from the Nigeria Demographic and Health Survey, 2008 that revealed 1424 (62.3%) eligible women who gave birth in the 15-19 year old age group, 35.1% had a knowledge on ANC by media exposure. This might have been attributed to the level of education of the adolescent mothers and that of the partners.



## 5.2 Antenatal care services provided by health workers

This study revealed a significantly 98.3% of adolescent mothers age 15–19 years age utilised majority of antenatal care services in the Yendi municipality. This figure is much higher than the figures recorded in other studies; Singh et al. (2014), in a study Utilisation of maternal healthcare among adolescent mothers in urban India: evidence from DLHS-3 revealed that 22.9% of mothers received full antenatal care. The same applies to GSS (2009), which revealed 97.3% of mothers less than 20 years of age received antenatal care from a health professional. In addition, about 2% non-utilisation of the service recorded by the study is on the low side when compared to the less than 5% reported for industrialized countries and about 4.5% non-users of antenatal care services by Okutu (2006) and even much better than 43% recorded by Awusi et al. (2009). The situation is not different when compared with that of 4 percent of mothers who do not receive any antenatal care according to the (GSS, 2009). Some reasons given by respondents in the study was that they either lack money to access the service or they did not want to make their pregnancy public. As one would expect these groups of pregnant adolescents to be more likely to hide their pregnancies and report late for antenatal care (Yeboah, 2012). However, the reasons given by the respondents is not different from findings of that of Rai et al. (2012), where about 39.3% of respondents who did not give birth in a health facility mentioned financial constraints as reason for non-utilization of the service. Similar results was supported by Okutu (2006) that slightly more than two-thirds (65.3%) of the women, getting money for treatment was the most outstanding problem in accessing health care.

The study also shows that 83.9% of the adolescent mothers had at least four ANC visits throughout the pregnancy which is remarkably much better compared to data from the Ghana Statistical Service (2009) which revealed about 78% pregnant women had four or more antenatal care visits, Daniels (2013) in her study also recorded 77.7% of women had at least



four ANC visits during their period of pregnancy and less than half (46.9%) of the women in Uganda made a minimum of four antenatal visits almost relatively proportionate to those who made between 1-3 visits (49.9%) as reported by Okutu (2006). More so, the 2013 annual health report of the Yendi municipal health directorate also recorded 49.5% as the proportion of women making fourth visits in the year under review.

Laboratory services utilization as component of ANC was not also left out. Both urine and blood samples analysis also saw an improved data over data from other studies and national source. According to the study, both urine and blood sample analysis recorded 91.5% utilization compared to only six in ten pregnant women in the Northern region (GSS, 2009).

Tetanus toxoid injection during pregnancy according to the study recorded 89.6% service utilization out of which 56.6% received TT1 and 42.5% receiving TT2+ compared with 56.4% of mothers less than 20 years receiving two or more injections while 68.3% was protected against neonatal tetanus1 (GSS, 2009). However, the 2013 annual report of the Yendi municipality revealed a steady increase in the coverage of TT2 plus from 49.1% in 2012 to 92.3% in 2013.

Utilization of Sulfadoxine-pyrimethamine (SP) saw tremendous improvement over other studies findings, 92.5% of adolescent mothers according to the study received SP tablets; 27.9% SP1, 18.9% SP2 while 53.2% SP3+ compared to nearly two-thirds (65%) of women 15-49 took some kind of anti-malarial medicine for prevention of malaria during the last pregnancy and Over half (58%) of the women took SP/Fansidar at least once during the pregnancy while less than half (46%) of pregnant women took SP twice during the pregnancy (GSS, 2009). The figure was also much better than that of the municipality which saw an overall coverage of 87.2% in 2013, 87.2% SP1, 74% SP2 44.5% SP 3+ (Annual report, 2013).



The study however, indicated that 80% of adolescent mothers had safe delivery (delivered at a health facility and supervised by a health professional) compared with Singh et al. (2014), in a study, Utilisation of maternal healthcare among adolescent mothers in urban India: evidence from DLHS-3 which revealed that 70.5% of adolescent mothers utilized safe delivery care. The GSS (2009) survey results also show that 59% of births in Ghana are delivered with the assistance of health professionals (doctor, nurse/midwife, community health officer/nurse), 30% are delivered by a traditional birth attendant, and about one in ten births is assisted by a relative, or receives no assistance. In addition the figure was higher than the municipal record of 3707 (77.7%) skilled deliveries in 2013 (Annual report, 2013).

### **5.3 Factors influencing ANC service utilisation**

This study identified a number of factors that have a significant associations with the utilization of antenatal care services, including place of residence, maternal age and partner's education level, knowledge, religion, support, distance and marital status. This was supported by Yeboah, (2012) in his study, which indicates that maternal age, marital status and educational are all significantly associated with the likelihood of initiating an early prenatal visit.

The study established the fact that utilization of recommended ANC services and safe delivery by adolescent mothers was higher in rural than in urban areas. This disagrees with the findings of a study conducted in eight other West African countries, where rural women give birth at home in the absence of skilled care (Ronsmans et al., 2003) and that of Okutu (2006) that showed rural-urban disparity in access to antenatal care in Uganda, Sixty two percent (62%) of urban women compared to 46.1% for their rural counterparts.

However, the findings of this study confirm the significant effect of husband's education on antenatal care service utilization among adolescent mothers in the Yendi municipality which was consistent with those of other studies in Africa (Magadi, Agwanda, & Obare, 2007;





Ogunlesi & Ogunlesi, 2012; [www.udsspace.udsa.edu.gh](http://www.udsspace.udsa.edu.gh); Ogunlesi, 2010; Wamani, Astrom, Peterson, Tylleskar, & Tumwine, 2005) and from other developing countries (Amin et al., 2010; Singh et al., 2012). It was supported that the educational level and occupation of partner had a significant association between delivery in a health facility and assistance at delivery by trained medical personnel ( $p < 0.05$ ) (Anita, 2013). To illustrate, studies have shown that male engagement in women's health needs enhances women's maternal and reproductive healthcare choices and their utilization (Agadjanian, 2002; Mufune, 2009; Odimegwu et al., 2005; Peacock & Levack, 2004; Sternberg & Hubley, 2004; USAID, 2000, 2003, and 2006). Moreover, studies elsewhere also established that when husbands agreed on the importance of a women's healthcare need, it would be addressed quickly (Prakash, Swain, & Negi, 1994).

The religious affiliation of respondent was seen to be significantly associated with at least four visits and safe delivery with p-values of  $p = 0.012$  and  $p = 0.000$  respectively. But this was strongly disagreed by Yeboah, (2012) in his findings that religious affiliation seems not to be significantly associated with timing of first prenatal visit.

In addition, the difference in healthcare service utilisation by social groups could be linked with the strong influence of cultural beliefs and practices (Babalola & Fatusi, 2009; Wall, 1998) as strongly agreed by this study where in an in-depth interview majority of respondents made it clear that the cultural ritual performed to outdoor the pregnancy of a young Dagombawoman was a barrier to the utilisation of ANC services. Also a study by Wall (1998) highlighted a series of adverse health consequences of the pregnancy on young married women in the Hausa community, where a young woman delivering her first child alone unattended to by anyone disavowed with pride. There is a need for community-based interventions that can create awareness and can change these social group cultural norms and behaviors. Further, attempts must be made to reach poor and illiterate families of certain social groups and provide appropriate counseling regarding antenatal care utilization.

The study further shows that the occupation and income status of adolescent mothers is significantly associated with utilization of antenatal care services and safe delivery care. This finding is consistent with previous evidence from African countries that highlights significant economic inequality in healthcare service utilisation (Ochako, Fotso, Ikamari, and Khasakhala, 2011; Nwogu, 2009; Rahman, Mosley, Ahmed, & Akhter, 2007). This is probably because poor households do not have the resources for healthcare expenses, because their priority is to meet their basic daily needs, whereas wealthier households can spend a higher proportion of their earnings on healthcare (Amin et al., 2010; Singh et al., 2011). This was also supported by Okutu (2006), because better occupations are associated with higher incomes, access to resources and therefore, increasing the use of health facilities. It is interesting to note that a relatively larger proportion of slightly more than half (51.4%) of women who were not working made between 1-3 visits to antenatal facilities.

The study revealed among others those lower-aged or first-time adolescent mothers were found utilising antenatal care services as compared to the older ones. This agreed with other studies from developing countries that indicate women are significantly more likely to use maternal healthcare services for their first delivery (Akin & Munevver, 1996; Celik & Hotchkiss, 2000; Stewart & Sommerfelt, 1991). A study by Bell, Curtis, and Alayon (2003) in six developing countries noticed a similar pattern and observed that high parity women (with 6 or more births) are less likely to deliver with a health professional. Similar observation was made with Okutu (2006) whose findings show that a larger proportion of women less than 20 years who had a live birth in the five years prior to the survey received antenatal care from nurses/midwives (49.9%) compared to less than one-third (27.0%) for those 35 years and above. Although it is usually unclear why higher order adolescent women are less likely to utilize skilled delivery services (Santhya, Jejeebhoy, & Ghosh, 2008), few studies argued that lower parity women tend to give careful attention to seeking assistance



during delivery because of their inexperience with pregnancy and greater health risks for women and child (Bell et al., 2003; Raj, Saggurti, Balaiah, & Silverman, 2009). In addition, lower utilisation of maternal healthcare services among higher parity women could be due to time and resource constraints faced by those with larger families (Wong, Popkin, Guilkey, & Akin, 1987; Elo, 1992; Bhatia & Cleland, 1995). It could also be by the fact that respondents who used health facilities for delivery in general are motivated by the fact that they were too young (Daniels, 2013).

This study shows a significant association between ANC service utilisation and knowledge of the availability of the service. It confirms one of the studies that brought the facts to bear that the effect of mass media exposure on recommended antenatal care services and safe delivery care utilisation is significant and consistent with previous studies ( Bankole & Westoff, 1996; Retherford & Mishra, 1997). Evidence suggests that the mass media is effective in information dissemination, which increases awareness about healthcare facilities that are available and fosters inter-personnel communication, which could facilitate behavioral changes (Valente, Poppe, & Merritt, 1996). Knowledge on ANC is critical in determining pregnant women's use of antenatal services (Simkhada et al. 2007). Studies have shown that exposure to mass media particularly television and radio significantly predicts utilization of FANC. Pallikadavath et al. (2004) and Sharma (2004) in studies done in India and Nepal, respectively, found that pregnant women who were watching television every week were more likely to use FANC. Moreover, other studies have shown that adequate knowledge of ANC has a positive and statistically significant effect on FANC use (Paredes et al. 2005; Nisar and White 2003). In the study conducted by Ndyomugenyi et al. (1998) in rural area of Uganda indicated that pregnant women with inadequate knowledge of Maternal and child health were likely not to utilize ANC. A similar study was conducted in Nigeria by Amosu et







al. (2011), the findings [www.udsspace.udsu.edu.gh](http://www.udsspace.udsu.edu.gh) indicated that health care provider and pregnant women ignorance about FANC was one of the factors affecting utilization of FANC.

Analysis of the study demonstrates the significant influence of distance travelled to the health facility on at least four ANC visits and safe delivery utilization among adolescent women in the Yendi municipality. This findings is supported by Daniels (2013) which reported that comparatively many women who did not go for antenatal during their first trimester considered the time spent on the journey to the health facility as being too long ( $p=0.000$ ). They also thought the cost of transportation was too high ( $p<0.05$ ) and general access to health facility was difficult ( $p<0.05$ ). Similarly, more women who could not visit the health facility for at most the fourth time, thought the nature of the roads were poor ( $p<0.05$ ) and that it took longer time to get to the hospital ( $p<0.05$ ). Although circumstances may seem challenging in terms of difficulties in getting permission to go for treatment, getting money for treatment, distance to health facility and having to take transport as factors that prevent women from accessing health care services (Okutu, 2006)

However, the study revealed that 7.6% of the respondents confirmed to the fact that attitude of health care providers still possess treat to the utilisation of ANC services. This was supported by findings from the in-depth interviews conducted when a question was posed to the respondents what could be some of the barriers to the utilisation of ANC services? The response they gave was that when they initiate ANC early the nurses become fed up each time they set their eyes on them and at times they shout at them during service delivery.

This was supported by other studies conducted elsewhere. Mathole et al. (2004) explains that poor attitude of health care providers towards pregnant women contributes to low utilisation of FANC services in Zimbabwe. Conrad et al. (2011) substantiate this finding in a multi-country study conducted in Tanzania, Uganda and Burkina Faso where it was noted that health care workers did not comply with the procedures stipulated in FANC guidelines and this had a tremendous effect on the utilisation of FANC. Conversely, WHO (2002) report on the opportunities for African newborns also revealed that health care providers' attitudes and

[www.udsspace.udsa.edu.gh](http://www.udsspace.udsa.edu.gh)

behaviours in ANC clinics compound this problem by failing to respect the privacy, confidentiality, and traditional beliefs of the women. As reported in Atuyambe et al., (2005), among adolescents on the experiences that often medical staffs have poor receptions with such intimidating mentality that would deter one from returning for health care service at a health facilities or receive assistance from skilled attendants but would rather prefer TBAs.



## CONCLUSION AND RECOMMENDATION

### 6.0 Conclusion

The conclusions in this section were drawn from the findings of data collected from adolescent mothers who utilized ANC services in the Yendi municipality.

- Age, marital status, parity, educational level and knowledge about ANC and its benefits strongly influenced the adolescent mother's decisions on either to utilize or not utilize ANC services. The younger and unmarried adolescent mothers who for the first time were unlikely to utilize the ANC services due to socio-economic factors.
- Socio-cultural and economic factors such as ethnicity and cultural practices also played a pivotal role in influencing pregnant adolescents' decisions on whether to utilize ANC services.
- Although the adolescent mothers demonstrated some appreciation of ANC and its benefits when tested, they themselves indicated that adequate knowledge about ANC might motivate them to utilize ANC services.
- Perceived barriers likely to prevent adolescent mothers from utilising ANC services in terms of accessibility, affordability and acceptability included issues of confidentiality.

The study therefore concludes by identifying a number of factors that have a significant influence on the utilisation of antenatal care services, including place of residence, maternal age and partner's educational level, knowledge, religion, culture, support, distance and marital status. This was supported by Yeboah (2012) in his study, which indicates that



maternal age, marital status and education are all significantly associated with the likelihood of initiating an early prenatal visit.

## 6.1 Summary of the study

The study was conducted in Yendi municipality, the second largest town in the northern region, between 2014 and 2015. The study areas were communities drawn from the six (6) sub-municipalities, Yendi East, Yendi Central, Yendi West, Bunbon, Gnani and Adibo.

The purpose of the study was to assess why some adolescent mothers book late for ANC and why others do not attend ANC, and to come up with recommendations for minimising factors that are perceived as barriers to utilisation of ANC services in Yendi municipality.

The study was guided by the Andersen's behavioural model, which was used to guide the research objectives and to explain and support the findings of the study. The research objectives of the study were:

1. To investigate the factors that determine the utilisation of ANC among adolescent mothers in the Yendi Municipality.
2. To assess the knowledge level of adolescent mothers on ANC services
3. To examine the services that are provided by nurses and midwives at ANC Clinic
4. Establish whether or not there is association between the determinants and the utilisation of ANC services among adolescent mothers in the Yendi municipality.

The study utilised both qualitative and quantitative non-experimental descriptive design. The study involved the procedure of collecting data from 120 adolescent mothers using a non-probability, purposive sampling together with snow balling technique. In-depth interviews were also conducted to 6 additional adolescent mothers to obtain more information that could





not be uncovered by the [questionnaire](http://www.udsspace.udsa.edu.gh). Ethical considerations were met through seeking permission from the Municipal Health Directorate and the heads of the health institutions, as well as those who participated in the study. Data were analysed using the SPSS computer programme version 20.0 - 32bit.

The findings from the data analysed revealed that adolescent mothers were appreciable utilising ANC services but this notwithstanding saw insignificant numbers sometimes not even using the services at all, because of various factors. The main factors that emerged as influencing adolescent mothers' failure to maximize the use of ANC services were:

- Documentation of ANC was inadequate and particularly poor documentation was marked on the aspects of health promotion, prophylaxis and other treatments as well as social history. During the data collection, large numbers of documents had not been filed, rendering the information useless for the ANC patients concerned during their follow-up visits. This suggested that the quality of ANC was compromised in some aspects. Also some mothers could not take proper care of their ANC books, either the book could not be found or they were poorly handled such that it makes one difficult to read some of the entries.

1. Predisposing Factors:

- Including socio-cultural, religious and economic factors were found to strongly influence adolescent mothers' decisions on whether to utilise ANC services in Yendi municipality.
- Health Beliefs, adequacy of knowledge of ANC and its services was also reported to influence adolescent mothers' utilisation of ANC services in Yendi municipality.
- Demographic, Age of respondents was also reported to influence the utilization of ANC services in the municipality.

2. Enabling Factors: The logistical aspects of obtaining care.

- Personal/Family: [www.udsspace.udsu.edu.gh](http://www.udsspace.udsu.edu.gh) support from the family, partners' educational level, respondents religious affiliation, marital status, income status, distance to the health facility and occupation were all seen to be influencing the utilization of ANC service in the municipality.
- Community: the attitude of health staff and waiting time at service delivery were also reported to influencing the utilization of ANC services in the municipality

### 3. Need Factors:

Perceived need: various responses (I was sick, I was educated to do so, I attended ANC because of my health and that of my fetus and I knew I was pregnant) given by adolescent mothers when a question as to why do they go for ANC was posed to them seem to suggest need to utilise ANC services.

## 6.2 Recommendations

The following recommendations were drawn from the findings of the study:

- The Ghana Health Service in collaboration with the Ministry of Health and the Ministry of Local Government and Rural Development should see to it that there is a health facility in every rural community in the country this will enhance quality health delivery and also help in solving the long distance travel by pregnant women to access ANC services.
- Enhancement of health-promotion activities that empower the pregnant adolescents and increase their knowledge on reproductive health, particularly ANC and family planning, so that these mothers could delay falling pregnant.
- Comprehensive, action-based approaches are needed in rural communities, including providing public transportation and increased availability of different types of health



[www.udsspace.udsa.edu.gh](http://www.udsspace.udsa.edu.gh) facilities. In remote areas, adolescent women should be encouraged to move closer to a health facility as their delivery dates approach.

- There is a need for community-based interventions that can create awareness and can change these social groups, cultural norms and behaviours.
- Educational programs broadcast through electronic media need to reach the poorest adolescent mothers, illiterate women who belong to disadvantaged social groups, and low privileged adolescent mothers living in rural areas.
- Government should resource The Town and Country Planning Department to ensure proper planning of our communities in terms of ensuring proper numbering of our houses since it was a major problem encountered during the course of the study.

### **6.3 Future Directions**

This study underscores the immediate need for more research and exploration into the factors that restrict the utilisation of ANC services among younger adolescent mothers. A residential difference in adolescent's ANC service utilisation is clearly evident in this study.



- Agadjanian, V. (2002). *Men's talk about "women's matters": Gender, communication, and contraception in urban Mozambique*. *Gender and Society*, 16, 194–215.
- Akin, A., & Munevver, B. (1996). *Contraception, abortion and maternal health services in Turkey: Results of further analysis of the 1993 Turkish Demographic and Health Survey*. Calverton, M. D: Ministry of Health, Turkey and Macro International Inc.
- Ali Tanti Robert. (2014). *Intensifying reproductive health education to battle adolescent pregnancies in Ghana*. Article featured in MC modern Ghana. Retrieved from <https://www.modernghana.com/news/572743/intensifying-reproductive-health-education-to-battle-adolesc.html>
- Amosu A. M., Degun, A. M, Thomas A. M, Olanrewaju M. F, Babalola A O, Omeonu P E, Ola O. O. (2011). *A study on the acceptance and practice of focused antenatal care by healthcare providers in the south-west zone of Nigeria*. *Arc. Appli. Sci. Res*, 2011; 3(1): 484–491.
- Andersen. R. M. A and Newman. J. F, (1973). *Societal and individual determinants of medical care utilization in United States*. *Milbank Memorial quarterly*, Vol. 51, 95-124.
- Anita Anima Daniels, (2013). *Factors influencing the utilisation of maternal health services: the perspective of rural women in Ghana*. *Journal of Public Administration and Governance* ISSN 2161-7104 2013, Vol. 3, No. 2
- Atuyambe, L., Mirembe, F., Johansson, A., Kirumira, E. K., Faxelid, E., (2005). *Experiences of pregnant adolescents-voices from Wakiso district, Uganda*: *African Health Sciences* 2005; 5(4): 304-309







- Awusi et al, (2009). [www.udsspace.udsa.edu.gh](http://www.udsspace.udsa.edu.gh). *Determinants of antenatal care services utilization in Emevor village, Nigeria*. Benin Journal of Postgraduate Medicine Department of Family Medicine, College of Medical Sciences, Delta State University, Abraka, Delta State, Nigeria.
- Babalola, S. and Fatusi A. (2009). *Determinants of use of maternal health services in Nigeria-looking beyond individual and household factors*. Bio-Med Central Pregnancy and Childbirth. 9(43).
- Bankole, A., & Wesstoff, C. F. (1996). *Mass media influences on contraceptive behavior and reproductive preferences*. Paper presented at the Annual Meeting of the Population Association of America, New Orleans, LA.
- Bell, J., Curtis, S. L., & Alayon, S. (2003). *Trends in delivery care in six countries. DHS analytical studies: No 7*. Calverton, MD: ORC Macro.
- Blessing I. Babalola. (2014); *Determinants of urban-rural differentials of antenatal care utilization in Nigeria*. African Population Studies Vol. 28, No. 3.
- Celik, Y. & Hotchkiss, D. R. (2000). *The socio-economic determinants of maternal health care in Turkey*. Social Science and Medicine, 50, 1797-1806.
- Chalmers B, Mangiaterra V., Porter R. (2001). *WHO principles of prenatal care: The essential antenatal, prenatal, and postpartum care course*. Birth, 28(3): 202–207.
- Chiwaula C. H. (2011). *Factors associated with late initiation of antenatal care among women of Lilongwe, Malawi*. Malawi.
- Christina Leah Banda. (2013). *Barriers to utilization of focused antenatal care among pregnant women in Ntchisi district in Malawi*. Master's Thesis, University of Tampere, Tampere School of Health Sciences (Public Health).
- Christopher et al. (2013). *Factors affecting antenatal care attendance: Results from qualitative studies in Ghana, Kenya and Malawi*. Volume 8, Issue 1, e53747

- Ciceklioglu M., Soyer M. T., Ocek Z. A. (2005). *Factors associated with the utilization and content of prenatal care in a western urban district of Turkey*. International Journal for Quality in Health Care. 17(6), 533–539.
- Conrad P., Schmid G., Tientrebeogo J., Moses A., Kirenga S., Neuhann F., Müller O., Sarker M. (2011). *Compliance with focused antenatal care services: Do health workers in rural Burkina Faso, Uganda and Tanzania perform all ANC procedures?* Tropical Medicine & International Health: 17(3), pp.300–307.
- Cynthia Nombulelo Mlilo-Chaibva. (2007). *Factors influencing adolescents' utilisation of antenatal care services in Bulawayo, Zimbabwe*. University Of South Africa.
- David Okutu. (2006). *Access to and utilization of antenatal care services in Uganda*. Affiliation: Regional Institute for Population Studies. University of Ghana, Ghana.
- Elo, I.T. (1992). *Utilization of maternal health care services in Peru: the role of women's education*. Health Transition Review, 2 (1), 1-20.
- Erci B. Barriers to utilization of prenatal care services in Turkey. Journal of Nursing
- Ghana Health Service, Annual Health Report. (2013). Yendi Municipal Health Directorate
- Ghana Statistical Service (GSS), Ghana Health Service and ICF Macro. (2014). *Ghana Demographic and Health Survey: Key indicators*. International Rockville, DHS Program, Maryland, USA and Accra, Ghana
- Ghana Statistical Service (GSS). (2013). *2010 Population and Housing Census: national analytical report*. Accra, Ghana: GSS.
- Ghana Statistical Service and ICF Macro. (2009). *Demographic and Health Survey*. Accra and Calverton, Maryland.





- Glei D. A., Goldman N., [www.udsspace.udsu.edu.gh](http://www.udsspace.udsu.edu.gh), Rodriguez G. (2003). *Utilization of care during pregnancy in rural Guatemala: Does obstetrical need matter?* Social Science & Medicine, 57(12), 2447–2463.
- Hulka and Wheat. (1985). *Health behavior: Emerging research perspectives*. Edited by Sonya Bahar
- Jeffrey Roth. (1998). *The risk of teen mothers having low birth weight babies: Implications of recent medical research for school health personnel*. Article in Journal of School Health. Impact Factor (Volume 1 pp. 43). <http://dx.doi.org/10.1111/J.1746-1561.1998.Tb00581-X>
- Lee LC, Yin T. J. C., Yu S. (2009). *Prenatal examination utilization and its determinants for immigrant women in Taiwan: An exploratory study*. The journal of nursing research, JNR, 17(1), pp.73–82.
- Lix L, Finlayson G, Yogendran M, Bond R, Bodnarchuk J & Soodeen R. "Primary Prevention: An Examination of Data Capabilities in Manitoba." January, 2005.
- M. K. Yeboah. (2012). *Research paper social support and access to prenatal health services: A study of pregnant teenagers in Cape Coast, Ghana*. Kwame Nkrumah University of Science and Technology (KNUST) Journal of Science and Technology, Vol. 32, No. 1 (2012), pp. 68-78. <http://dx.doi.org/10.4314/just.v32i1.8>
- Magadi M. A., Madise N. J., Rodrigues R. N. (2000). *Frequency and timing of antenatal care in Kenya: Explaining the variations between women of different communities*. Soc. Sci. Med. 51: 551-61.
- Magadi, M. A., Agwanda, A. O., & Obare, F. A. (2007). *A comparative analysis of the use of maternal health services between teenagers and older mothers in sub-Saharan Africa: Evidence from Demographic and Health Surveys (DHS)*. Social Science and Medicine, 64, 1311–1325.



- Magadi, P. T., Thembi, [www.udsspace.udsa.edu.gh](http://www.udsspace.udsa.edu.gh), I. T., Ransjo-Arvidson, A. B & Ahlberg, B. M. (2002). *Quality of maternity care for adolescent mothers in Mbabane Swaziland*. International Nursing, Maternal and Neonatal Health (MNH) Program, Focused Antenatal Care: Planning and Providing Care during Pregnancy, Maternal and Child Health Division, Office of Health, Infectious Diseases and Nutrition, Bureau for Global Programs, U.S. Agency for International Development, No. HRN-A-00-98-00043-00.
- Mathole T., Lindmark G., Majoko F., Ahlberg B. M. (2004). *A qualitative study of women's perspectives of antenatal care in a rural area of Zimbabwe*. Midwifery, 20(2), 122–132.
- Matthew Naakiyab Laari. (2014). *Factors Influencing Prenatal Outcomes Among Adolescent Pregnancies in Kassena Nankana Municipality, Upper East Region, Ghana*.
- Matua, A. G. (2004). *Determinants of maternal choices for place of delivery in Ayivu County, Uganda*. Africa Journal of Nursing and Midwifery 6(1):33-38.
- Mufune, P. (2009). *The male involvement programme and men's sexual and reproductive health in Northern Namibia*. Current Sociology, 57, 231–248.
- Mumtaz Z. and Salway S. (2005). *I never go anywhere: Extricating the links between women's mobility and uptake of reproductive health services in Pakistan*. Social Science & Medicine, 60(8), 1751–1765.
- National Population Council. (2000). *Republic of Ghana Adolescent Reproductive Health Policy*, Ghana.
- Navaneetham K., Dharmalingam A. (2002). *Utilization of maternal health care services in Southern India*. Soc. Sci. Med, 55: 1849-69.
- Ndyomugenyi R., Neema S., Magnussen P. (1998). *The use of formal and informal services for antenatal care and malaria treatment in rural Uganda*. Health Policy and Planning, 13:94–102.



- Nisar N and White F. (2003). [www.udsspace.udsu.edu.gh](http://www.udsspace.udsu.edu.gh) *Factors affecting utilization of antenatal care among reproductive age group women (15–49 years) in an urban squatter settlement of Karachi.* JPMA – Journal of the Pakistan Medical Association, 53(2), 47–53.
- Nwogu, E. C. (2009). *Utilization of maternity care in Nigeria.* Global Journal of Pure and Applied Sciences, 15. 439–437.
- Odimegwu, C. O., Adewuyi, A. A., Odebiyi, T., Aina, B., Adesina, Y., Olatubara, O. (2005). *Men's role in emergency obstetric care in Osun State of Nigeria.* African Journal of Reproductive Health, 9, 59–71.
- Ogunlesi, T. A. (2010). *Maternal socio-demographic factors and the initiation and exclusivity of breastfeeding in a Nigerian semi urban setting.* Maternal and Child Health Journal, 14, 459–465.
- Ogunlesi, T. A., & Ogunlesi, F. B. (2012). *Family socio-demographic factors and maternal obstetric factors influencing appropriate health-care seeking behaviours for newborn Jaundice in Sagamu, Nigeria.* Maternal and Child Health Journal, 16, 677–684.
- Pallikadavath S. Foss M, Stones RW. Antenatal care: provision and inequality in rural North India. Social Science and Medicine. 2004; 59(6), 1147–1158.
- Paredes I, Hidalgo L, Chedraui P, Palma J, Eugenio J. Factors associated with inadequate prenatal care in Ecuadorian women. International Journal of Gynecology & Obstetrics, 2005; 88(2), 168–172.
- Peacock, D., & Levack, A. (2004). *The men as partners program in South Africa: Reaching men to end gender-based violence and promote sexual and reproductive health.* International Journal of Men's Health, 3, 173–188.
- Philip O. Sijuwade. (2015). *Social support and access to prenatal health services among pregnant teenagers.* International Journal in Commerce, IT & Social Sciences, IJCISS Vol.2 Issue-05, (May, 2015) ISSN: 2394-5702

- Prakash, A., Swain, S., & Negi, K. S. (1994). *Who decides?* Indian Pediatrics, 31, 978–980.
- Rahman, M. H., Mosley, W. H., Ahmed, S., & Akhter, H. H. (2007). *Does service accessibility reduce socioeconomic differentials in maternal care seeking? Evidence from rural Bangladesh.* Journal of Biosocial Science, 40, 19–33.
- Rai et al (2012). *Utilization of Maternal Health Care Services among Married Adolescent Women: Insights from the Nigeria Demographic and Health Survey, 2008.* Nigeria
- Raj, A., Saggurti, N., Balaiah, D., & Silverman, J. G. (2009). *Prevalence of child marriage and its effect on fertility and fertility-control outcomes of young women in India: A cross sectional, observational study.* Lancet, 373, 1883–1889.
- Retherford, R. D., & Mishra, V. K. (1997). *Media exposure increases contraceptive use.* National Family Health Survey Bulletin. Mumbai, India: International Institute for Population Sciences; and Honolulu: East-West Center Program on Population.
- Ronsmans, C., Etard, J. F., Walraven, G., Hoj, L., Dumont, A., Bernis, L. (2003). *Maternal mortality and access to obstetric services in West Africa.* Tropical Medicine and International Health, 8, 940–948.
- Santhya, K. G., Jejeebhoy, S. J., & Ghosh, S. (2008). *Early marriage and sexual and reproductive health risks: Experiences of young women and men in Andhra Pradesh and Madhya Pradesh, India.* New Delhi, India: Population Council. Scholarship, 2003; 35(3), 269–273.
- Sharma B. (2004). *Utilization of antenatal care services in Nepal.* Nepal Population Journal, 11(10), 79–97.
- Sharma, S. K., Sawangdee, Y. and Sirirassamee, B. (2007). *Access to health: women's status and utilization of maternal health services in Nepal.* Journal of Biosocial Science, 39, 671-692.





- Simkhada B, Porter M, Van Teijlingen E. R. (2010). [www.udsspace.udsu.edu.gh](http://www.udsspace.udsu.edu.gh). *The role of mothers-in-law in antenatal care decision-making in Nepal: a qualitative study*. BMC pregnancy and childbirth, 10, pp.34.
- Simkhada B. D., Van Teijlingen E. R., Porter M., Simkhada P. (2008). *Factors affecting the utilization of antenatal care in developing countries: systematic review of the literature*. Journal of Advanced Nursing, 61(3):244-60.
- Singh et al. (2014). *Utilization of maternal healthcare among adolescent mothers in urban India: Evidence from DLHS-3*. Peer J, pp. 592. <http://dx.doi.org/10.7717>
- Singh, L., Rai, R. K., & Singh, P. K. (2011). *Assessing the utilization of maternal and child health care among married adolescent women: Evidence from India*. Journal of Biosocial Sciences. <http://dx.doi.org/10.1017/S0021932011000472>.
- Singh, N. K. & Khare, S. (2001). *Outcome in adolescent pregnancy*. The Journal of Obstetrics and Gynaecology of India 51(6):34-36.
- Singh, P. K., Rai, R. K., Alagarajan, M., & Singh, L. (2012). *Determinants of maternity care services utilization among married adolescents in rural India*. 7, e31666.
- Socioserve Ghana. (2012). *Towards an effective collaboration for quality maternal and neonatal health delivery: The role of traditional birth attendants & the Ghana health service*. Retrieved from <http://socioservegh.org/kitnes/data/2012/06/29/1.947729.pdf>
- Sternberg, P., & Hublely, J. (2004). *Evaluating men's involvement as a strategy in sexual and reproductive health promotion*. Health Promotion International, 19, 389–396.
- Stewart, K., & Sommerfelt, A. E. (1991). *Utilization of maternity care services: A comparative study using DHS data*. Proceedings of the Demographic and Health Surveys World Conference (Vol. III; pp. 1645–1668). Washington, DC.



- Tawiah E. O. (2011). [www.udsspace.uds.edu.gh](http://www.udsspace.uds.edu.gh). *Maternal health care in five sub-Saharan African countries*. Regional Institute for Population Studies-University of Ghana, Legon; *African Population Studies* Vol. 25, 1
- Thode et al. (2004). *Health care utilization in Germany: theory, methodology, and results*. Edited by Christian Janssen, Nadine Ladebeck, Thomas von Lengerke.
- United Nations Agency for International Development (USAID) (2006). *System analyzing: Resources for engaging men in sexual and reproductive health*. Washington, DC: USAID, Inter Agency Gender Working Group.
- United Nations Agency for International Development (USAID). (2000). *Involving men in sexual and reproductive health: An orientation guide*. Washington, DC: USAID, Interagency Gender Working Group.
- United Nations Agency for International Development (USAID). (2003). *Reaching men to improve reproductive health for all implementation guide*. Washington, DC: Interagency Gender Working Group.
- Valente, Poppe, & Merritt. (1996). *Routledge Handbook of Applied Communication Research*. Edited by Lawrence R. Frey, Kenneth N. Cissna
- Wall, L. L. (1998). *Dead Mothers and Injured Wives: The Social Context of Maternal Morbidity and Mortality among the Hausa of Northern Nigeria*. *Studies in Family Planning*. 29 (4): 341-359.
- Wamani, H., Astrom, N., Peterson, S., Tylleskar, T., & Tumwine, J. K. (2005). *Infant and young child feeding in Western Uganda: Knowledge, practices and socioeconomic correlates*. *Journal of Tropical Pediatrics*, 51, 356–361.
- WHO. (2006). *Opportunities of Africa's newborns, Practical data, policy and programmatic support for newborn care in Africa*. Retrieved from <http://www.who.int/pmnch/media/publications/oanfullreport.pdf>



- WHO. (2005). [www.udsspace.udsu.edu.gh](http://www.udsspace.udsu.edu.gh). *Make every mother and child count*. World Health Report, World Health Organization, Geneva, Switzerland.
- WHO. (2014). *Adolescent pregnancy*. WHO Fact sheet. Retrieved from <http://www.who.int/mediacentre/factsheets/fs364/en/>
- Wong, E. L., Popkin, B. M., Guilkey, D. K. and Akin, J. S. (1987). *Accessibility, quality of care and prenatal use in the Philippines*. *Social Science & Medicine*, 24(11), 927-944.
- World Health Organization. (2002). *WHO antenatal care randomized trial: manual for the implementation of the new model*. WHO document WHO/RHR/01.30. Geneva.
- Yengo ML. (2009). *Nurses' perception about the implementation of focused antenatal care services in District facilities of Dares Salaam*. University of South Africa.
- Ziyani, I. S., King, L. & Ehlers, V. J. (2004). *Using triangulation of research methods to investigate family planning practices in Swaziland*. *Africa Journal of Nursing and Midwifery* 6(1):12- 17.



**Appendix 1: Research questionnaire**

**UNIVERSITY FOR DEVELOPMENT STUDIES-TAMALE**  
**MODULAR IV MSC COMMUNITY HEALTH AND DEVELOPMENT**

**DISSERTATION QUESTIONNAIRE**

**Topic: Assessing the determinants for the utilization of antenatal care services among adolescent mothers in the Yendi Municipality.**

ID..... /H/No.....

**A. *Demographic characteristics***

1. Name of community.....
2. Residence  
(a) Rural (b) Urban
3. Age of respondent .....
4. Ethnicity  
(a) Dagomba (b) Konkomba (c) Others specify.....
5. Religion  
(a) Muslim (b) Christian (c) Traditional (d) None
6. Marital status  
(a) Single (b) Married (c) Divorce (d) Separate

**B. *Knowledge of antenatal care (ANC) service***

7. Have you heard of antenatal care (ANC) before?  
(a) Yes  
(b) No (**go to 15**)
8. If yes, from which source?  
(a) Friends  
(b) Parents  
(c) School  
(d) Health facility  
(e) Radio  
(f) TV  
(g) Internet  
(h) Graphic  
(i) Others specify.....



9. Which categories of people go for ANC?  
(a) Children  
(b) Women  
(c) Pregnant women
10. What issues are being discussed during ANC?  
(a) The importance of ANC  
(b) Nutrition  
(c) Services available at ANC  
(d) The need for early ANC initiation  
(e) Management of pregnancy related complications  
(f) The importance of postnatal care  
(g) Others specify.....
11. How effective are the issues discussed?  
(a) Below average  
(b) Average  
(c) Above average
12. How often do you attend ANC?  
(a) Once a week  
(b) Once a month  
(c) Twice a month  
(d) Others specify.....
13. Do you go by the timetable?  
(a) Yes  
(b) No
14. Who gave you this timetable?  
(a) TBA  
(b) Nurse/Midwife/CHN  
(c) Doctor  
(d) Others specify.....

**C. Antenatal care (ANC) services provided by health workers**

15. Have you attended ANC during your last pregnancy?  
(a) Yes (**go to 17**)  
(b) No
16. If no, why did you refuse to attend ANC?  
(a) Lack of money to access service  
(b) Health facility far from home  
(c) Unfriendly health staff  
(d) Cumbersome process to go through at the facility  
(e) Had to undergo cultural rituals  
(f) Others specify.....



17. How many times did you attend ANC in your last pregnancy?  
(a) 1-3  
(b) 4+
18. When did you initiate ANC during your last pregnancy?  
(a) First three months of the pregnancy  
(b) Second three months of the pregnancy  
(c) Third three months of the pregnancy
19. What prevented you from initiating ANC during the first three months?  
(a) Health facility far from home  
(b) Unfriendly health staff  
(c) Cumbersome process to go through at the health facility  
(d) Had to undergo cultural rituals  
(e) Did not have money  
(f) Others specify.....
20. Was your urine sample taken?  
(a) Yes  
(b) No  
(c) Don't know
21. Was your blood sample taken?  
(a) Yes  
(b) No  
(c) Don't know
22. Were you given an injection on your upper arm?  
(a) Yes  
(b) No (**go to 24**)  
(c) Don't know
23. How many times were you given the injection?  
(a) Once  
(b) Twice or more  
(c) Don't know
24. Were you given SP tablets to take?  
(a) Yes  
(b) No (**go to 26**)  
(c) Don't know
25. How many times were you given the tablet?  
(a) Once  
(b) Twice  
(c) Thrice  
(d) Don't know



26. Why were you not given?  
(a) Allergic to the drug  
(b) Drug not available  
(c) Others specify.....
27. Where did you deliver your baby?  
(a) Home  
(b) CHPS C/ HC/Hospital
28. Who assisted in the delivery?  
(a) TBA  
(b) Doctor/Nurse/Midwife /CHN

***D. Determinants of antenatal care ANC utilization***

29. Did you pay for ANC services?  
(a) Yes  
(b) No
30. How much did you pay for the services?  
(a) GH¢5  
(b) GH¢10  
(c) Above GH¢10
31. Are you engaged in any income generating activity?  
(a) Yes  
(b) No (**go to 33**)
32. What income generating activity are you engaged?  
(a) Farming  
(b) Petty Trading  
(c) Others specify.....
33. How much do you earn from this activity per month?  
(a) Less than GH¢200  
(b) Between GH¢200- GH¢400  
(c) Between GH¢400- GH¢1000  
(d) More than GH¢1000
34. Does the amount you earn able to sustain you and your child?  
(a) Yes  
(b) No
35. Do you get any support anywhere?  
(a) Yes  
(b) No (**go to 37**)



36. Where do you get your support?  
(a) Family  
(b) Friend  
(c) NGO  
(d) FBO  
(e) Others specify.....
37. Have you attended school before?  
(a) Yes  
(b) No (**go to 39**)
38. What is the level of your education?  
(a) Basic  
(b) Secondary  
(c) Tertiary  
(d) Others specify.....
39. Does the father of your child attended school before?  
(a) Yes  
(b) No (**go to 41**)
40. What is his level of education?  
(a) Basic  
(b) Secondary  
(c) Tertiary  
(d) Others specify.....
41. Why did you go for ANC?  
(a) Because I was sick  
(b) Because I was educated on the need to do so  
(c) Because I knew I was pregnant  
(d) Others specify.....
42. Where did you attend ANC during your last pregnancy?  
(a) CHPS Compound  
(b) Health Centre  
(c) Hospital  
(d) Others specify.....
43. How far is the health facility from your home?  
(a) Less than 1 km  
(b) Between 1 to 2 km  
(c) More than 2 km  
(d) Others specify.....



44. How do you get to the health facility?  
(a) I walk  
(b) I use bicycle  
(c) I use motor bike  
(d) I use vehicle  
(e) Others specify.....
45. Is the road to the facility accessible throughout the year?  
(a) Yes  
(b) No
46. How was your relation with the health workers during ANC?  
(a) Friendly  
(b) Unfriendly
47. Was that your first ANC visit?  
(a) Yes  
(b) No
48. How did you feel when you visited ANC for the first time?  
(a) Uncomfortable  
(b) Normal  
(c) Time consuming  
(d) Others specify.....
49. What was your reaction after the visit?  
(a) Stopped attending  
(b) Continue attending  
(c) Decided going to the TBA  
(d) Others specify.....
50. Do you have any cultural belief or practice that prevents pregnant women from attending ANC?  
(a) Yes  
(b) No
51. If yes, what is it  
.....  
.....  
.....  
.....  
.....  
.....



**Appendix 2: In –depth interview guide**

**UNIVERSITY FOR DEVELOPMENT STUDIES-TAMALE**  
**MODULAR IV MSC COMMUNITY HEALTH AND DEVELOPMENT**

**IN –DEPTH INTERVIEW GUIDE**

*Topic: Assessing the determinants for the utilization of antenatal care services among adolescent mothers in the Yendi Municipality.*

1. How old are you?
2. Which tribe are you?
3. How can I refer the father of your child to you?
4. What is the level of your education?
5. Which religion do you practice?
6. What do you do for your livelihood?
7. Which category of people goes for ANC?
8. Where did you get that information from?
9. May I ask why you went for ANC services during your last pregnancy?
10. Could you narrate to me what you went through ANC during your last pregnancy, meaning from the first day of your visited to the day you delivered? Please just be brief.
11. Could you narrate to me some of your challenges or the challenges your colleagues faced in the utilization of ANC services?
12. What do you think in your opinion is the role of TBAs in the utilization of ANC services among adolescent mothers?

