UNIVERSITY OF GHANA

ACCESS AND TRENDS OF UTILIZATION OF MATERNAL HEALTHCARE SERVICES AMONG RURAL WOMEN IN ASIKUMA ODOBEN BRAKWA DISTRICT IN THE CENTRAL REGION OF GHANA

BY

AMPONG-ANSAH, FRANCIS

(10443878)

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DECLARATION

I, Francis Ampong- Ansah, do hereby declare that this work was put together entirely by my own effort. I further state that, all exiting literatures I consulted or quoted have been duly acknowledged. I again emphasize that this thesis has not been presented either in part or whole for any other degree elsewhere.

…… ……..

FRANCIS AMPONG-ANSAH DATE
(10443878)

CERTIFICATION

I, do hereby certify that, this thesis was supervised by me in accordance with the procedures laid down by the University of Ghana.

…… ……

THEOPHILUS MALOREH-NYAMEKYE, PHD DATE

DEDICATION

This thesis is dedicated to my dearest mother Sarah Ampong (Esi Korantemaa) of Breman Esiam (Nkwantanum, NK 2) in the central region of Ghana who has always been my greatest source of inspiration to climb high the academic ladder.

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LIST OF ABBREVIATIONS

ANC	-	Antenatal Health Care
AOB	-	Asikuma Odoben Brakwa
AOBDA	-	Asikuma Odoben Brakwa District Assembly
APRM	-	Africa Peer Review Mechanism
CADN	-	Culture Access Demographic Needs (for conceptual framework)
CHPS	-	Community –based Health Planning Service
CHN	-	Community Health Nurse
CRHD	-	Central Regional Health Directorate
CSDS	-	Cross Sectional Descriptive Survey
DAs	-	District Assemblies
DAHP	-	Delivery Assisted by a Health Professional
DHD	-	District Health Directorate
DHIO	-	District Health Information Officer
Ds	-	The three delays that leads to Maternal Mortality
FMHCP	-	Free Maternal Health Care Policy
GDHS	-	Ghana Demographic and Health Survey
GPRTU	-	Ghana Private Road Transport Union
LOC	-	Local Council of Churches
HPs	-	Health Professional(s)
HFs	-	Health Facility (ies)
MCA	-	Millennium Challenge Account
MDGs	-	Millennium Development Goals
MHCs	-	Maternal Healthcare Services
MM	-	Maternal Mortality
MMR	-	Maternal Mortality Rates

MOH	-	Ministry of Health
MMRs	-	Maternal Mortality Ratios
NEPAD	-	New Partnership for Africa Development
NHIS	-	National Health Insurance Scheme
POB	-	Place of Delivery
TBAs	-	Traditional Birth Attendants
UNDP	-	United Nations Development Program
UNICEF	-	United Nations
WHO	-	World Health Organization
WDI	-	World Development Index

ABSTRACT

The death of a mother as a result of maternal healthcare implications is a source of worry to all and sundry. The formation of MDGs in the year 2000 was very timing. It led to the introduction of various healthcare interventions globally with the aim of improving access to maternal healthcare utilization and subsequently reduce maternal mortality. This study, therefore identified the factors that influence utilization of Maternal healthcare services among rural women in Asikuma Odoben Brakwa whiles looking at the relationship between provision of both geographic and financial accessibility and its impact on the trend of utilization of ANC and DAHP after the introduction of such policies.

Using both quantitative and qualitative methods, data was collected from both primary and secondary sources and analysed using SPSS version 20. The cross sectional descriptive survey designed was used to draw inferences from responses of 267 study participants among rural women in Asikuma Odoben Brakwa. It was revealed that; the need characteristics of health seeking behaviours; evidence of sickness, perceived presence of sickness and experience of previous complications were the major factors for utilizing ANC and DAHP services by rural women in AOB. Again, age of a women, her level of education, employment or poverty level coupled with the number of previous births/children have various level of influence on her decision to utilize ANC services. Availability of Health Facility (HF) in a woman's' village, the distance covered to the nearest HF and possession of a Free Maternal Healthcare Policy (FMHCP) card had little significance on utilization but did not fully guarantee utilization. Religious and cultural dynamics and marital status on the other hand has no influence on utilization.

Further efforts at expanding the healthcare coverage to all corners of the country, especially the rural areas, coupled with the proper maintenance or reconstruction of access roads and complete removal of all charges on all ANC and DAHP services and effective strategies to promote domiciliary midwifery by training more Community Health Nurses is very essential if indeed Ghana desires to reduce the operations of TBAs and subsequently meet the target of MDG 5 in 2020. Moreover extensive research work need to be conducted at various ecological levels and specific policy directions admonished to address specific contextual health needs rather than generalization which rather benefit the middle class and urban dwellers.

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Introduction

This study examines how the introduction of the various policies and interventions aimed at improving upon both geographic and financial accessibility to maternal healthcare services (CHPS compounds and free maternal healthcare policy) have influenced the level of utilization of such services in rural Ghana using rural communities in Asikuma Odoben Brakwa district as the study setting. Specifically, the study seeks to find out the factors that influence utilization of Antenatal Care (ANC) and Delivery Assisted by Health Professional (DAHP) among rural women while focusing on the relationship between access and utilization in the district as well as analysing the trend of utilization of ANC and DAHP services after the introduction of these policies (2006 to 2014). Again, the study suggests ways to improve upon utilization of MHC services aside the removal of the user fees and expansion of the coverage. This chapter entails the study's background, problem statement and the objectives of the study, research questions, hypothesis, and significance of the study, synopsis of literature review and organization of the study.

1.1 Background to the study

In September 2000 world leaders committed the world to a new global partnership to reduce extreme hunger, poverty, poor health and expand the choices of the poor (MDG website 15th August 2014). Dubbed the Millennium Summit, in New York, the development of the MDG was necessitated to set as a common development framework at both global and national levels for accelerated development in all countries (Zedillo *et al* 2001). Goal one and five focuses on reducing poverty and extreme hunger and maternal health respectively.

According to the United Nations Development Programme (UNDP) report (2014), forty two percent (42%) of the population in developing countries especially in sub Saharan Africa

lived on less than 1.25 dollars per day as at 1990. These poverty levels were as a result of low income levels, lack of education and policies that affect the living standards of the people in many ways of which inability to access and utilization of health care services are keen (See; Casas, Dachsan and Bambas, 2001; Mackenback and Kunst, 1997; Subramanian, Belli, Kawachi, 2002). MDG goal one is aimed at reducing extreme poverty and hunger by half between 1990 and 2015.

On the issue of maternal mortality, Addai (2000) indicated that over half a million women died each year from diseases and complications during pregnancy, childbirth and post births. Similarly, world indications were that, an estimated 800 maternal deaths were recorded each day from pregnancy related diseases (WHO, 2005 and Wilmoth *et al*, 2012). This worrying situation (Sen, 2002) informed goal five which focuses on issues of maternal health and is targeted at reducing maternal mortality by three quarters (¾) between 1990 and 2015. Studies by Barros et al (2012) and WHO (2013) revealed that, most of these maternal deaths occur in developing countries because of maternal healthcare services that most women are unable to acquire as a result of inequalities in health which vary with time, place, and by specific health indicators.

This assertion is supported by, Magadi, Zulu, Brockerhoff (1993), Say and Raine (2007) and Smith (2008) who all found in their studies that there were variations in the use of maternal health care. In a study by Ronsmans *et al* (2006), they asserted that, the risk of a woman dying is high in developing countries as compared to developed countries. Carr (2004) and Boutayeb (2006) indicate that within the same country, especially in sub Saharan Africa, there were differences in the level of access and utilisation of healthcare services and health status.

In a related study, Ronsman *et al* (2006), stipulated that, whereas the maternal mortality rate in developing and under developed countries in Africa and South Asia remains very high (1 in

every 6 live births) that of the developed countries in Northern Europe and America is as low as 1 case in every 30,000 births.

With few months to end 2015, which also serves as the stipulated year for the achievement of the MDGs, findings of a study by WHO (2013) on facts about maternal health, gave indication that whereas 1 mother died out of every 150 live births in developing countries; the case of developed countries is 1 out of 38,000, depicting the existence of variation in healthcare accessibility. Studies by Magadi, Zulu and Brockerhoff, (2003), Saeed *et al* (2013), Giusti & Sotelo (2007) posit that the differences in utilization of health across population groups can be defined by socio economic, demographic, or geographic factors. Similarly, Tawiah (2011) attributes differences in utilization to socio-economic factors such as: inadequate antenatal care, institutional delivery and current use of contraceptive methods. In that same manner, Abor *et al* (2011) attribute the differences to poverty levels while Mekonnen and Mekonnen (2003) attribute it to religious and cultural dynamics citing issues of distinct socio-cultural backgrounds.

In the quest of world leaders and other related agencies to reduce the effects of differences in utilization of healthcare services, Rosenfield, Maine and Freedman (2006) found that, the World Health Organization, World Bank, UNDP, UNICEF all joined governments to introduce various policies, interventions and reforms in all regions of the world especially developing countries in an attempt to reduce poverty levels and eventually increase access to health care services for all (See Acheson 1998, Smith, 1998). Africa's desire to reduce the effects of differences in accessing general healthcare services and particularly maternal healthcare services cannot be overlooked. It is for this reason that the top short of the April 2007 third Ordinary Session of the Ministers for Health of the African Union (AU) in Johannesburg was directed towards commitment and strengthening of health systems for equitable health outcomes.

These ministers committed their nations to developing social protection systems, particularly for the poor and vulnerable groups in society, aimed at promoting greater access to healthcare services and protecting families from debt traps due to health emergencies. Similarly, the 2010 UN special summit in New York saw both developed and developing countries re-affirming their commitment to meeting the health related Millennium Development Goals (MDG) especially goal 5 which is aimed at reducing maternal mortality by ¾ by 2015.

In the case of Ghana, the introduction of MDG 1 saw various social intervention programs aimed at poverty reduction such as the Ghana Poverty Reduction Strategy (GPRS 1) which is regarded as reducing the number of poor people from 7.9 million or 52% of the population at that time in 1992 to 6.3 million or 29% of the population as at 2006. Other interventions such as Growth and Poverty Reduction Strategy (GPRS 2, 2006-2009), Ghana Shared Growth and Development Agenda (GSGDA 2010-2013), Micro – Finance and Small Loans Centre (MASLOC), Livelihood Empowerment Against Poverty (LEAP), and Savannah Accelerated Development Authority (SADA), as well as improvement in infrastructural development relating to accessibility were all introduced to reduce poverty and improve desire for utilization of social services especially for those in less developed communities and villages of which Asikuma Odoben Brakwa was not left out. The World Development Indicators (2013) also shows tremendous reduction in the poverty levels in Ghana confirming why Ghana was adjudged the first to meet MDG 1 in sub Saharan Africa.

Again the government of Ghana in 2003 through an act of parliament passed the National Health Insurance act which saw the establishment of the National Health Insurance Scheme (NHIS). This scheme replaced the LI 1313 of 1985 which mandated all persons who needed healthcare services to pay out of pocket (cash 'n' carry) for the full cost of the services provided from OPD to Dispensary (Brobbey- Mpianim, 2014). The scheme therefore provided a universal health for all especially the under privileged who could not pay for the

direct cost. As part of this policy, specific interventions were introduced to remove the financial burden (poverty gap) on maternal healthcare such as the free maternal healthcare policy and the building of more Community Health Planning Service compounds (CHPS) to increase access and provide advisory (health education) and antenatal attention for especially rural dwellers seeking maternal healthcare services. These interventions were all aimed at laying the foundation and support an undisputed fact that the healthcare that a mother receives during pregnancy, at the time of delivery, and soon after delivery is important for the survival and well-being of both the mother and her child (GDHS, 2008). Again Asikuma Odoben Brakwa district benefitted.

With Ghana meeting MDG 1 (UNDP, 2014, World Bank 2014) as well as bridging both the financial and geographical gap between the rich and poor with regards to accessibility (free maternal health care policy, CHPS compounds), one would have expected a sharp increase in the desire of expectant mothers to seek maternal health services and eventually reduce maternal mortality. Unfortunately, studies by Ansong *et al* (2007) and Whiter *et al* (2009) asserts that though there seems to be a general decline in maternal mortality rate in Ghana (490 before MDGs and 380 in 2013), due to the introduction of the free maternal health care policy, there are still areas that need to be tackled so as to get the full utilization of the policy.

Similarly, Thaddeus and Maine (1994), Shah *et al* (2009), Ameyaw (2011), Wen-Ying *et al* (2013) indicate that, taking the financial burden (cash 'n' carry system of health care services/ financial ability to purchase health) off the shoulders of expectant mothers is not enough to increase access and utilization of maternal healthcare services and eventually reduce maternal mortality. This assertion therefore indicate that there are other factors aside monitory accessibility (reducing poverty) that confront people from accessing and utilising maternal health care.

Jehu-Appiah et al (2011) emphasized this assertion by his indication that; the National Health Insurance Scheme (NHIS) in Ghana is not, in general, reaching the poor. Thus though a pro poor policy to reduce financial (out of pocket) inequality in accessing maternal health care services between the poor and rich, other factors aside financial obligations (cash and carry) hinder the poor from fully enjoying the policy. Again Frimpong (2013) indicates that differences in the utilization of health care are implacable features among developing countries in Africa and Ghana and for that matter Asikuma Odoben Brakwa is no exception. This implies that, the key question as to whether the reduction in poverty levels nationally has had an effect on utilization of social services such as healthcare and specifically maternal healthcare services by rural women is yet to be answered.

1.2 Problem Statement

Generally, the desire to ascertain which factors cause differences in the utilization of healthcare services between and within developing countries has existed for a long time. According to Obermeyer and Potter (1991), Elo (1992) and Becker *et a*l (1993), as quoted by Ibnouf, Van den Borne, and Maarse (2007), there have been several studies since the mid-1980s to identify and understand what factors influence the utilization of maternal healthcare services in developing countries. The case of Africa and particularly sub-Saharan Africa has enjoyed more attention in this regard (Mekonnen *et al*, 2003; Ibnouf *et al* 2007; Chaibva, 2008; 2013; Babalola 2013 etc).

The specific case of Ghana is no exception. In the mid 1990 and early 2000, several studies were conducted within Ghana on maternal healthcare access and utilization (Martey *et al*, 1995, Addai 1998, Buor, 2003). Interestingly, whereas Martey *et al* (1995), looked at socioeconomic factors in only one district and collected primary data and found income as one of the key determinants of utilization of MHC services, Addai (1998), used data from the 1993 Ghana Demographic and Health Survey (GDHS), to investigate the demographic and

socio-cultural determinants of utilisation of maternal health services; yet both studies failed to look at how the introduction of the various healthcare interventions has contributed to accessing maternal healthcare (MHC) service in Ghana.

In recent times, the number of studies to identify socio - economic and cultural factors that influence utilization of MHC services continue to increase in developing countries (Kabeer, 2006; Tugwell *et al*, 2007; Chaibva, 2008; Kiwanuka *et al*, 2008; Sari, 2009; Tawiah, 2011, Frimpong, 2013, Abor *et al*, 2013; Babalola 2013 etc). The case of Ghana is no exception to this growing desire of finding factors that influence utilization of MHC services (Abor *et al*, 2011; Tawiah, 2011; Frimpong, 2013; Saeed *et al*, 2013, Daniels, 2013; Asamoah, 2014). Interestingly, findings of most of these studies point out to similar if not the same factors as causes of disparity in accessing MHC services. Factors such as age, education, school attendance, residence and employment were identified by Magadi *et al* (2003), Giusti and Sotelo (2007) and Saeed et al (2013). Elsewhere, Mekonnen *et al* (2003) identified religion and ethnicity coupled with basic needs and social status as key factors influencing the utilization of MHC services across sub - Saharan Africa.

In a study to determine the socio-economic determinants of maternal health care utilization in Ghana, Abor *et al* (2013) revealed similar factors as determinants to accessing and utilizing maternal health care services. Despite going further to run multiple regression to examine the changes in the utilization of maternal health care services where the study specified education, residence and access to health facilities as key determinants, the study failed to add data from the 2008 GDHS report to that of the 1993, 1998 and 2003.

Considering the 10 year gap between 2003 and 2013, findings of the survey on factors that influence access to maternal health care services could have changed drastically especially when there have been numerous interventions aimed at improving MHCS. This argument is

emanating from the fact that UNDP (2014) reports that Ghana was the first country in sub Saharan Africa to have met MDG 1 far back in 2007 and also to have introduced the CHPS compound system in 2003. With a reduction in the poverty levels of Ghanaians where only 27% of the population live below the 1.25 per day dollars poverty line (WDI, 2013), the demand for the utilization of social services of which access to and utilization of quality healthcare services must rise.

Reports from the GDHS (2008) show that, the trends in utilization of MHC services though improved do not match the expected rate thereby not meeting the target of reducing maternal mortality to 185 per 100,000 live births as proposed by WHO. This undue delay in meeting the MDG 5 supports studies by Thaddeus *et al* (1994), Shah, *et al* (2009), Ameyaw (2011), and Wen-Ying *et al* (2013), that taking the financial burden or bridging income disparity gaps among women is not enough to guarantee access to maternal healthcare services and eventually reduce maternal mortality. This therefore implies that other factors account for the utilization of Maternal Healthcare Services (MHCS) especially in rural communities such as Asikuma Odoben Brakwa.

The Population and Housing Census (PHC) report (2010) indicates that whereas the national average maternal mortality ratio was 485 that of central region was 520 per 100,000 live births and a disturbing Life Time Risk of 16 deaths per every 1000 women.

Again, despite numerous studies on utilization of maternal health care services in Ghana in general (Abor *et al* 2013; Saeed *et al* 2013) few studies have focused on specific districts (Bour 2004; Ameyaw, 2011; Daniels *et al*, 2013). Little or no studies have focused on specific districts in the central region especially AOB. A study by Amegbor (2014) which focused on health seeking behaviours of people in AOB also failed to address the specific issue of ANC and DAHP.

In another vane, the GDHS (2008) recommends the need for more studies at the ecological level in order to identify specific contextual factors that influence utilization of MHC services as pertains in the central region of Ghana and AOB district in particular which as at June 2013 was the most deprived district in the central region (AOB composite Budget, 2013).

This study therefore seeks to determine factors which influence utilization of antenatal care (ANC) and delivery assisted by health professional (DAHP) in the Asikuma Odoben Brakwa district, while looking at the association between the introduction of the various policies aimed at improving upon access and the changes in utilization in the use of such services from 2006 – 2014.

1.3 Purpose of the Study

The main aim of this study is to examine how the provision of access (both financial and geographic) has influenced the trends of utilization of MHC services among rural women in Ghana.

1.4 Objectives of the study

Specifically, the study seeks to:

(i) Ascertain the factors that influence the utilization of ANC and DAHP services among rural women in Ghana the AOB district as revealed by other studies.

(ii) Examine the link/dependency between access and utilization of maternal healthcare services (ANC and DAHP) in the Asikuma Odoben Brakwa district.

(iii) Examine the trend of utilization of ANC and DAHP in AOB from 2006 – 2014.

(iv) Suggest what can be done to improve upon access and utilization of antenatal health care services in Ghana.

1.4.1 Research Questions and Hypothesis

The study is guided by 2 research questions and 4 separate hypothesis aimed at ascertaining the factors that influence utilization of ANC and DAHP services in AOB as well as establishing the relationship and subsequent dependency between access and utilization.

(i) What factors influence the utilization of ANC and DAHP services among rural women in AOB district?

(ii) What is the trend of utilization of ANCs and DAHP in Asikuma Odoben Brakwa district from 2006 - 2014?

1.4.2 Hypothesis

Ho 1: There is no relationship between the provision of HF/CHPS compounds and the utilization of ANC and DAHP among rural women in AOB.

Ha 1: There is a relationship between the provision of HF/CHPS compounds and the utilization of ANC and DAHP among rural women in AOB.

Ho 2: Utilization of ANC services is not dependent on the distance between a woman's place of residence and the nearest health facility.

Ha 2: Utilization of ANC services is dependent on the distance between a woman's place of residence and the nearest health facility

Ho 3: There is no relationship between possession of FMHCP card and the utilization of ANC services

Ho 3: There is a relationship between possession of FMHCP card and the utilization of ANC services

Ho 4: Utilization of ANC services among rural women in AOB is dependent on possession of FMHCP card.

Ha 4: Utilization of ANC services among rural women in AOB is dependent on possession of FMHCP card.

1.5 Significance of the study

Determining the factors that influence the utilization of Maternal Healthcare services in rural Asikuma Odoben Brakwa (AOB) district is very important at this time and era where despite the introduction of several policies to reduce poverty and improve access to healthcare services in general (for example; LEAP, MASLOC, SADA, national health insurance policy, private mutual health insurance, building of CHPS compounds) and specifically access to maternal healthcare services (free maternal healthcare policy, free pregnancy registration, free counselling sessions for expectant mothers and training of traditional births attendances etc) aimed at reducing maternal mortality, indications are that Ghana would not be able to meet the MDG goal 5 by the close of 2015 (GTV, 2014).

It is therefore important for future researchers, policy formulators and implementers and other related bodies to be abreast with how provision of these interventions have contributed to the changes in factors that influence utilization of ANC and DAHP services in Ghana.

The study would provide in-depth evidence of the factors that influence utilization of ANC and DAHP services in the national view especially as the Ghana Demographic and Health Survey (GDHS) has not been conducted for the past seven years.

1.6 Limitations

Ideally, all women who have visited any of the CHPS compounds or have given birth within the past ten years (2006 to 2014) should have been made to fill the questionnaire especially as they would have given different reasons for utilizing a specific maternal healthcare service

(antenatal or delivery by health professional). The period under review should also have been extended to the early 2000s and late nineties so as to get more insight into factors that determined patronage of healthcare centres prior to the implementation of the Millennium Development Goals (MDG) 1 and 5 in Ghana. Unfortunately, due to unavailability of data on the utilization of ANC and DAHP at the AOB district health directorate coupled with time constraints and financial difficulty, the study made use of 267 women while limiting the time to one year after the introduction of the FMHCP (2006 – 2014).

Again, records of ANC attendance and DAHP services at the main hospital at Breman Asikuma, the two health posts at Brakwa and Odoben which ideally would not have been used, were unfortunately fused in the district's overall ANC and DAHP data and so could not be separated. This in effect, is feared to have affected the real figures of ANC attendance for only rural women/CHPS compounds especially as the main hospital serves as reference point for all the minor clinics and CHPS compounds in the entire Asikuma Odoben Brakwa district and that of Ajumako Enyan Esiam district, part of Assin North, South and Central and Agona West district.

1.7 Chapter Organization

The entire study was grouped into six main chapters. Chapter one was basically the introductory stage that looked at the background to the study, the research problem under investigation, objectives, research questions and hypothesis. Again the chapter explained the rationale for the study, the conceptual framework that guided the study as well as the limitations that were encountered in the course of the study. Finally, the introductory stage ended on how the whole study was organised.

Chapter two focused on review of related literature while placing emphases on factors that influence the utilization of maternal healthcare services as depicted by the conceptual

framework which was adapted to guide the study. The rate of maternal mortality in the global, continental and Ghanaian contexts as well as some of the policies which have been introduced to improve upon the livelihood of Ghanaians, especially the poor and deprived were discussed. Policies and social interventions to improve upon access and subsequent utilization of MHC were also reviewed in this chapter.

Chapter three focused on the methods that were employed in conducting the study. The scope, setting, approach and design of the study were spelt out. Rationale for choosing the specific design and study setting were explained. Other aspects such as sources of data and data collection instrument, target population, sample size and sampling techniques as well as mode of administering questionnaires were shown. How data was to be managed, presented and analysed were also explained in this chapter.

Findings of the study and its analysis were presented in chapter four. Similarly chapter five looked at discussions on how the findings of the study relate to what exists in literature. It also draws attention to peculiar findings in the data/results which had no direct lineage to previous literature but are very relevant to be brought out for both academic and professional consideration.

Chapter six which finalises the entire study, summarises, concludes and suggests or gives recommendation for future academic work researchers, policy formulators and implementers, developmental partners and the general public.

Three appendices were used to represent references cited in the write up of the study, tables and Graphs and Research Questionnaire/interviews.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter seeks to review all relevant literature that complements access and trends of utilization of maternal healthcare (MHC) services in rural Ghana with emphasis on Asikuma Odoben Brakwa district of the central region. The literature review will cover key definitions that would be used in the course of the study. In this regard, the factors that influence access and utilization of maternal health care services as indicated by Anderson *et al* (1975); maternal mortality rates; the structure of antenatal services in Ghana and Ghana poverty reduction strategy will be the focus of review. Other policies and interventions which have been formulated and implemented to bridge the financial accessibility of all health seekers will also be reviewed.

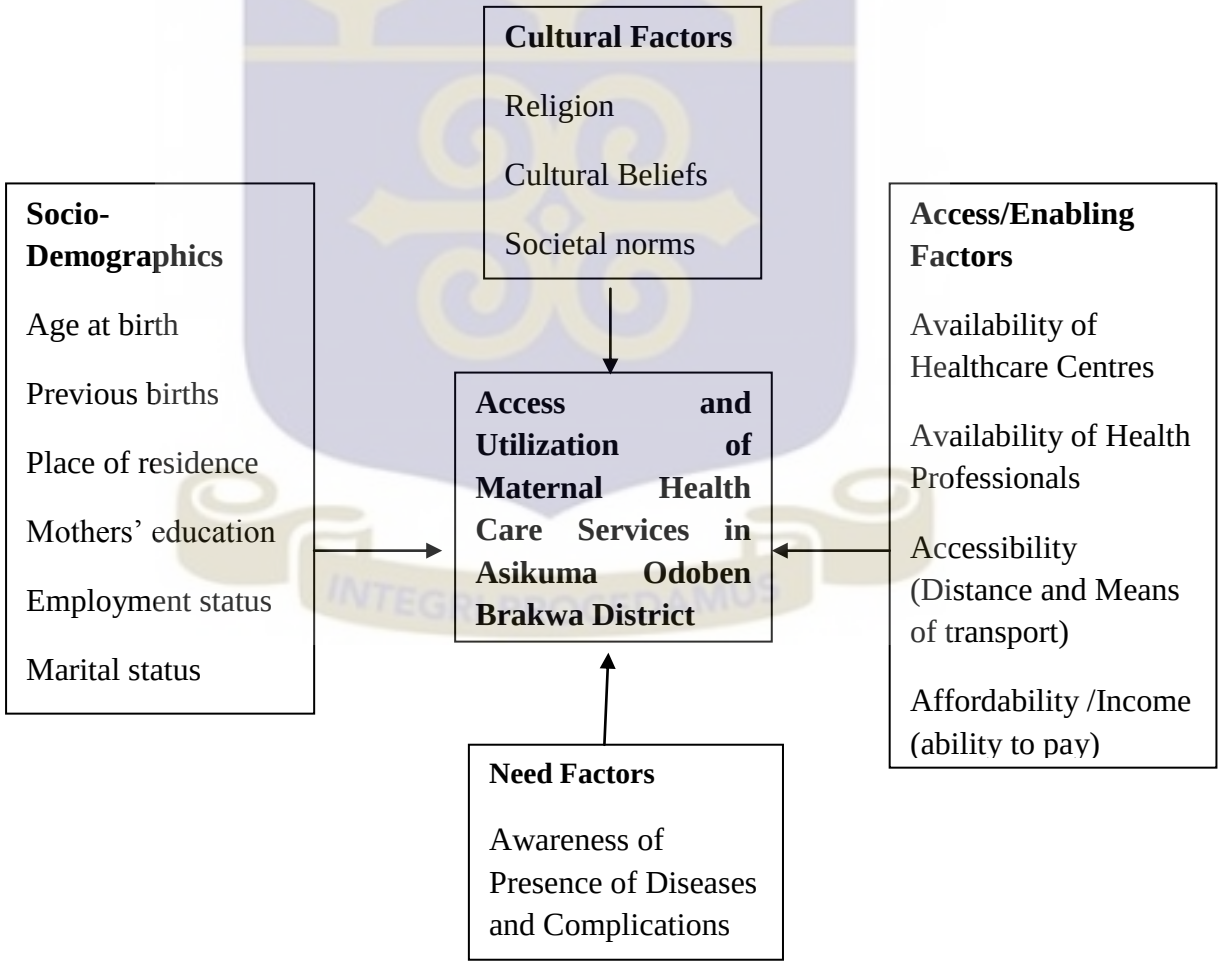
2. 1 Conceptual Framework

In this study, a conceptual framework is developed to guide and position the entire study. By this, the health seeking behavioural model designed by Anderson and Newman (1973) is adapted and modified to include the socio cultural factors. Therefore the CADN (cultural factors, Access/enabling factors, Socio-demographic factors and Needs factors) model is proposed as a conceptual framework for the study.

According to Chakraborty *et al* (2003) and Abor *et al* (2013), the health-seeking behavioural model as developed by Anderson and Newman (1973) posits that, the use of healthcare services is a function of three sets of individual characteristics. These characteristics are (i) predisposing characteristics such as age, household size, education, number of previous pregnancies, health-related attitude; (ii) enabling characteristics, such as income, characteristics of health care system and access and availability of health facilities; and (iii) need characteristics, such as presence of illness, perceived health status, and expected benefit from treatments. For the purpose of this study, the issue of cultural and religious influence

which has been found to be a major factor in utilizing certain healthcare services (Addai, 2000) will be added to the framework. Thus, though not grounded in theory, investigations by Ghana's investigative journalist; Anas Aryme Yaw Anas: The Messiah of Mentukwa (TV3, GTV, 2013) and revelations by the TV3 mission Ghana (2014) reveal worrying situations of how culture and religious beliefs influence women's decision to utilize maternal healthcare services. Similarly, the Roman Catholic Church worldwide forbids the use of contraceptives which is a major aspect of maternal healthcare; the Jehovah Witness forbids blood transfusion and these are clear examples of how religion has a toll on the utilization of certain healthcare services.

Figure 2.1: Diagrammatic presentation of conceptual framework



CADN Model adapted from the heath seeking behavioural model as developed by Anderson and Newman (1973) and adopted by Chakraborty et al (2003), Abor et al (2013) and Daniels et al (2013).

With the diversity of cultures and religious denominations that exist in Asikuma Odoben Brakwa district (AOBDA profile, 2O13 pg 13; Amegbor, 2014) it was important to include such a key element of cultural and religious influence when conceptualizing a framework for factors that influence the utilization of healthcare services especially maternal health. The CADN model is therefore well placed for this study, especially when studies by Tawiah (2011), Frimpong (2013), and Abor et al (2013), Saeed et al (2013) have identified majority of the variables in the model as those which influence the utilization of maternal health care services in sub-Saharan Africa of which Ghana is no exception.

2.1.1 Factors influencing utilization of maternal healthcare services in Ghana.

Humans in nature decide on every aspect of life before implementation of which seeking healthcare services is no exception. In this regard, Addai (2000) and Chakraborty *et al* (2003) posit that, the desire of an individual to utilize a specific healthcare service is a complex behavioural phenomenon. Accordingly, they suggest that, this phenomenon arises as a result of certain factors. These factors are a function of three sets of individual characteristics (Anderson *et al*, 1973). The characteristics involve (i) predisposing/demographic characteristics such as age, household size, education, number of previous pregnancies, health-related attitude; (ii) enabling/access characteristics, such as income, characteristics of health care system and accesses, and availability of health facilities; and (iii) need characteristics, such as characteristics of illness, perceived health status, and expected benefit from treatments (Chakraborty *et al*, 2003).

2.1.1.1 Predisposing Characteristics/ Socio Demographic Factors

Predisposing factors in the context of this study refer to all the socio-demographic factors that account for access and utilization of maternal health care services. That is, factors that account for accessing medical services in many situations differ from place to place and person to person (Magadi *et al*, 1993; Say and Raine, 2007). For instance, all things being

equal, one would suggest that, two women living in the same vicinity and of the same age would access medical care equally. Interestingly, this is not the case as other predisposing characteristics like level of education, family size, and previous births will cause a disparity in health care search (Abor *et al*, 2011). This argument was earlier proposed by Fosu (1994) who posits that predisposing factors reflect differences in families with different characteristics (ages, family size, educational level) would have different propensity (desire) to utilize specific health services. Thus, predisposing characteristics differ and so seeking for health care also differs. Therefore, predisposing factors can be linked to those basic individual socio demographic differences that account for differences in accessing maternal health care services GDHS (2008).

Age of Mother/Pregnant Woman

The age of a mother is likely to affect her perception about utilizing antenatal healthcare services to a large extent (Chaibva, 2008; Abor *et al*, 2011; Abor *et al* 2013; Babalola 2013). Several surveys have proved that women between the ages of 20 to 34 who utilize antenatal and postnatal healthcare services are more than those who are less than 20 years and those above 35 years (GDHS 2008).

With regards to those who are less than 20 years Chaibva (2008) indicates in her study conducted in Zimbabwe that a woman's age is likely to influence her decision to initiate antenatal care (ANC), late or not to attend at all, because of fear of being teased by her peers or not being married. To those above 35 years, several factors such as shyness of being overage, and over protection of pregnancy may account for not utilizing ANC. In this regard, most of these women may only seek for ANC after their first trimester and more so only when they perceive the presence of sickness.

Educational level of woman

According to Farrant (1980), education is the process of human learning, faculty training and social upbringing of an individual to be well modified and suited in his environs**.** In this view,

Farrant further stated that, education is a powerful tool which helps an individual to brighten his or her horizon. By this analogy, an individual who is educated is able to access information that is useful to his/her existence and so is able to decide on what, when, how and whether to do certain things or not. With regards to healthcare, an educated person (possible with SHS or above) is in a better position to decide on utilizing specific healthcare needs better than peers with lower educational levels (Tawiah, 2011; Abor *et al*, 2013; Frimpong 2013). Education therefore contributes immensely to an individual's desire to make preferred choices at what time, place and how best. A woman's educational level is therefore likely to affect her ability to make life choices of which utilization of maternal health care services is part. A study by Sari (2009) reveals that educated mothers have a greater awareness of the existence of Maternal Healthcare (MHC) services and the benefits from using such services. They are also likely to have better knowledge and information on modern medical treatment as well as have greater capacity to recognize they need specific services. Thus, education empowers women to be socially and intrinsically motivated to utilize MHC services.

Number of earlier birth(s)

It is widely speculated, if not an emphatic truth that most women are likely to utilize ANC very well only during their first pregnancy (Abor *et al*, 2013; Daniels, 2013). Thus, the desire to seek medical advice and subsequent obeying of all instructions with regards to the welfare/safety of her pregnancy is very high during her first pregnancy (Daniels, 2013). The utilization of MHC services reduces as the woman experiences the second third and so on births. In this regard, most women who have given birth before tend to downplay the importance of ANC in their subsequent pregnancies due to their previous experience (Abor *et al*, 2013; Daniels, 2013). A study conducted by Daniels *et al* (2013) in selected rural communities in the Akuapem North district of the Eastern region of Ghana reveals that women who had more than four births were less concerned about utilizing ANC and that most of them did not even satisfy the basic four visits as suggested by WHO (2013).

2.1.1.2 Enabling Characteristics

The second characteristic of utilizing health care services deals with the enabling characteristics such as income, access, and availability of health services (Fosu, 1994). By this assertion, Fosu stated that, even if a family is predisposed to use health services, they must have some means to obtain them. In this regard, the distance to health facility and the type of transportation are very essential to utilizing ANC services (Kiwanuka *et al*, 2008). Thus, families with different enabling characteristics will seek healthcare services differently. This indicates that, in an ideal situation, two families with different income levels and proximity to health centres as well as availability of qualified health professionals within their catchment area will seek health care services differently.

According to Abor *et al* (2013), a number of studies such as Chakraborty *et al* (2003) and Mekonnen et al, (2003) have shown that accessibility is a major determinant of greater use of health facilities and improvement in health conditions. Similarly, in a study by Arthur (2012) on how wealth affects utilization of ANC services, he found out that, geographic location and means of transportation to health facility are important factors which influence usage of ANC. This suggests that access to healthcare services and personnel is also an equally important determinant of MHC utilization (Kiwanuka *et al*, 2008; Abor *et al*, 2011; Arthur, 2012; Abor *et al*, 2013). Thus an individual's ability to utilize healthcare services (MHC) may be influenced by the availability of such health facilities and means to access the facilities. It must however be noticed that, there is no guarantee that proximity to health facility will necessarily lead to increased desire to utilize health services (Maloreh - Nyamekye 2013)

Income/ poverty levels

The amount of money one earns in a day, month or year is likely to affect his decision to engage in several activities be they social, emotional, psychological, physical and economical. Most women in developing countries are unable to access social services due to high poverty levels (Casas *et al*, 2001). That is, poverty is a major factor which can inhibit one's access to

healthcare and is seen to be one of the factors that hinder most women the world over especially in developing countries as was founded by Kiwanuka *et al* (2008) in Uganda. It inhibits women in their decision making processes and other vital areas of their lives of which the utilization of MHC services cannot be isolated (Kabeer, 2005; Chirowa *et al*, 2013). Thus in sub-Saharan Africa, most women cannot take decisions on their own health needs (Kabeer, 2005). Therefore their ability to access and utilize MHC services depends on their husbands.

By this assertion, even if the women are aware of the need for certain MHC service, it is not guaranteed that such women would seek for MHC services without consulting their husband (Chirowa *et al*, 2013). According to Ameyaw (2013), a woman's economic dependence on men for survival is a principal barrier to the woman's control over her reproductive behaviour in developing countries. This may therefore account for the high number of maternal mortality in developing countries. Ameyaw further stated that, women who usually engage in income generating activities have been identified to be able to or more likely to access health care and for that matter MHC services more than their unemployed peers.

Similarly, prior to the MDG 1, studies by Magadi *et al* (2000) revealed that utilization of maternal healthcare services (antenatal care visits) usually started earlier for women who received some form of monetary income from their employment since they were likely to have greater knowledge about pregnancy and childbirth issues due to their constant freedom of movement and interactions outside their household. In this regard, Magadi *et al* (2000), Kabeer (2005) and Chirowa *et al* (2013) reveal that such women are also better able to decide on their health status as they do not depend so much on their spouses before deciding when and how to get to the health facilities to access such MHC services.

In the context of this study, economic empowerment and poverty levels can be associated with the kind of socio economic environment and the society in which the woman finds herself (Arthur, 2012). By this assertion, it can be said that if a woman sees the peers utilizing

a service, there is the greater tendency to insist on utilizing the service even if she does not fully have the means. Again since financial commitments to utilizing ANC and DAHP have been catered for by the FMHCP, women who genuinely wish to seek for such services do not need so much to do so.

2.1.1.3 The Need Characteristics

This is the need factor is the most immediate cause of health service use (Andersen *et al*, 1973), in that most people (women) seek health care services when they perceive that they are sick or have complications and need expect medical treatment. Thus the presence of the first two factors (predisposing and enabling components) as discussed above may not really guarantee a mother to seek health care. She must intrinsically perceive that her present condition or disease is serious and again, has the believed that the treatment to be provided will indeed be beneficial to her (Fosu, 1994). According Fiedler, (1981) the need for health care can therefore be measured in a variety of ways including: self-perceived health status (how the individual sees his or her own health status), number of morbidity symptoms (clear signs of the presence of a particular disease), or duration and severity of disability (how long a specific condition has affected the individual). According to Fosu (1994), perceived severity or numbers of episodes of diseases has a positive association with healthcare utilization. Thus, the extent to which a mother values a disease as being detrimental to her health is likely to positively influence her desire to seek health care services.

2.1.1.4 Cultural Characteristics

According to Mekonnen *et al* (2003), irrespective of the three characteristics of seeking healthcare that were developed by Anderson *et al* (1973), cultural and religious factors also influence the health seeking behaviour of an individual to a large extent. This assertion was earlier indicated by Addai (2000), who stated that, cultural influence in seeking medical attention is particularly predominant in rural and indigenous societies in Africa, of which Ghana and for that matter Asikuma Odoben Brakwa is no exception.

A study by Amegbor (2014) on the health seeking behaviour of people in Asikuma - Odoben - Brakwa district revealed that, most patients often associated ailment with spiritual causation anytime initial remedies fail to heal the supposed sickness. This situation he explained, usually arises when the ailment comes after a dispute or litigation. By this belief, most people turn to seek for spiritual medication at the least time an orthodox medicine delays in healing therefore confirming how cultural/societal beliefs influence decision to utilize a particular king of medication.

According to Pelto (1987) and Leslie and Gupta (1988) as cited by Ameyaw (2011), the cultural background of women serves as an important factor in the utilization of Maternal Healthcare (MHC) services. In this sense, most individuals (women) would want to satisfy their cultural and religious faiths before choosing between using orthodox services or traditional cure (herbalist).

With regards to religion, several media reports show that more women are victims of denial to access and utilize health care services due to their religious belief. A specific example is the case of 'the Messiah of Mentukwa' (New Crusading Guide, 2013; GTV, 2013; TV3, 2013; and TV3, 2014).

It is also interesting to know that, the choice of a woman to continue using a particular kind of medication; either orthodox or herbalist is very much dependent on the religious and or cultural beliefs that are associated with seeking such care (Addai, 2000; Mekonnen *et al*, 2003). Moreover Addai (2000) had earlier lamented that, in rural communities where the influence of culture on decision making is expected to be high, individuals may seek professional medical care only after exhausting their own folk remedies and family resources. Building on the work of Colson (1971) and Mensah-Dapaah (1979), Abor *et al* (2013) suggest that utilization of MHC services may lean towards one particular health service delivery mode, depending on previous evidence. This is usually predominant in developing countries

such as Ghana where history of past events are repeated in similar situations without any consideration of the differences in time, age, location, access or income.

Though not grounded in theory, investigations by Ghana's investigative journalist; Anas Aremeyaw Anas: The Messiah of Mentukwa (New Crusading Guide, 2013) and revelations by the TV3 Mission Ghana team (2014) aimed at showcasing problems faced by rural communities in the education and health sector revealed a worrying situation of how cultural and religious beliefs influence women's decision to utilize maternal health care services.

The most interesting aspect of this cultural influence on seeking general health care services and specifically maternal health care services is that, despite the presence of the three elementary factors as suggested by Anderson *et al* (1975), cultural factors do not take into consideration any of them. Thus, whereas it is evidently accepted that the differences in factors such as age, level of education, income, distance to health facility and presence of disease is likely to influence people to utilize health care services differently (Ameyaw, 2011; Abor *et al*, 2013; Saeed *et al*, 2013; Frimpong, 2013) with the presence of the religious or cultural beliefs, people of the same faith are likely to comply to their religious beliefs irrespective of their age, income or education and so (Addai 200, Anas 2013, TV3, 2014). The author is of the view that, indeed the presence of cultural influence can be said to be the most powerful factor in the health seeking behaviour of an individual especially pregnant women.

2.2 Maternal mortality in developing countries (Sub-Saharan Africa)

Maternal mortality is defined as the death of a woman as a result of disease (s) and or complications associated with pregnancy (Addai, 2000; WHO, 2013). It is regarded as one of the leading causes of deaths of women in the reproductive age, especially in developing countries in Asia and sub Saharan Africa (Ronsmans *et al*, 2006; WHO, 2006). According to Addai (2000), it was estimated that prior to the MDGs in 2000, over half a million (500,000) women died each year from diseases and complications during pregnancy, childbirth and post

births. Again, WHO (2005) and Wilmoth *et al* (2012) estimate that there are 800 deaths recorded each day as a result of complications during pregnancy, childbirth and post births globally. Interestingly out of the 800, 440 occur in sub-Saharan Africa, 230 in Southern Asia and 5 in high-income countries. Ronsmans *et al* (2006) assert that the risk of a woman dying is high in developing countries as compared to developed countries.

According to statistics provided by WHO (2006), whereas the reduction in average maternal mortality rate in all developing countries was 42% in 1990, rising to 52% in 2000, that of Sub-Saharan Africa saw a very minimal improvement of 3% (40% in 1990, rising to just 43% in 2000) though it shows a positive sign of improvement. Similarly, The WHO report (2013) on maternal health indicates that despite some improvement in maternal mortality rates globally, there is still a major concern as most developing countries have not halved (1/2) the target of MDG 5. This statistics show a wide gap between developed and developing countries in their efforts to reduce maternal mortality.

2.2.1 Causes of Maternal Mortality in the global context

2.2.1.1 Medical causes

According to Brabin *et al* (2001),Whitworth *et al* (2005), and Ronsmans *et al* (2006), the most common medical causes of maternal deaths are severe bleeding, hypertension and infections which are easily preventable when attended to by a qualified doctor, midwife or nurse. Unfortunately these diseases have an effect on women in developing countries as a result of their inability to access proper medical health care before, during or after delivery. This is evident as studies by Allegri, *et al* (2010) reveal that maternal mortality continues to be high in Sub-Saharan Africa as a result of inability to utilise or access maternal care services.

Similarly, most women in developing countries prefer the services of Traditional Birth Attendants (TBAs) to professionals giving reasons of proximity, accessibility, relatively cheaper and humane treatment (Dorwie and Pacquiao, 2013). Ghana is of no exception to this

worrying phenomenon. This situation is very evident in Asikuma Odoben Brakwa district as the senior principal nursing officer of the district directorate of health services indicated that two maternal deaths that happened in the district in 2012 were as a results of the inadequacy of health professionals/ midwives in the district especially in the rural areas (Essuman, 2013).

2.2.1.2 Non - medical causes of maternal mortality in Asikuma Odoben Brakwa district

According to Thaddeus et al (1994), there are three stages to which a woman who needs MHC must effectively go through to ensure the removal of any form of danger which can lead to complications and the unfortunate instance of death. These stages are referred to as the concept of the three D's (delays associated with seeking and receiving medical attention during child birth).

i) Delay In Taking Decision to Utilize Maternal Health Care Services;

This is the first of the three delays (Ds) which is the most common and dangerous cause to which women risk their lives in experiencing the medical causes of Maternal Mortality. This is where a woman who is likely to need or must for the purposes of her pregnancy seek a MHC services delay so much in taking the decision to do so. This may eventually put the woman in a critical situation and so other persons or relatives must decide and find any means possible to get her to the health facility for treatment.

Thus, the woman is most often not able to decide on what, when, where and how to seek health care due to several factors including education, culture and most importantly income. Thus women are not autonomous in decision making concerning their own health status (see Kabeer, 1999; Casas *et al 2001*; Makkonen *et al*, 2003; Bianco and Moore, 2012; Chirowa, 2013). Again delay in taking decision to utilize maternal health care services, especially deliveries assisted by health professionals (DAHP) is most often linked to the economic status of the woman (Abor *et al*, 2013; Daniels *et al*, 2013; Esena *et a*l, 2013; Babalola, 2014; Gedefaw *et al*., 2014) as well as the understanding of the need to seek early treatment (Brobbey-Mpianim, 2014). Thus, most women who delay usually depend on their husbands or

family to provide them with money in order to transport themselves to the nearest health facilities and so in the absence of their husbands they are unable to move resulting in undue delay which eventually results in complications and unfortunate instance of death in some cases (Chirowa, 2013).

ii) Delay in Getting to the Health Facility

This aspect has to do with how close a facility is to the pregnant mother as well as the means by which the woman can get to the facility. Thus the distance to cover and the means of transport play a key role to utilizing MHC services especially DAHP. Often pregnant women in rural areas live more than 5 km to the nearest health centre (Brobbey-Mpianim, 2014). In this regard the women have to be transported to the health facility by car since at the time of delivery most women would not be able to walk such long distances. As particular of rural communities, drivers do not usually ply such routes and so when a woman is in labour, the time she gets transported to the health facility is elongated due to the long delay of a vehicle getting to the community and the poor nature of roads (Ahenkan, 2013; Brobbey- Mpianim, 2014). According to the principal nursing officer in the AOB district, this delay is a major factor causing maternal health complications and eventual death.

iii) Delay by Medical Staff/Professional in attending to pregnant mother

This situation is whereby medical personnel (example, doctors, nurses, midwives, surgeons and all who matter in the healthcare delivery process) delay in attending to a patient who is in need of medical attention. Thus, most often since medical staffs have seen several instances of women in labour or pain, they tend to treat all situations as same and do not see the need in rushing to attend to a patient in a critical situation (Brobbey-Mpianim, 2014). Though this delay is the least among the three delays in the cause of maternal deaths, its effect is generally seen as the key contribution to the cause of maternal death in sub Saharan Africa and for that matter Ghana. This delay is seen as highly avoidable and so any time it occurs to any patient,

it is taking as a generalised characteristic of all health professionals (Brobbey-Mpianim, 2014).

With specific reference to AOB, the inadequate number of health professionals to provide services coupled with the individual human characteristics of emotional and psychological instability; especially resulting from anger over women's delay in getting to the health facility only at the point of danger causes such professional to delay in attending to such patients (Essuman, 2013). This situation largely accounts for the effect of the third Delay in causing maternal mortality.

2.3 Maternal mortality and the Millennium Development Goals (MDGs)

Maternal mortality continues to be a global concern in recent times. It is widely regarded as a key indicator of population and of social and economic development (Wilmoth *et al*, 2010). Prior to the MDGs in 2000, Addai (2000) found in his study that over half a million women died each year from diseases and complications during pregnancy, childbirth and post births globally. In this regard there have been several attempts to ensure reduction in these deaths especially in developing countries. In the 1990s there was a world conference by United Nations (UN) where the International Development Goals (IDGs) were formulated to improve upon the living standards of people (MDG website, 2014).

In September 2000, at the UN General Assembly Millennium Summit, there was an adoption of millennium declaration which was aimed at committing governments to see the problems of each nation as that of the whole UN. The eight - point Millennium Development Goals (MDGs) has goal-five focusing on issues of maternal health. This goal is targeted at reducing maternal mortality by ¾ between 1990 and 2015 (Zedillo, 2001). Since issues of maternal mortality are predominant in developing countries in sub-Saharan Africa (Ronsmans *et al*, 2006; WHO, 2006), Ministers of Health at a meeting of the Third Ordinary Session of the African Union (AU) in 2007 in Johannesburg reaffirmed their commitment towards

strengthening health systems so as to ensure equitable health care for all citizenry especially the aspect of maternal health care.

Again due to the slow pace of progress in meeting the target of MDGs, especially MDG 5, the UN summit in September 2010 made a special appeal aimed at improving the child and maternal health situation in sub-Saharan Africa, calling for renewed and accelerated political and financial commitment to MDG 4 and MDG 5. In this regard, Goal number 5 of the MDGs which aimed at improving maternal health was reviewed to set out two targets: (1) to reduce maternal mortality ratio by three-quarters (3/4) by 2015 and (2) universal access to reproductive health by 2015, UN (2010). All countries reaffirmed their commitment to ensuring the attainment of the reviewed targets.

Despite these commitments, the current rate of maternal mortality in sub-Saharan Africa is still high, considering a 1 death out of every 150 live births in developing countries (WHO, 2013) while the case of developed countries is 1 out of 38,000.

This worrying situation of loss of women of reproductive and productive age and the effects on family, community and the nation as a whole, triggered the first ladies of all member states at the 2014 UN Summit to re- echo the need for all governments across the globe to stay committed, and or increase their support towards improving issues of maternal health thereby reducing the occurrence of maternal mortality, especially in developing countries (TV3, 2014). Indeed maternal mortality and its implications are a burden on all and sundry.

2.4 Maternal mortality rates in Ghana

A retrospective survey by Senah (2003), to assess the rate of maternal mortality in Ghana within a 5-year span revealed that, there was a gradual increase in maternal mortality between1996 and 2000 with an increase of 585 in 1996 to 851 in 2000. The introduction of the free maternal healthcare policy (FMCP) in 2003 was therefore very timely, taking cognisance of its objectives with that of MDG 5. Despite the existence of the policy, the

Ghana Health Survey (2007) and Ghana Health Service report (2009) predicted that, with the slow pace of decline in maternal mortality rate (540 to 470 per 100,000 births as at 2007) Ghana could only decline to 374 deaths per each 100,000 births by 2015.

In September, 2012, a world fact report by the Central Intelligence Agency (CIA) indicated that, Ghana was placed 41st with an average 350 deaths out of 100,000 live births from 2008 to 2010. Shockingly, a higher number of 1,022 deaths were recorded in 2011 according to a report by the Ghana Health Service (Ghana News Agency, 2012). This therefore showed a detriment in the extent to which maternal mortality ratio continues to be high in Ghana despite various interventions by the state, civil society organizations, and developmental partners in their quest to reduce the canker.

As at the 3rd quarter of 2014, reports on Maternal Mortality (GTV, 2014) reveal that Ghana is still having a relatively high maternal mortality rate of 350 deaths out of every 100000 live births which is far above the estimated 185 deaths per 100,000 live - births as proposed by the World Health Organization (WHO). This figure is suspected to even be on the lower side as many deaths that occur in the rural areas are not reported to the major hospitals for record keeping (Essuman, 2013)

2.5 Policies and programmes aimed at helping women in Ghana and their impact on reducing maternal mortality in Ghana

As the bible connotes, women must be submissive to their husbands. Similarly, most socio cultural dynamics/beliefs in sub-Saharan African region of which Ghana is no exception adhere to this decree. In this regard, most women in Ghana in some years past were not given the opportunity to embark on many aspects of advancements that were geared towards empowering them to make meaningful contributions to national discussions; and more worrying the ability to decide on their own health status (Kabeer, 2006)

The Government of Ghana through the United Nation convention on the rights, freedom of life of all human beings coupled with the mandate of the fourth republican constitution of Ghana to ensure fair treatment for all men and women, has made a lot of commitments towards bridging the gap between both sexes in areas of education, finance, governance and more importantly health. The government has so far undertaken the following commitments towards women's welfare, especially towards reducing poverty levels and improving upon maternal healthcare utilization.

i) Ratification of several international convention, instruments and guidelines to promote gender equality. Most of these conventions have implications on the development and promotion of health for all its citizenry (MOH, 2009). They include the United Nations' Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW); the Safe Motherhood Conference in Nairobi (1987); the Cairo-Population Conference (1994); and the International Conference on Population and Development (ICPD) (MOH, 2009).

ii) The government has also ratified the Beijing Platform of Affirmative Action of 1995 which is an agenda for women empowerment aimed at acceleration and the implementation of the Nairobi Forward looking strategies for the advancement of women (UN, 1995). By this the government of Ghana introduced a special ministry (Ministry of Women and Children's Affairs (MOWAC) in the year 2001 aimed at promoting the welfare of women and children by developing and actively promoting policies guidelines, advocacy tools, strategies and plans for implementation by Ministries Departments and Agencies (MDAs), Metropolitan, Municipal and District Assemblies (MMDAs), private sector agencies, Non-Governmental Organization (NGOs), Civil Society Groups, and other developmental partners (Ghana Web, 2014).

MOWAC with its aim at the time developed a National Gender and Children's Policy Framework which is geared towards setting a national agenda to streamline gender related

issues in order to improve the social, legal, civic, political, economic and cultural conditions of Ghanaians, with emphasis on women and children. This framework forms an integral part of the national development policy (MOH, 2009).

2.6 Policies/ Interventions aimed at improving access to healthcare for all inhabitants of Ghana.

The government of Ghana has continuously shown commitment towards achieving universal healthcare access for all. That is, the constitution of Ghana entreats the government through the Ministry of Health (MOH) and the Ghana Health Service (GHS) to provide healthcare services targeted at improving the health status of all people living in Ghana (Brobbey-Mpianim, 2014).

In order to fulfil this obligation, various interventions have been introduced as follows:

2.6.1 The National Health Insurance Policy (NHIS):

The National Health Insurance Scheme was introduced by an Act of Parliament (ACT 650) in the year 2003 to replace the then existing "Cash and Carry" health care financing system which ensured that all people seeking for healthcare service paid out of pocket right at the point of need (receiving healthcare services). The "Cash and Carry" system was introduce by a Legislative Instrument (LI) namely LI1313 of 1985 and was targeted at recovering 15% of the cost of financing health care in Ghana (Brobbey- Mpianim, 2014). Unfortunately it could not meet the target as more Ghanaians were unable to cater for their health needs. Agitations from various sectors led to the New Patriotic Party government in 2001 led by former President John Agyekum Kuffour through the parliament to pass the national health insurance bill in 2003.The Scheme was implemented in January 2004, with the aim of removing the financial risk protection against the cost of basic health care for residents of Ghana (NHIS, 2013).

According to Brobbey- Mpianim (2014), as at the close of 2013, the NHIS served as the major source of health care financing system in Ghana with over 8.8 million active subscribers. Similarly, the NHIS has operational capacity of 3500 healthcare providers both public and private, and accounts for more than eighty five percent (85%) of service delivery income by public and quasi-public health care facilities (NHIS, 2013). Under the NHIS, members pay a premium to scheme management and in their time of need for healthcare they have access to health facilities without paying directly. The major prospects of the scheme include: its improvement in the quest to seeking healthcare without necessarily paying at the point of need; coverage for the aged; children under eighteen (18) years; collaboration with private facilities to increase geographical accessibility; and the introduction of the biometric registration card aimed at helping members access healthcare at every location in the country (NHIS, Website 2014). The major challenge has to do with mismanagement, misappropriation and limited operational resources in terms of human, financial, technical and political interference (Brobbey-Mpianim, 2014 and NHIS, 2014).

2.6.2 The CHPS Compound Policy/System

The CHPS compounds system was introduced in Ghana in 2003 to reduce the demographic disparity in access to quality healthcare. It is a policy adopted by the Ghana Health Service GHS) as a key strategy to increasing access to primary healthcare while focusing on individuals, households and communities (Maroreh-Nyamekye, 2013). The system is a community - based approach aimed at providing healthcare through partnership between the health program, community leaders and social groups (MOH, 2012). It came into force upon realising that more than 70% of Ghanaians especially in the rural communities stayed over 8 kilometres to the nearest healthcare facility (MOH, 2012). Currently there are over 1,863 CHPS compounds nationwide (MOH, 2012).

As at the end of 2013, AOB had a total of 7 CHPS compounds providing various degrees of primary healthcare services to people in its catchment areas such as normal OPD services,

Antenatal care, Delivery assisted by Health Professional (HP), and Community Education (AOB DHS report, 2013). Generally the introduction of the CHPS system has contributed to reducing distance challenges and thereby enhancing utilization of basic healthcare services, especially MHC services (MOH, 2012).

Despite these achievements, the implementation of the system has not met its fullest expectation due to a range of challenges including logistical and administrative setbacks on the part of government and poverty, illiteracy, societal disregard for seeking healthcare services on the part of clients as well as attitudes/behaviours of HPs which make rural dwellers unwilling to utilize (MOH, 2012; Brobbey-Mpianim, 2014). Reconstruction of linkage roads to communities within catchment areas of CHPS compounds and possible expansion of CHPS zones are a necessary tool for effective implementation of the system (MOH, 2012 report).

2.7 Intervention to improve maternal healthcare services in Ghana

Ghana, just like many other countries, both developed and developing, has a comprehensive program to ensure that, women who begin the welcoming journey of pregnancy end up getting the best results of a safe delivery (spontaneous or caesarean operation), the child and a healthy mother. According to the WHO (1994, 2004) as indicated by Daniels et al (2013, pg 127), it is medically satisfactory for every woman to satisfy four conditions as part of fulfilling a complete maternal health care service.

These include the requirement that:

i) The Woman receives antenatal care within her first three months of pregnancy.

ii) The Woman undertakes four or more antenatal visits before delivery

iii) The Woman is attended to at delivery by trained medical personnel

iv) The Woman Delivers in a health facility

In order for the government of Ghana and other developmental partners to help women to meet these criteria, various healthcare provisions, policies and interventions have been put in place to ensure that all women who become pregnant irrespective of age, tribe, religion, occupation, educational level, income, and marital status are given the best of maternal healthcare services. These interventions include the free maternal healthcare policy (Ameyaw, 2011), expansion of the CHPS compounds system and collaboration between Ghana Private Road Transport Unions and the Central Regional Health Directorate (CRHD) aimed at ensuring mothers in labour are transported to nearby clinics or hospitals as fast as possible to reduce, if not remove the impact of the delay of women in labour getting to the health centre (GHS Report, 2009, Central region).

Over the years, access to maternal health care services has improved tremendously (GDHS, 2008) with more women becoming aware of the need to utilize the services. Unfortunately, this increment is not holistically achieved as there are more places in Ghana where access continues to hinder women from utilizing such services (TV3 News, 2014) of which central region and AOB are particularly affected. In a related view, Amegbor (2014) asserts that, despite various policies made to make biomedicine accessible to Ghanaians such as introduction of the National Health Insurance Scheme and Community Health Posts, majority of people in AOB still use self-treatment as their first choice in addressing their health needs.

2.8 Antenatal Care Services (ANC)

According to the Macmillan English dictionary, antenatal healthcare is defined as all the healthcare services a woman seeks/needs before, during and just after delivery. That is, all the services provided to a woman by a qualified health professional as soon as she is confirmed pregnant, during pregnancy and just after delivery (post natal). Studies have shown that it is at this stage that the woman establishes a cordial relationship with the healthcare providers so as to help her identify and manage her current and potential risks and problems during pregnancy (Ameyaw, 2011; Abor et al, 2013)

According to WHO (2013), a woman reduces the risk of pregnancy related diseases and complications when she visits and utilizes antenatal healthcare services within the first trimester of her pregnancy. Averagely, the WHO (2013) suggests that every pregnant woman visits and receive ANC services from a qualified person (approved health professional) four times before delivery. This supports the assertion that the healthcare that a pregnant mother receives during pregnancy, at the time of delivery, and soon after delivery is important for the survival and well-being of both the mother and her child (GDHS, 2008). In this regard, utilization of antenatal healthcare services is paramount to reducing maternal mortality globally, within sub Saharan Africa and Ghana in particular.

2.9 Summary

The chapter focused on the relevant issues that are associated with utilization of maternal healthcare services. It also highlighted some of the policies, strategies and interventions that have been formulated and implemented globally and especially in Ghana to improve upon utilization of ANC and DAHP services and subsequently reduce maternal mortality. Though these policies have contributed in many ways to increase access and subsequent utilization of maternal healthcare services, there is the need for extensive work to be done in arriving at the most suitable literature on the real factors that influence utilization of ANC and DAHP services among rural women in Ghana.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter focuses on the procedures that were followed in conducting the entire study. These include: the collection of data, the scope of the study, the study setting, study design, target population, sampling procedure, sample size, sources of data, data collection instruments, mode of collecting the data, and how the data was analysed.

3.1 Scope of the Study:

The study focused on access and utilization of maternal healthcare services in rural Ghana. The specific issues investigated were:

(i) Ascertain the factors that influence utilization of ANC and DAHP services among rural women in Ghana (AOB district) as revealed by other studies.

(ii) Examine the link/dependency between access and utilization of maternal healthcare services (ANC and DAHP) in the Asikuma Odoben Brakwa district.

(iii) What is the trend of utilization of ANCs and DAHP in Asikuma Odoben Brakwa district from 2006 - 2014?

(iv) What can be done by government, and all stakeholders to improve upon access and utilization of maternal health care services in the Asikuma Odoben Brakwa district

3.1.1 Study Setting:

Asikuma Odoben Brakwa district (AOB) is located at the North Eastern part of the Central region of Ghana. It is bordered on the North by Birim South District of the Eastern Region, on the South by Ajumako-Enyan-Esiam District, on the West by Assin North and Assin South Districts and on the East by the Agona District (AOB health report 2012, pg 1). As at 2010, the district had a total population of 112,706 (Population and Housing Census report for Central Region 2010, pg 23) with 54,293 males and 58,413 females. Out of the number of

females in the district, 42.4% are within the reproductive age of 15 to 49 years (PHC, 2010). Currently, the population of the district is projected at 121,883 with a growth rate of 3.1%. This is made up of 63,931 Males and 68,951 Females, respectively (AOB District Assembly Composite Budget, 2013 pg 5). Out of the projected population, 79,224 representing 65% live in the Rural Areas.

The AOB district has only three towns with a population above 5000 making them urban centres with the rest of over 601 been towns and villages (CRCWSA Data Bank, 2010 as cited in the composite budget of AOB, 2013 pg 5). AOB is the least densely populated district in the central region with an average of 101 per square kilometre. In terms of employment and labour force, AOB is predominantly made up of farming communities with 65.4% of the labour force employed in the Agriculture sector (AOB, Composite Budget 2013, pg 4).

With regards to health infrastructure (access) and utilization, AOB has one main hospital at Breman Asikuma (Our Lady of Grace Catholic Hospital) and two health post at Breman Brakwa and Agona Odoben respectively. Again there are seven CHPS compounds that offer primary health care services to the rural communities and one accepted private maternity home at Breman Ayipey (AOB DHS report, 2012). AOB has the highest fertility rate in the central region with an average of 4.68 (PHC, 2010). This high rate of fertility clearly supposes that the use of Maternal Healthcare Services (MHCS) especially Antenatal Care and Birth Assisted by Health Professional(s) should be high.

The study was carried out in villages within Asikuma Odoben Brakwa district. The choice of the villages helped to gather primary data on how the introduction of CHPS system in 2003 has resulted in improving access to health facilities (HFs) and health professionals (example, doctors, nurses, midwifes, trained TBAs, community health workers), especially for the rural women in the district.

3.1.2 Rationale for selecting AOB district

Asikuma Odoben Brakwa district of the central region of Ghana was both purposely and conveniently selected for the study based on the following reasons:

(i) AOB is the most deprived district in the Central region (AOB Composite Budget, 2013 pg 6).

(ii) AOB is among six districts in the Central region where CHPS compound system was started.

(iii) AOB has the highest fertility rate (HFR) of 4.68 resulting from; low use of contraceptives and lower ages at first marriage in the district (PHC, 2010). The HFR ideally should have an influence on demand for maternal healthcare services in the district and so using it as a case study to determine the extent of ANC and DAHP utilization was in the right direction

(iv) AOB has more of its population 79,224 representing 65% living in the rural areas (CRCWSA Data Bank, 2010 as cited in the composite budget of AOB, 2013 pg 5).

(v) AOB has more women with about 42.4% falling within the reproductive age of 15 to 49 years.

(vi) The researcher conveniently chose AOB due to proximity and human resource availability.

3.2 Study Approach:

A mixed method approach was employed in the study. This enabled the researcher to collect both primary and secondary data and analysed them using both quantitative (correlation coefficient and trend analysis) and qualitative means (interview of managers at CHPS compounds and AOB district health information officer). The choice of a mixed method emanated from the fact that, the researcher wanted to get a clear view of what has been happening after the introduction of the various health policies aimed at improving accessibility while reducing cost of utilization. Similarly, the primary data collected from

women who had given birth within 2006 – 2014 helped in determining whether the statistics on trends/level of attendance/utilization of ANC and DAHP services corresponded to the secondary data that was gathered. By so doing the researcher was able to reduce any level of bias. Thus the qualitative data was collected after administering and analysing the quantitative data. In this regard, the researcher was able to ascertain whether the information gathered from the quantitative analysis corresponded to the responses from the interviews.

3.3 Study Design

The study adopted a cross-sectional descriptive survey (CSDS) which involved administering structured questionnaire to 267 women between the ages of 13 – 45 who were living in villages within Asikuma Odoben Brakwa district as well as interview of seven nurse managers in the 7 CHPS compounds within AOB and the district health information officer (DHIO). According to Olsen and George (2004), CSDS is usually used by epidemiologists (Public health researchers) to determine and describe the relationship between a cause (disease, program, intervention, policy) and the effect (results, benefits) at a particular time. In the case of this study, CSDS allowed the researcher to select some of the villages within AOB and selected individuals to help answer research questions of interest (Olsen *et al*, 2004, Songer, 2006). Their responses and findings were used to generalise their characteristics as that of the whole population from which the sample was taken (Bynner, 2006).

The choice of CSDS also allowed the researcher to use both probability and non probability sampling techniques concurrently to select individuals for a specific purpose (Bynner, 2006). Thus individuals were selected to meet certain quotas considered important to the subject matter of the study such as age, marital status, educational level, income level, religious background. Two very important aspects of CSDS were also applied. Thus both the descriptive and analytical aspect of CSDS were used (Olsen et al 2004, Bynner, 2006)

Rationale for choosing CSDS as the design for this study

In line with this objectives, CSDS was selected as the study design to help the researcher to use both quantitative and qualitative means to ascertain and describe the relationship or association between the outcome variables (1st ANC visit, total number of ANC visits before birth, place of delivery, assistance during delivery) and independent variables such as age, educational level of woman, educational level of partner, income, distance to health facility, possession of FMHCP card and culture/religion (Ameyaw, 2011).

The descriptive nature of CSDS helped to provide a quick snapshot of what has been going on with regards to the level of utilization over the specific time frame (2006 – 2014) using the variables of interest for the research problem without interfering with the existing health seeking behaviours of Cultural, Access, Demographic and Needs characteristics (CADN) as developed by Anderson et al (1973).

Similarly, most studies in Ghana that looked at utilization of healthcare services and specifically Maternal Healthcare in specific location or districts (Bour, 2004, Ameyaw, 2011, Daniels, 2013) used CSDS as their study design. Since this study was also looking at utilization of MHC (ANC and DAHP) services in one district (Asikuma Odoben Brakwa district), CSDS was considered for the study. Again, CSDS was most appropriate since the research spans over a particular period of time (2006 – 2014) and was carried out at the ecological level to identify the association between the introduction of the numerous healthcare interventions, policies and programmes improvement of access to MHC services and the level of utilization.

3.4 Pre-testing

The questionnaire was pre - tested using 50 women who were purposefully and conveniently selected from five villages in Ajumako Enyan Esiam (AEE) district. The choice of AEE was arrived at after preliminary investigations and initial visits to the two districts revealed similar

socio demographic, cultural and economic backgrounds as pertaining among women in the districts. The pre-testing was done to check the validity and reliability of the data collection instrument.

3.5 Data Collection Instrument

Two types of instruments were used.

1. Structured questionnaire involving both closed and open ended questions. It was meant to determine factors that influence utilization of MHC services (ANC and DAHP) by the women based on the health seeking behavioural factors of Cultural, Access, Demographic and Needs (CADN) as in the conceptual framework that was adapted to guide the entire research.

2. Key Informants interview guide – was used to collect data from the nursing managers/midwives of the 7 CHPS compounds in AOB and the district health information officer. The findings from the interview were juxtaposed with the responses from the questionnaire before drawing conclusions on the factors and trends of utilization among rural women in AOB district.

3.6 Source of Data

The researcher collected data from both primary and secondary sources. This was done to overcome any form of bias as an attempt to collect data from one source could have skewed the findings to a certain direction (Denzin, 1989). Thus primary data on utilization was directly collected from the women using the questionnaire while secondary data on utilization was collected from the statistics of utilization as captured in the district health report from 2006 to 2013. Again, the collection of both primary and secondary data helped in bringing a sizable number of those who were directly affected by the findings on board to provide explicit information at the ecological level (Boateng, 2013).

3.4.1 Primary Source

Ideally, two forms of primary data were collected. In the first instance, structured questionnaires were administered to mothers who had given birth within the time frame or those currently pregnant to find out how accessible antenatal care services and delivery by health professionals were among rural women in the AOB district. This was targeted at ascertaining the factors that influence utilization and whether the provision of both geographic (CHPS compound) and financial (FMHCP) access to utilization of maternal healthcare services has really materialised within rural AOB (Abor et al, 2013). Each questionnaire had two (2) sections of which one focused on the conceptual framework (CADN) while the other looked at the outcome variables (1st ANC visit, Total number of ANC visits, Place of Delivery and Assistance during delivery. Both closed and open ended questions were asked.

In the case of open ended questions/interviews), respondents were given opportunity to give further clarification on why they took a particular stance on an issue. The second primary data was also a semi- structured interview guide used to interview the managers at the 7 CHPS compounds and the DHIO at the AOB district health directorate. These separate interviews were conducted after the questionnaires had been administered and analysed in order to confirm or otherwise the responses given by the women.

3.6.2 Secondary Data

Records of ANC services (new ANC registrants, total number of ANC attendances and number of 4+ visits) and skilled delivery and TBA assisted delivery in AOB were collected directly from the office of the DHIO. Thus data on total attendance for each year after the introduction of the FMHCP (2006 to 2014) was collected and used to compute the level/trend of utilization in ANC and DAHP in the district.

3.7 Target Population

All women within the reproductive age of 15 - 49 years who lived in any of the villages within AOB and have given birth within the period 2006 to 2014 or was pregnant at the time

of data collection formed part of the population. Again, the 7 managers at the CHPS compounds as well as the DHIO were also part of the total population of respondents.

3.8 Sample Size

In all, 267 women were conveniently and purposefully selected to answer the questionnaire. The number of respondents was arrived at based on Roscoe's (1975) assertion that, it is most appropriate that behavioural research should have a sample size of between 50 and 500. Again Rosenberg (1997), indicates that since trend analysis is typically carried out at the ecological level to bring out what happened directly on the ground, the real observations of the units of analysis should be the time periods (years, months, days) and not specifically the number of individuals as is done in traditional approach in selecting a sample size for a study. Similarly, Morton et al (2006) indicates that, sample size selection can be bias, depending on the study intention and the level at which the study is conducted. Thus, in trend analysis the most important factor in determining the sample size of the population is not the number of individuals to be interviewed but rather, the number of observations (time periods) that matter. Having agreed with the stance of Roscoe (1975), Rosenberg (1997) and Morton *et al* (2006) on the sample size to use in a behavioural and trend analysis studies respectively, the researcher used two forms of sample size.

1. The number of respondents: 267 women within the reproductive age (15-49) were selected and interviewed across the seven CHPS compound zones. Mothers with more children were given a bigger preference since their responses spanned over a longer period of years. The nursing managers at the 7 CHPS compounds and the District Health Information Officer (DHIO) would form part of the study participants.

2. The trend of utilization: data on the trend of utilization were collected to reflect one year after introduction of FMHCP and spanned over a 9 year period (2006 - 2014). In this regard,

the study adopted one of the characteristic of trend analysis which looks at the pattern of change in utilization of MHC services over a 9 year period.

3.9 Mode of Meeting Respondents

In order to accomplish a highly convenient selection, no clear cut guideline was followed in meeting respondents. Visits were made to homes, market centres, farms, churches and on the way to and from farm. On the part of the managers at the CHPS compounds, permission was sought from the DHD, an initial visit was made to the CHPS compounds to make arrangement for the day and time to grant interview and it was followed as such. In certain circumstances permission was sought from opinion leaders of the villages and husbands of respondents before allowing their wives to answer the questionnaire.

3.9.1 Sampling Technique

Both convenient and purposive sampling techniques were used as is in line with the study design of cross sectional descriptive survey (Bynner, 2006). The purposive technique supported the assertion by Boateng (2013) that, it is always important to select a specific person or persons who are directly linked to an act or can provide the best of information when looking out for whom, how, when, where and why something is done. In this regard only women of reproductive age (15-49) who have given birth(s) within the time frame of 2006 to 2014 or were pregnant at the time of the study were selected to answer the structured questionnaire/interviews. Women who have given birth more than once were given an advantage since their information spanned over a longer period of time than those now pregnant.

Again, the women were conveniently selected based on their willingness to take part in the exercise (Marshall, 1996). This was to ensure that, they provided accurate responses. Moreover, women from over 32 different villages were used thereby overcoming any issue of bias associated with women of the same or similar socio-demographic characteristics. The manager/officer in charge of each of the CHPS compounds were purposely selected and

interviewed. The interview was used to the extent to which the information/data provided by the women while answering the questionnaire corresponded with that of the health personnel.

3.10 Data Management and Analysis

The data/information gathered from the questionnaire administered were grouped and processed using SPSS version 20. The SPSS version 20 was conveniently chosen as the data analysis tool due to the researchers' conversance with its usage. Again SPSS affords the opportunity to handle data in a more simplified manner.

3.10.1 Representation of Data – Tables and Graphs - Objective 1

Tables were used to represent the normal and percentage distribution of most of the responses on the aspects of the questionnaire that dwelled on the CADN model. Graphs such as pie chart, bar chart and histograms were used to display responses in an attempt to achieve objective 1. This involved a descriptive analysis of the normal and percentage distribution of respondents' responses for most of the variables of interest (age, level of education, employment, income, number of ANC visits, number of deliveries at health facilities etc). The graphs provided a source of visual perception for the distribution of the factors that influence utilization as indicated in the conceptual framework. The responses from the interviews of the nursing managers and the DHIO were also summarised and stated as to whether they agreed or disagreed with the findings. The reportage from the interviews was done for all the objectives.

3.10.2 Correlation/Cross tabulation and CHI - Square analysis – Objective 2 (hypothesis)

In testing the relationship between the accessibility factors and utilization, two separate statistical tests were computed and analysed to make informed decisions.

1) Two - tailed Pearson correlation coefficient matrixes were computed separately in SPSS version 20 to determine the relationship between the dependent variable (utilization of ANC and DAHP) services and the two key independent variables (availability of CHPS compound

in a respondent's village/distance to the nearest HF and Possession of Free Maternal Healthcare Policy card).

2) A cross tabulation and a Pearson CHI- Square test was computed to determine the dependency of utilization (total number of ANC visit) on the distance from a woman's village to nearest health facility (HP) as well as possession of FMHCP card. The output of the computation for the two independent test approaches (analysis) on each of the independent factors (distance and FMHCP card) were fused, juxtaposed and conclusions drawn to reject or fail to reject the hypothesis.

3.10.3 Trend analysis graphs – Objective 3

Trend analysis chart/graphs were used to obtain results for objective 3. This involved representation of the trend of new ANC registration in AOB district per year, the total number of ANC in the district per year and the skilled delivery (DAHP) and TBAs delivery per year (2006 – 2014). Thus the years and their corresponding levels of utilization (general attendance of ANC and DAHP) were graphically represented to show the rise or fall in utilization due to the provision or otherwise of access.

3.11 Presentation and Discussion of Findings

The factors that influence utilization of ANC and DAHP as stated in the conceptual framework, the relationship between access and utilization of ANC and DAHP and the trends of utilization of ANC and DAHP services in rural Asikuma Odoben Brakwa were presented, analysed and discussed based on the data that was gathered from administering the questionnaire and the key informant interviews.

3.9.4 Summary and Conclusion

The top shots of the findings as was revealed during the course of the study were highlighted to bring out the key issues that need to be critically looked at by other researchers, policy formulators, implementers and other relevant bodies. Suggestions and recommendations that

were given by the study participants and the researchers' personal observations were also enumerated.

CHAPTER FOUR

PRESENTATION OF DATA, FINDINGS AND ANALYSIS

4.0 Introduction

This chapter presents the findings of the questionnaire that were administered as well as the interviews with the district health information officer of Asikuma Odoben Brakwa (AOB) district and the seven nurses/midwifes in charge at the CHPS compounds. The chapter seeks to bring out the relevant information that was gathered while administering the questionnaire as well as the inputs of the DHIO and the nursing managers. By this, the chapter showcases findings, makes inferences, make informed judgements and draws conclusions on how access to MHC influences utilization of ANC and DAHP services.

4.1 Factors Influencing Utilization of ANC and DAHP Services among Rural Women in AOB

The first objective of this study was to determine the factors that influence utilization of ANC and DAHP services in Ghana. In this regard, women provided basic socio demographic information which is in line with the Health Seeking Behavioural Framework (HSBF) as designed by Anderson et al (1975) and has been adopted by various studies in connection with utilization of maternal healthcare services (Addai, 2000; Chakraborty et al, 2003; Mekonnen et al, 2003; Abor et al, 2013). These include; age, level of education, marital status, years of marriage, husbands/partners level of education, employment/poverty level and number of children. Similarly, the enabling factors that affect utilization such as, availability/ distance to health facility, type of health professional and their attitudes towards respondents as well as women's perception of the influence of culture dynamics and religious believes on seeking ANC and DAHP and the need characteristics of sickness, perceived presence of diseases and experience of previous complications were gathered.

4.1.1: Current Age of Respondent

In all, the study interviewed 267 women. The age interval of 5 years was used to group the women such as 10 – 14, 15 - 19, 20 - 24, 25 – 29 and 30 years and above. This age interval

was arrived at after results of pre- testing of questionnaire in five selected rural communities in Ajumako Enyan Esiam (AEE) district which gave an indication of 13 years as the age of the youngest woman to have given birth and 33 years as that which every woman ideally should have given birth within rural AEE. Again most of the respondents were unwilling to mention their real ages but were willing to select within the range they fall.

Table 4.1: Normal and percentage distribution of respondents' age

Age of respondents	Frequency	Percent
10-14 yrs	1	.4
15-19 yrs	15	5.6
20-24 yrs	35	13.1
25-29 yrs	73	27.3
30 yrs & above	143	53.6
Total	267	100.0

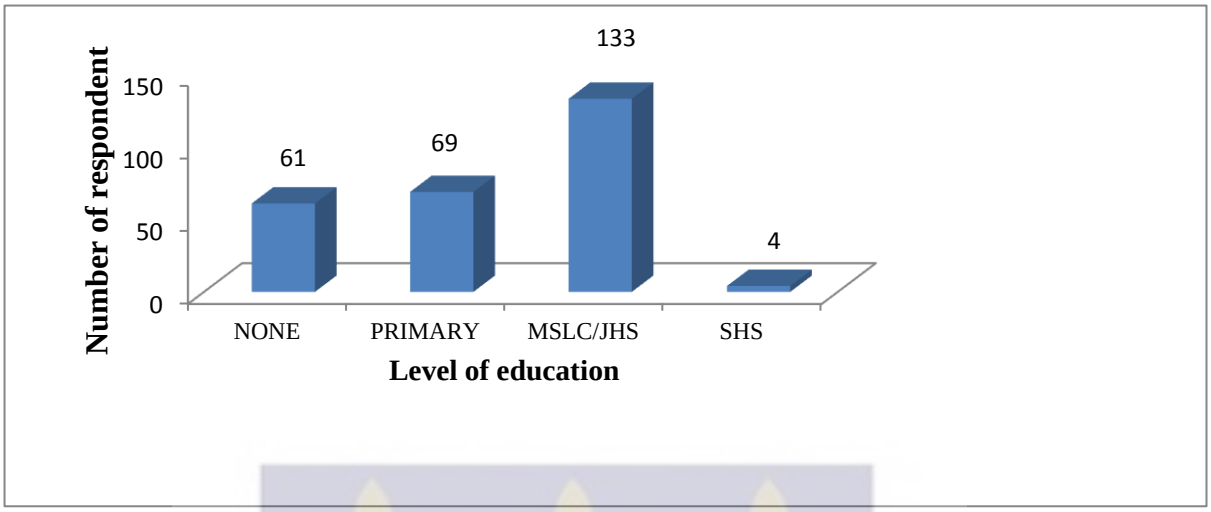
Source: Researcher's Field Data (2015)

From Table 4.1 above, the age distribution of respondents who had given birth within 2006 to 2014 showed that a total number of 143 representing 53.6% were 30 years and above. This relatively high percentage gives an indication that, among rural women in AOB, those who are 30 years and above form a greater majority of mothers. This gives an indication that, within rural AOB the age distribution of women who have given birth within 2006 - 2014 is more concentrated around those who are 30 years and above. Women who fall within the age bracket of 20-24 years and 25-29 years had 35 and 73 representing 13.1% and 27.3% respectively. Interestingly only one woman was aged between 10 – 14 years. This age distribution implies that older women continue to give birth in the district.

4.1.2 Level of Education of Respondents

The level of education of an individual affects his/her decision making process in several ways (Farrant, 1980). It empowers the individual to be intrinsically motivated to utilize social services of which healthcare is paramount (Sari, 2009).

Figure 4.1: Distribution of respondents' highest level of education



Source: Researchers' Field Data (2015)

From Fig 4.1 above, 133 (49.8%) respondents had formal education to the Middle School/Junior High School level. Barely a quarter (61women representing 22.8%) had no formal education, with another quarter (69 representing 25.8%) gaining formal education up to various classes at the primary level. Only 4 (1.5%) of respondents had formal education to the SHS level. None of the respondents got to the tertiary level. This finding shows that, rural women in AOB have relatively low level of education which in effect could affect their level of utilization of ANC and DAHP services.

4.1.3: Marital Status of Respondents

This section reveals the marital status of respondents which is intended to highlight the influence

partner's have on utilization of ANC and DAHP services.

Table 4.2: Distribution of Respondents Marital Status

Respondents Marital Status	Frequency	Percentage (%)
Single	9	3.4
Married	229	85.8
Cohabitation	22	8.2
Fiancé	7	2.6
Total	267	100.0

Source: Researchers' Field Data (2015)

Most (229 representing 85.8%) of respondents were married. Only 9 (3.4%) were single, with 7 (2.6%) of the women becoming pregnant through boy-girl relationship (fiancé). Upon further questioning, it was revealed that most of the respondents who gave birth through boy girl relationship were between the ages of 13-17 years. It is also seen from Table 4.2 that, 22 (8.2%) of respondents were living under the same roof with their partners yet they had not been traditionally/legally married. This situation most of them explained, were agreed upon by the partners themselves with or without their families' approval.

4.1.4: Respondents Partners Level of Education

The level of education of a woman's partner has been found to be a key determinant to the woman's use of ANC and DAHP services as part of the general MHC utilization (GDHS 2008; Abor *et al* 2013). In this regard, though the study focused primarily on women and as such their socio- demographic characteristics, it was important to find out the level of education of their partners. In the case of those who were single, the educational level of the man with whom they had their last baby with, was necessary as it could affect their level of utilization at the time.

Table 4.3: Distribution of Respondents Partners level of Education

Respondents Partners Level of Education	Frequency	Percentage (%)
None	23	8.6
Primary	71	26.6
MSLC/JHS	169	63.3
SHS	3	1.1
Tertiary	1	.4
Total	267	100.0

Source: Researchers' Field Data (2015)

From Table 4.3, it is seen that the level of education of men (husbands, fiancé, co-habitat or former husband) did not differ so much from that of their wives/partners. Just as in the case of the women, majority of the men 169 (63.3%) of respondents' partners completed their highest level of education at the middle school/junior high school. This though, above the 133(49.8%) women who completed MSLC/JHS, is not encouraging especially, as a higher

number of 71 (26.6%) had only a form of primary education with only 3 (1.1%) and 1 person (0.4%) acquiring secondary and tertiary education respectively. Surprisingly, 23 women who form 8.6% of the respondents indicated that their husbands have had no form of formal education.

4.1.5: Respondents Employment Status

The type of employment (be it formal or informal) and the specific occupation in which a woman is engaged in, is likely to affect her level of utilization of ANC services (Kabeer, 2005; GDHS, 2008; Abor et al, 2011; Daniels et al, 2013). This section illustrates the type of employment/ occupation in which study participants are engaged, in relation to how they were well informed about their health needs especially ANC and DAHP services.

Table 4.4: Distribution of Respondents Employment Status

Type of employment	Frequency	Percentage (%)
Dressmaking	13	4.9
Trading	50	18.7
Farming	190	71.2
Teaching	3	1.1
Others	11	4.1
Total	267	100.0

Source: Researchers Field data (2015)

Responses from the questionnaire reveal that most of the women were engaged in informal/private jobs. From Table 4.4 above, it is seen that, only 3 (1.1%) respondents were engaged in formal employment (teaching). These 3 respondents were among the 4 who had had some level of secondary education. This gives an indication that, the level of education has a possible influence on the type of employment and subsequent level of the utilization of ANC and DAHP by rural women in AOB district. As normal of rural women (Addai, 1994; Abor et al, 2013; Daniels, 2013), majority (71.2%) of the respondents, had their main source of employment being farming. Trading, usually in the form of retailing services of majority consumable products such as provisions received the next highest number of 50 (18.7%)

respondents engaged in it. Dress-making which saw only 4.9% of respondents engaging in it, was mostly being engaged in by women between the ages of 23 – 32 and had completed JHS. Others (comprising of all the other jobs mentioned during the interview but were not significant and those who have no jobs at all) had 11 women (4.1%) belonging to that category.

4.1.6: Respondents Number of Children

The number of previous births or living children that a woman have has a strong effect on the woman's choice to further utilize ANC services in subsequent pregnancies especially among women in sub Saharan Africa (Addai, 1994; Mekonnen et al 2006; Ameyaw, 2011; Arthur, 2012; Abor et al, 2013; Daniels, 2013). This section ascertains the previous birth of respondents and how it influences their level of utilization of ANC and especially DAHP services.

Table 4.5: Distribution of respondents number of children

Respondent number of children/earlier births	Frequency	Percentage (%)
Now pregnant	7	2.6
1	15	5.6
2	14	5.2
3	50	18.7
4	100	37.5
5 and above	81	30.3
Total	267	100.0

Source: Researchers' Field Data (2015)

Out of a total number of 267 respondents, 100 (37.5%) respondents had given birth to 4 children as at the time of data collection. Fifty (18.7%) respondents had 3 children with 14 (5.2%) and 15 (5.6%) haven given birth to 2 and 1 child respectively. Only 7 (2.65) out of the total number were pregnant at the time of gathering data. As earlier stated, AOB district has a high fertility rate of 4.68, a relatively high number of 81 (30.3%) respondents indicated that they have 5 and or more children with some having given birth to more than 10 children. Further probing and responses showed that, most of the women had intentions of given birth

to more than 4 children. Similarly, most women who had more than 3 children revealed that, they least utilized ANC and especially DAHP services after their first birth.

4.2 Access and Enabling Characteristics of Seeking ANC and DAHP Services.

This section focuses on the respondents' ability to seek and utilize ANC and DAHP services. It took into consideration the factors that were not controlled by the respondents but directly and indirectly influenced utilization. In this regard, issues of geographic and financial accessibility, the type of health professionals and their attitudes towards respondents were analysed.

4.2.1 Availability of Health Facility/CHPS compound in respondents Village

This section determined how available HF/CHPS compounds were to respondents

Table 4.6: Availability of Health Facility/CHPS compound in Respondents Village

Presence of CHPS compound in respondents village	Frequency	Percentage (%)
Yes	65	24.3
No	193	72.3
Not Aware	9	3.4
Total	267	100.0

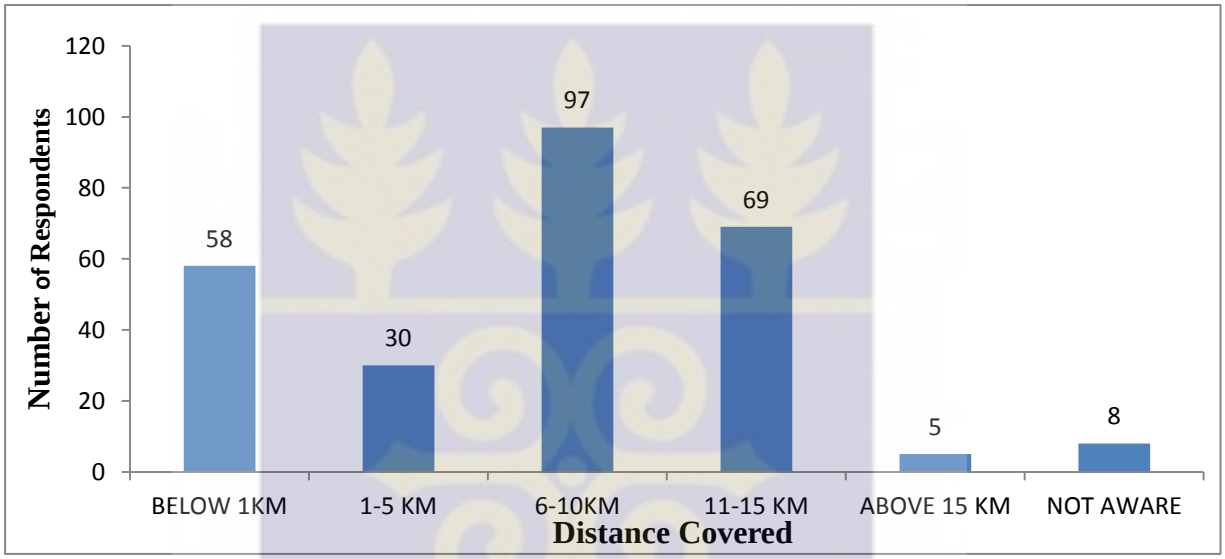
Source: Researchers Field Data (2015)

Out of the number of study respondents questioned, 193 (72.3%) did not have any form of health facility in their village of residence. This showed that, most women had to move to other villages/town to utilize ANC or DAHP services. Only 65 (24.3%) respondents indicated the presence of health facility/CHPS compound in their specific village. The vast difference in those with and without CHPS compounds in their village shows how most rural women in AOB suffer before getting to a CHPS compound for ANC or DAHP services. Interestingly 9 women (3.2%) were not even aware of the existence of health facility in their village or not. This implies that, they had no business with seeking ANC and DAHP services and so did not bother to find out the nearest health facility/CHPS compound.

4.2.2: Distance covered to health facility

Distance covered to the nearest health facility (HF) is a major contributing factor to utilizing ANC services (Kiwanuka et al, 2008; Abor et al, 2011; Arthur, 2012; Daniels et al, 2013). This section focuses on the distance between a respondent's village and the nearest HF in an attempt to ascertain whether the provision of CHPS compound has improved upon geographic accessibility to utilize ANC and DAHP services among rural women in AOB.

Figure 4.2: Distance covered to a nearest health facility



Source: Researchers Field Data (2015)

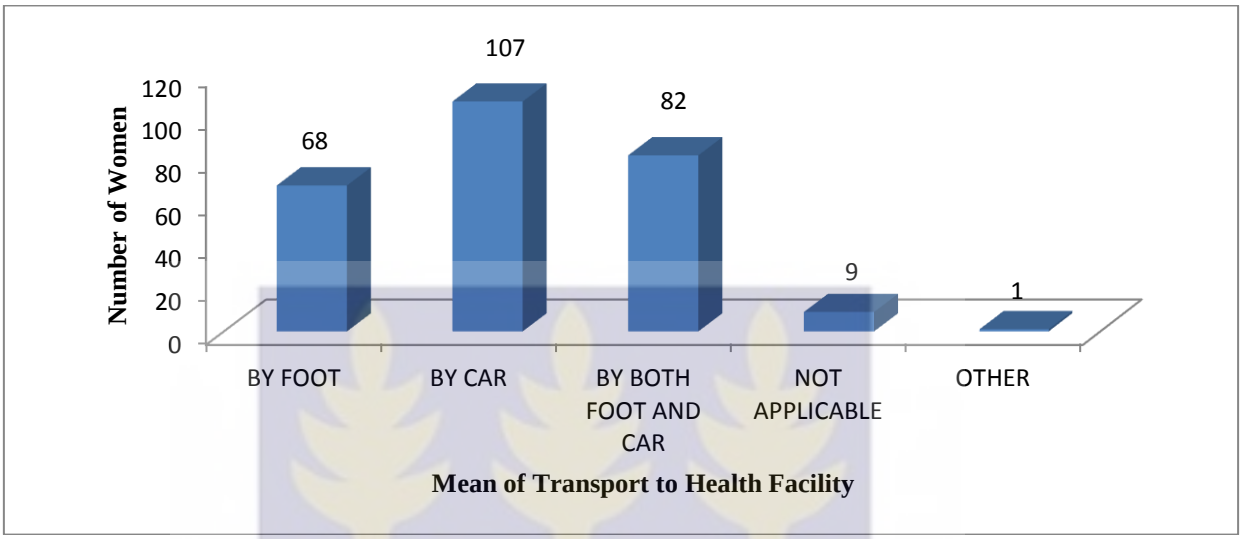
From Figure 4.2, it is seen that, almost all the 58 (21.7%) respondents who had CHPS compounds in their village(s), walked less than 1 km to the nearest CHPS compound. Thirty (11.2%), 97 (36.3%) and 69 (25.8%) covered between 1 - 5 km, 6 - 10 km and 11 - 15 km respectively. Only 5 (1.9%) of women covered more than 15 km to the closest HF. This implies that majority of respondents covered between 5km and 15 km which is relatively far. In this regard, the study can conclude that most women travel long distances to access ANC and DAHP services and as such geographic accessibility is not fully met.

4.2.3: Respondents Means of Transport to Health Facility

How and where a person seeks ANC and DAHP services is an important factor in determining whether the person would continue to utilize the service or not (Addai, 1994; Daniels 2013).

Figure 4.3 highlights the means of transportation by which respondents commute from their places of residence to the nearest HF.

Figure 4.3: Distribution of Respondents Means of transport to Health Facility



Source: Researchers' Field Data (2015)

From Figure 4.3, majority of the respondents, thus 107 representing 40.1% travelled by car only to the nearest and sometimes most convenient place (health facility) to utilize a specific ANC or DAHP service. Approximately ¼ of the respondents (68, representing 25.5%) travelled by foot to the CHPS compound and so did not incur any form of transportation cost. Interestingly, about 1/3 of the respondents (82 representing 30.7%) travelled both by car and foot concurrently. They explained that, since most vehicles do not get to their villages due to lack of access roads, they had to walk to a certain point (nearby village or road side) before boarding a car to the nearest HF. This situation, they expressed as worrying, since they had to spend a whole day to get a single ANC service. Though most women did not confirm, the study gathered that the above delay in getting to the nearest HF is a major cause for failing to fully utilize all services especially, DAHP.

4.2.4: Availability of Health Professionals at Health Facility

In order to get the type of health professionals at various CHPS compounds, their dress code was used as a means to describe them. In this regard, registered nurses were coded as those

who wear green and white with community health nurses/assistants (CHN/A) wearing either brown or pink while midwives (popularly referred to as matron) wearing white (Essuman, 2014). This section was to address the type and attitudes of health professionals that are found in the HFs.

Table 4.8: Normal and Percentage Distribution of HPs at CHPS compounds

Health professional at the CHPS compounds	Frequency	Percentage (%)
Registered Nurses	5	1.9
Community Health Nurses/ Assistants	247	92.5
Midwives	6	2.2
Other	9	3.4
Total	267	100.0

Source: Researcher Field Data (2015)

From the Table 4.8, it is evident that majority of the respondents have seen or have been attended to at the CHPS compound by CHN/A. A total of 247 (92.5%) respondents have seen CHN/A. Six (2.2%) respondents had had services delivered by a midwife(s) and 5 (1.9%) made mention of registered nurses. Again, 9 women had no idea of the HPs at the various CHPS compounds implying that they had never paid visit to any HF let alone utilize any service. This in effect reveals a worrying situation that, despite the continuous education to press home the need to utilize ANC services, some rural women in AOB has not paid heed to this advice.

4.3. Financial Accessibility

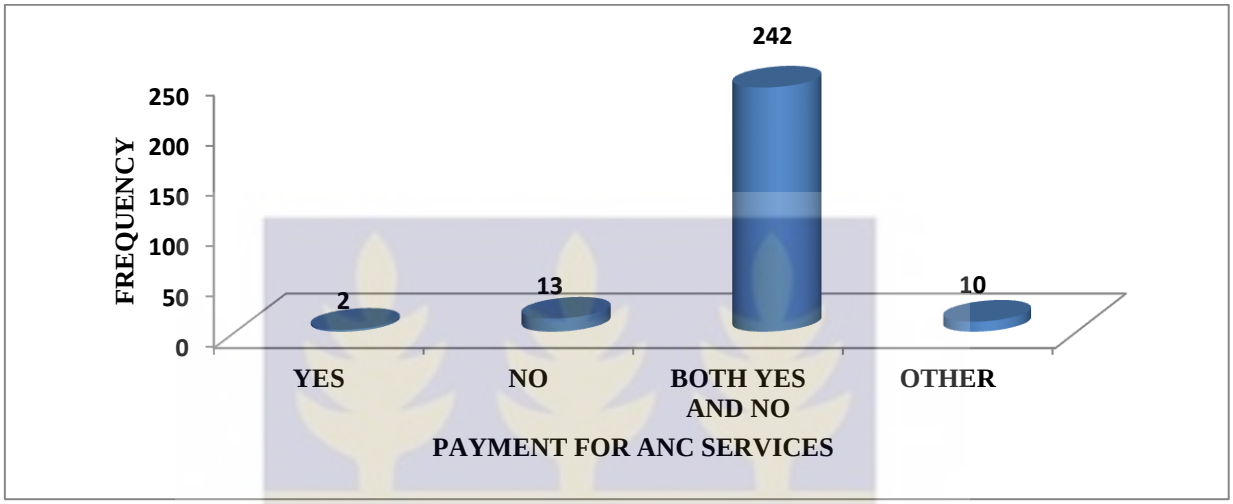
This aspect was intended to ascertain whether or not respondents had any financial commitment for the ANC or DAHP services they underwent during their last or current pregnancy. Here respondents were asked to provide vivid information on their healthcare expenditure and state the means by which they incurred those expenses.

4.3.1: Payments made by Respondents Seeking ANC and DAHP services

The means by which a woman pays for her healthcare and especially maternal healthcare services is a necessary tool to enhancing her willingness to continue or otherwise (Ameyaw,

2011; Jehu-Appiah, 2011; Wen-Yen *et al*, 2013). In this regard, the study wanted to confirm whether or not, the free maternal healthcare policy's aim of removing all financial commitment towards utilization of ANC and DAHP services is achieved.

Figure 4.4: Distribution of Respondents Payment for ANC and DAHP services



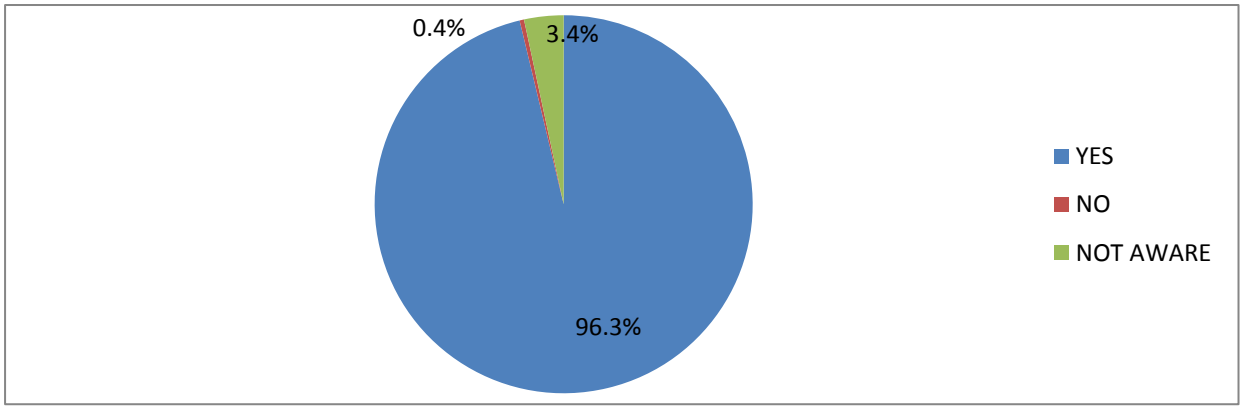
Source: Researchers' Field Data (2015)

From Fig. 4.4, only 2 (0.7%) respondents stated, they make direct payment any time they utilize any ANC or DAHP service. Thirteen (4.9%) respondents indicated not paying for any ANC and DAHP ever. Interestingly, a high number of 242 (90.6%) respondents stated that, they paid for some of the ANC and DAHP services whiles others were free. This high number of women paying for some ANC services presupposes that, though the FMHCP is contributing to improving ANC and DAHP services, it has not been fully operational as stated in its objectives.

4.3.2: Respondents Possession of Free Maternal Healthcare Policy Card

Possession of a FMHCP card is an indication that, the pregnant woman or the mother has ever visited an ANC section of the HF during an earlier or current pregnancy. Thus, pregnant women are enrolled onto the policy on their first ANC visit (Brobbey-Mpianim, 2014; DHIO, 2015)

Figure 4.5: Percentage distribution of respondent Possessing of the FMHCP card



Source: Researchers' Field Data (2015)

From Fig 4.5, 257 (96.3%) respondents indicated that, they possess the FMHCP Card. This shows that, they have ever utilized an ANC service during their last or current pregnancy. Surprisingly, 9 (3.4%) respondents had no idea about FMHCP since they had not used any of the ANC or DAHP during their pregnancy within 2006 to the time of gathering the information.

4.3.3: ANC and DAHP Services Paid for by Respondents

When women pay for a specific service at a HF, it is likely to influence her decision to further utilize such service (Brobbey-Mpianim, 2014). Table 4.9 shows the ANC and DAHP services that women usually pay for as part of the general ANC services.

Table 4.9: Distribution of ANC and DAHP Services Paid for by Respondents

Services paid for	Frequency	Percentage (%)
Lab/Scan	240	89.9
Medication	13	4.9
Caesarean Operation	6	2.2
Not Applicable	8	3.0
Total	267	100.0

Source: Researchers Field Data (2015)

From Table 4.9 above, 240 (89.9%) respondents stated they paid for all lab/scan services anytime they utilized it. Upon further interrogation, the study gathered that, no woman enjoys Scan/Lab services without paying even though it is compulsory for all pregnant women to undergo lab test in order to further enjoy ANC services. Since most women are unable to

travel to the HFs with Labs and let alone pay for the cost of Lab services, they refuse to utilize ANC services after their initial visit. On medication, 13(4.9%) revealed that some medicines are sold to them. Six respondents (2.2%) who had had the experience of a caesarean operation also indicated paying some amount of monies. Again 8 women (3.0%) had no business with utilization.

4.4: Influence of cultural dynamics and beliefs on the utilization of ANC AND DAHP

This section reveals how culture and religion influence respondents' decision to utilize ANC and DAHP. In this regard, the religious affiliations and effects of their culture dynamics on their quest to utilize ANC and DAHP services were investigated.

Table 4.10: Distribution of cultural influence on utilization of ANC and DAHP services

Cultural influence on ANC and DAHP	Frequency	Percent
No	261	97.8
Don't Know	6	2.2
Total	267	100.0

Source: Researchers' Field Data (2015)

Out of the 267 respondents, 261 (97.8%) indicated that, cultural beliefs and practices do not influence their choice to utilize ANC. Six (2.2%) respondents could not take any stance on the subject matter. Not surprising, all of these women who couldn't take stance were among those who had not utilized ANC or DAHP during their last pregnancy and were even not aware of FMHCP. From the above revelation, the study concludes that, culture believes and practices do not have any form of influence on utilization of ANC and DAHP services among rural women in AOB.

4.4.1: Religious background and its influence on utilization of ANC and DAHP services

This section focuses on the religious association of respondents and how their religious faiths affect their utilization of ANC and DAHP services. The study came across 188 (70.4%) respondents who are Christian, 73 (27.3%), Islam's (Muslims), 5 (1.9%) traditionalists and 1 other.

Table 4.11: Distribution of Religious influence on utilization of ANC and DAHP Services

Religion allows ANC/DAHP	Frequency	Percent
Yes	266	99.6
Don't Know	1	.4
Total	267	100.0

Source: Researchers' Field Data (2015)

Despite the selection of study participants from different geographic location coupled with their different religious backgrounds, 266 (99.6%) respondents stated that, their religion encourages them to utilize ANC and DAHP services during pregnancy. Only 1 (0.4%) respondent could not tell whether her religion allows utilization of ANC and DAHP or not. This level of encouragement implies that, all the religious faiths within AOB district do not infringe on utilization of ANC. Interestingly, three fetish priestesses who formed part of the respondents confirmed ever using ANC services during a former pregnancy. From this revelation it is deduced that, the effects of cultural and religious influence on utilization of ANC and DAHP in rural AOB is neutral and positive respectively.

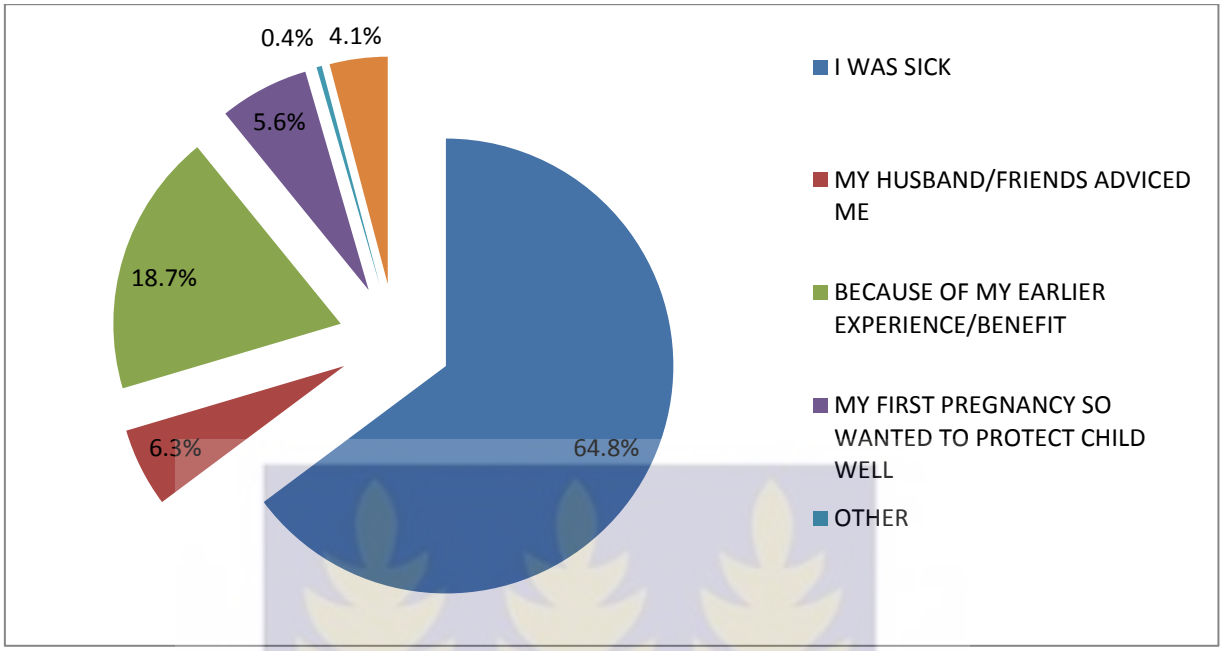
4.5: Needs Characteristics /Reason for utilizing ANC and DAHP Services

The most powerful ingredient that motivates a pregnant woman to utilize ANC services is the Need characteristic (Anderson et al, 1973). In this regard, the study wanted to find out whether, rural women in AOB utilized ANC services mainly as a result of the need characteristics. This includes; sickness, previous experience of a complication or an unusual abnormality associated with the current pregnancy.

4.5.1: Respondents' reasons for making first ANC visit

Reasons that are associated with women making their first ANC visit during pregnancy differ from place to place, time and social status (Abor *et al*, 2013). In the light of the study, the figure below highlights the reasons which motivated respondents to make their first ANC visit.

Figure 4.6: Distribution of respondents reasons for making 1st ANC Visit.



Source: Field Data (2015)

Fig. 4.6 shows that, 173 (64.8%) respondents made their first ANC visit due to the presence of sickness. This implies that, these respondents only saw the essence of visiting a health facility (HF) to utilize ANC during their last/current pregnancy when they were convinced of being sick.

The second highest percentage of 18.7% on the chart depicts that, the earlier experience of complication (mainly unexpected severe bleeding) or sickness affects the decision of a woman to utilize ANC during subsequent pregnancies. Similarly, the number of earlier births/number of previous pregnancies of a pregnant woman affects her decision to utilize ANC. From the chart, 6.4% of respondents who mostly were pregnant or had given birth to 1 child stated that, they made their first ANC visit as a result of wanting to protect their first child well.

They further indicated that, since it was their first pregnancy, it was important to have started ANC early in order to gain maximum protection for the child and themselves and especially know whether the child was lying well in the womb or not. Respondents who made their first visit as a result of their husbands/family and friends advice formed 5.6% of the total

respondents. Interestingly, 11 (4.1%) did not visit ANC at all and had no reason for utilizing ANC during their last pregnancy.

4.6: Utilization of ANC by rural women in AOB

This section focuses on the cumulative outcome of all the factors that influence utilization their effects on rural women within AOB to utilize ANC services or otherwise during their last pregnancy within 2006 to 2014 (one year after the introduction of the FMHCP). This was to verify whether women in rural AOB undertake ANC services at the right time and with the right number of visitations as stipulated by the WHO.

4.6.1: Respondent Initiation of 1st ANC visit

The timing of a woman's first ANC visit during pregnancy is an important step to promoting the general welfare of the woman and the baby yet unborn (WHO, 2010; 2014). To this effect, the WHO suggests that each woman makes her first ANC visit within the first three months of pregnancy. The study wanted to find out whether rural women in AOB adhered to the WHO suggestion.

Table 4.12: Timing of first ANC visits by respondents.

Month/Timing of 1st ANC visit	Frequency	Percentage (%)
1-3 month	57	21.3
4-6 month	148	55.4
7-8 month	49	18.4
9 month	1	0.4
None	12	4.5
Total	267	100.0

Source: Researchers' Field Data (2015)

From Table 4.12 above, 148 (55.4%) respondents indicated making their first ANC visit within the 4th and 6th months of their pregnancy. Similarly, 49 (18.4%) paid their 1st visit within the 7th and 8th month while 1 (0.4%) respondent visited ANC centre during her last month of pregnancy. Summation of the above number of respondent's first visit to ANC sections implies that, most rural women in AOB make their first ANC services after their first

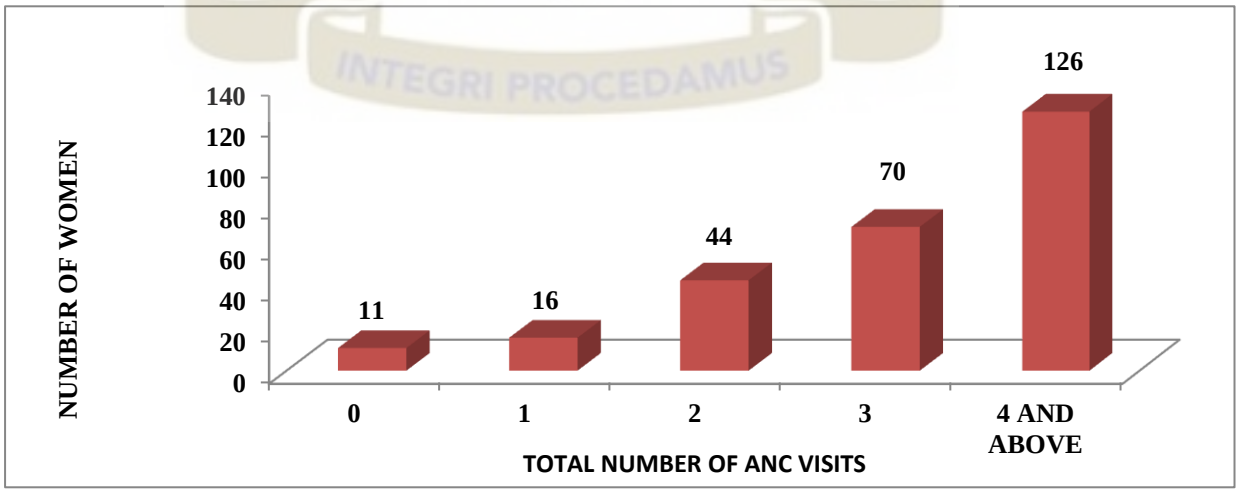
trimester of pregnancy. This situation goes contrary to the suggestion by the WHO. Interestingly, 12 (4.5%) respondents did not make any visit at all during their last pregnancy apparently because they did not fall sick or have no previous experience of complication(s). Further questioning revealed that, majority of the women who paid late visit are those who have had previous experience of pregnancy and or child birth.

Despite these acts of late visitation to CHPS compounds for ANC services, 57 (21.3% of respondents) paid their first visit within the first trimester. The study gathered that, most of the respondents in this category were those who were experiencing pregnancy for the first time or have suffered one form of complications/sickness during a previous pregnancy. In general, the study reveals a worrying situation of most women in rural AOB paying visit to CHPS/HFs for ANC services late and even that, they only do when they feel the presence of sickness.

4.6.2: Total Number of ANC Visit by each Respondent.

The World Health Organization stipulates that, every woman must at least make 4 ANC visits before delivery. To ascertain this assertion, the total number of ANC visits made by respondents during their last pregnancy was gathered.

Figure 4.6: Distribution of respondent total number of ANC Visit.



Source: Researchers' Field Data (2015)

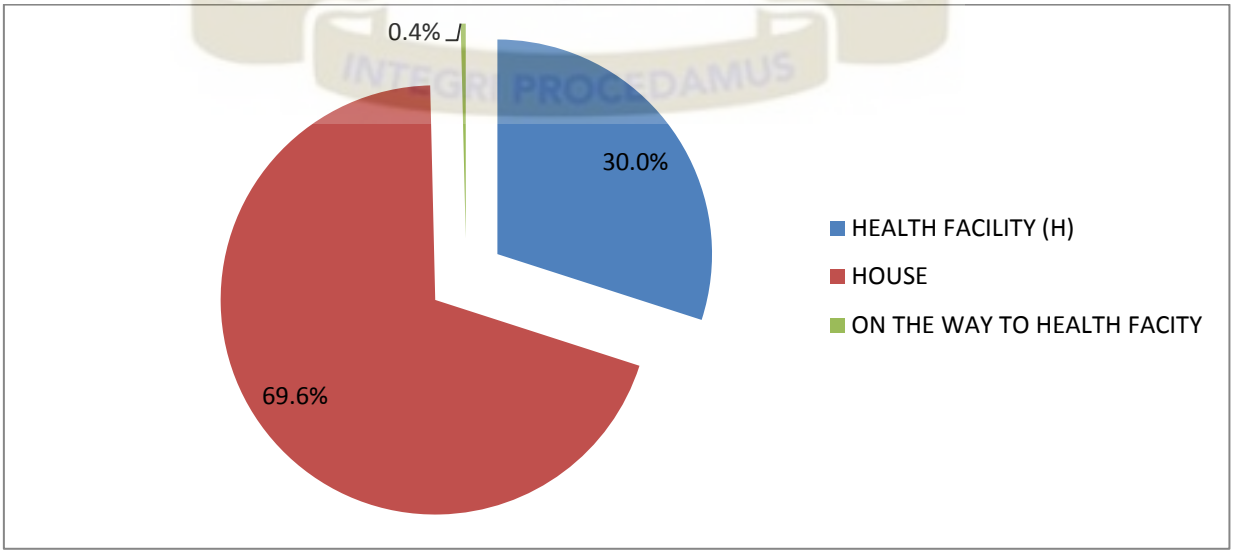
From Fig. 4.6 above, 125 (46.8%) respondents made 4 or more visits to ANC centres during their last pregnancy. This the study gathered through a critical analysis of the reason for utilizing ANC that, most of the women who made more than 4 visits were as a results of first pregnancy, previous experience of complication or early detection of sickness/possible complication. Further interview revealed that, when there is an abnormality associated with the pregnancy, the rural women obey the instructions of the HPs and attend ANC services as instructed and vice versa.

The figure also shows that, a cumulative percentage (53.2%) of the total number of respondents who did not meet the requirement 4+ visits is on a higher side. This reveals another worrying situation that more than 50% of rural women in AOB do not meet the required 4 visits or more as stipulated by the WHO.

4.6.3: Respondents place of delivery (POB)

According to the WHO (2014), every pregnant woman stands a 50% chance of reducing risk when she delivers in a health facility and is assisted by a qualified health professional. In view of this assertion, this section of the study examines; where respondents delivered their last baby, who assisted them while delivering and the reason for choosing to deliver at that place.

Figure 4.7: Percentage distribution of place of delivery by respondents



Source: Researchers' Field Data (2015)

From Fig. 4.7 above, 186 (69.6%) respondents delivered their last baby in the house. The study gathered upon further investigation that, the high number of house delivery was as a result of the presence of numerous TBAs in the villages and the bad nature of roads that make motorists unwilling to ply the roads. Eighty (30.0%) respondents indicated having given birth to their last babies in health facilities with the assistance of HPs. Surprisingly 1 (0.4%) woman revealed that, due to excessive delay in getting transportation to the nearest CHPS compound, she delivered her last baby in a car while on her way to the CHPS compound. This situation can therefore be linked to the fact that, the issue of the first and second delays in seeking skilled delivery is paramount in AOB.

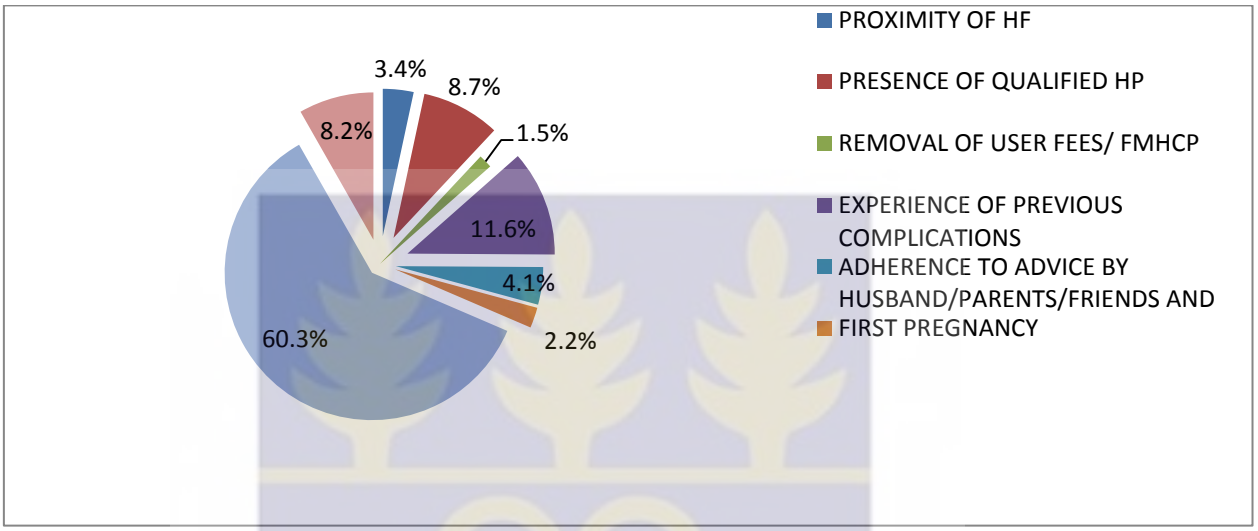
Upon request to indicate the type of professionals who assisted respondents during their last delivery, 166 (62.2%) respondents indicated receiving assistance from traditional birth attendants (TBAs). As to whether the TBAs were trained or not, most respondents in this category could not confirm. They could only tell of the number of years such TBAs have been operating in their area/village and the number of times they have enjoyed the TBAs services. The study also gathered that, in situations where pregnant women in labour are unable to go the CHPS compound (s) as a result of delay in getting car, special phone numbers have been given to community leaders to contact the nearest CHPS compound, so that HPs will move to the village themselves and help such women. It is for this reason that, though some people delivered in the house they were still assisted by HPs.

Ninety six (36.0%) were assisted by HPs during their last delivery. Again, 5 (1.9%) respondents indicated delivering without anybody's help. Though surprising, these women revealed, they delivered the baby, cut the umbilical cord and dressed the baby all by themselves. The study again gathered that, most of the women who practiced such bravery yet dangerous acts were those above 33 years and had 4 or more children. From these findings, it confirms that, the number of previous deliveries influences ones choice to utilize DAHP services.

4.6.4: Factors which influenced respondent's decision to deliver at the house or HF.

Different people are influenced by different reasons to utilize a specific place of delivery. in this regard, the study ascertained from the respondents what motivated them to utilize delivery at the HF or the house.

Figure 4.8: Percentage distribution of respondents reasons for utilizing DAHP.



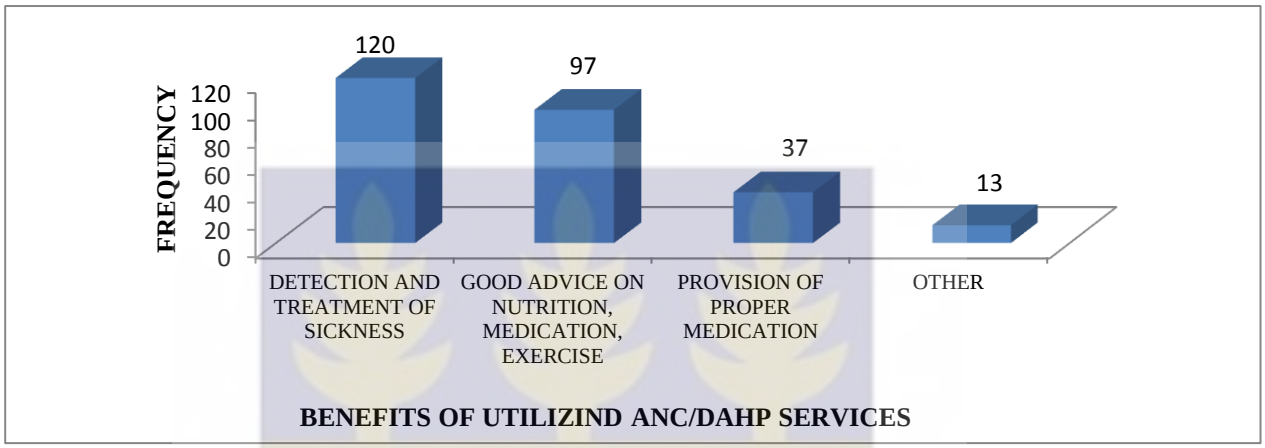
Source: Researchers' Field Data (2015)

From Fig. 4.8 above, 161 (60.3%) indicated that, they felt more comfortable delivering in the house and with the assistance of TBAs. This they emphasized that, the TBAs were more easily accessible, loving, empathetic and caring in nature. These characteristics they explained are not the same when you utilize the HFs. Only 23 (8.7%) respondents delivered at HFs because of the presence of qualified health professionals whom they feel give quality care. Surprisingly, the issue of proximity to HFs received very minimal recognition as only 9 (3.4%) respondents indicated using HFs as a measure of the proximity of HFs in their locality. The removal of user facility/FMHCP was barely recognised. Only 4 (1.5%) respondents revealed being motivated by FMHCP to use HFs. The issue of previous experience of complication during a past pregnancy continues to motivate women to utilize HFs with 31 (11.6%) of respondents stating this reason making them utilizing DAHP. Adherence to husbands and parents' advice and wanting to protect first delivery were recognised though minimally.

4.6.5: Benefits associated with using ANC and DAHP services in AOB.

Respondents stated various benefits from utilizing ANC and DAHP services but three of them were very paramount. These were; early detection of sickness, good advice on nutrition and medication and provision of proper medication

Figure 4.9: Distribution of benefits from utilizing ANC and DAHP services.



Source: Researchers' Field Data (2015)

From Fig 4.9 above, 120 (44.9%) respondents were of the view that, utilizing ANC helped them to identify their sickness early and get further treatment. This, they indicated, prevents further complications and ensured they had no problems during delivery. Good advice on nutrition, medication and exercise was also a very important benefit respondents enjoyed with 97 (36.3%) stating it as their benefit from utilising ANC and DAHP services. Women in this category insisted that, the ANC sections had an aspect of talk show which were used to educate them on the need to eat balanced diet during pregnancy.

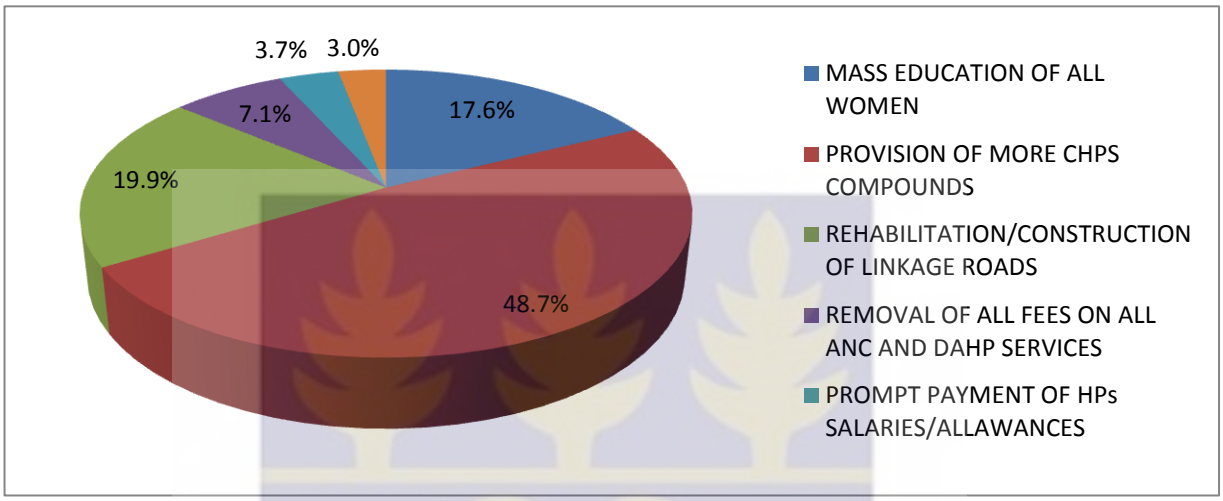
"*Adherence to the advice helped us to be strong and delivered healthy babies".*

On provision of proper medication in their right quantities and dosage, 37 (13.9%) respondents stated this as the key benefit they enjoyed from visiting ANC sessions. The respondents emphasized that, the TBAs are unable to give the right quantity of medicine and most often their medication has several effects. Out of the total number of respondents, 13 (4.9%) stated other reasons which were not many while others within this same group could not state any benefit apparently because they don't utilize ANC and DAHP services.

4.6.6: Suggestions to improve upon utilization of ANC and DAHP services in Rural AOB

The figure below shows respondents suggestions on how to improve upon utilization of ANC and DAHP services in AOB district. Despite numerous suggestions that were given, 5 were paramount.

Figure 4.10: Suggestion to improve on Utilization of ANC and DAHP services



Source: Researchers Field Data (2015)

On the whole, 47 (17.6%) respondents were of the view that, mass education of all women on importance of ANC and DAHP in churches, markets, farms and other places where women meet will go a long way to ensure that women really understand the need to utilize these services in order to reduce maternal mortality. A large proportion of 130 (48.7%) respondents suggested that though the government and other related agencies have tried their best to improve upon geographic accessibility, it is important to build more CHPS compounds across the length and breadth of the district. This will indeed cement the aim of reducing geographic inequality. On the part, 53 (19.9%) respondents were of the view that, road networks that link village to CHPS compounds should be constantly renovated or constructed where unavailable.

This in effect, will motivate more vehicle/drivers to ply the route and therefore reduce the second delay in seeking ANC and especially DAHP.

Complete removal of all charges associated with utilizing ANC and DAHP saw 19 (7.1%) respondents suggesting it. This they claim will indeed motivate more women to utilize ANC and DAHP especially lab and scan services which most often they are unable to pay for. Ten (3.7%) respondents were of the view that, when HPs are well paid, they would subsequently behave well toward them and this in turn will motivate us to utilize ANC and DAHP services. Eight (3.0%) respondents gave other independent suggestions which were ideal to them.

4.7 Interview with Midwives/Nursing Managers and District Health Information Officer of Asikuma Odoben Brakwa District.

From the interviews conducted to ascertain the factors that influence utilization of ANC and DAHP services as stated by the respondents, the responses of the midwives/nursing managers though many were grouped as follows;

(i) None / Bad nature of linkage road network – From the information gathered, the road from most of the villages to the CHPS compound is so bad that it is virtually unmotorable.

"Most drivers refuse to ply the road and so pregnant women who are unable to walk over long distances refuse to attend ANC let alone utilizing DAHP".

(ii) Presence of too many TBAs – all the midwives/nursing managers stated that, despite much education for pregnant women to deliver under the supervision of a health professional, most of them prefer delivering under the supervision of TBAs whether trained or untrained. Most of the pregnant women associated the desire for TBA to their friendly, caring and empathetic behaviours when supervising their delivery.

"*They are of the view that their mothers and grandmothers gave birth to plenty children in the house without any difficulty so they see no need to deliver at the hospital". They only rush to the CHPS compound when their situation worsens and this is the major cause of still births in the district"*

(iii) Lab Services – the nursing managers stated that;

"Since pregnant women have to travel over long distances to Breman Asikuma, Agona Odoben or Swedru for such services, they do not go and so, they stop attending further ANC. They then resort to TBAs medication and assistance during delivery".

(iv) Education – most of the women have had no education at all. The few who have had little education usually did not complete JHS or at most completed JHS. Similarly they have not travelled or stayed outside their communities before. Due to this, changing their mentality about modern trends of medication, lifestyle and contraceptive use is a huge challenge. Most of them forget their ANC attendance and Toxoid dates for their tetanus immunization.

"*They refuse to follow simple instructions and when queried they coil back and the next thing is for them not to attend ANC again". Since most of the husband themselves are not educated they don't care whether their wives attend ANC or not"*

(v) Job / poverty – according to the nursing managers and midwives,

"Most of the women engage in farming with their husbands and do not have money of their own to travel to CHPS zones let alone travelling to farer distances for lab/scan services while paying for those services too".

In this regard, when their husbands refuse to give them money to travel or take lab test and buy other relevant materials as part of MHC services, the women are left handicapped with no other option than to ignore utilizing MHC services. Again, they stated that,

"During farming season, some husbands refuse to allow their wives to access MHC since they need them to work on the farm"

(vi) Failure in Telecommunication or Mobile network – it was found out that, mobile phone numbers of some drivers as well as the health professionals at the CHPS compounds were given to the various communities to call in times of emergencies, especially, when a pregnant woman is in labour. Unfortunately,

"*The communities are unable to reach us due to mobile network failure. Most women deliver in the house with or without assistance".*

On the part of the DHIO, he was of the view that, there are several challenges/factors associated with utilization of MHC in the district citing four as most very paramount;

(i) Geographic accessibility – The district health directorate deals with 183 communities of which some of the villages have been combined as one.

> "*CHPS compounds are usually situated at the centre of about 10 to 20 villages and so most of the women who seek MHC services in the CHPS compound stay in villages which are more than 5 km to the nearest Health Facilities (HF) and there are usually no motorable roads to the HF".*

Available roads too are so bad that, most drivers refuse to ply them and those who do charge exorbitant fares. In this regard, most of the women who genuinely had wish to utilize ANC services are unable to do so especially during their first (1-3 month) and last trimesters of pregnancy (7 -9 months) when they cannot walk for long distances. He further stated that,

> "*Though there is a memorandum of understanding (MOU) between the regional/ district directorate of health and the various driver unions (GPRTU and PROTOA) in the district to convey any pregnant woman in labour to the nearest HF, most drivers refuse to do so due to the bad nature of roads".*

(ii) Educational background and attitude of pregnant women –The DHIO stated that,

> **"***Due to the low level of education of most of the rural women, it is very difficult convincing them to accept utilizing MHC. They rather prefer using their own method of medication during pregnancy".*

He added that most of them who occasionally utilize ANC services do not adhere to the pieces of advice that are given them.

(iii) Poverty and income levels of rural AOB women - the DHIO stated that,

> "*Some of the women are willing to attend ANC as well as utilize DAHP but due to their low level of income/economic hardship, they are unable to transport themselves to the CHPS compound.* Again, *none of the CHPS compounds has laboratory and scan services so the pregnant women have to travel to the main hospital a, Breman Asikuma or Odoben health post or sometimes to Agona Swedru to utilize such services which are usually at a fee. Since they do not have money for transportation and cost of such services, they do not continue utilizing ANC services at all, for fear that the HPs will reprimand them for not going to undertake the lab test and scan services".*

(iv) Attitude of Health Professionals (HPs) resulting in preference for traditional birth attendants was another factor the DHIO stated influenced the decision to utilize ANC and DAHP services among all women and especially rural women in AOB. To this effect the DHIO stated that,

behaviours of most of the nurses, especially the young ones towards the pregnant women in our villages is mostly not cordial and so there is no rapport between them making it difficult for most pregnant women to continue utilizing MHC services and especially DAHP. They are unfriendly and disrespectful". This behaviour has resulted in most pregnant women not having trust in the HPs at various CHPS compounds and rather resort to seeking services from traditional birth attendants whom they see as being more friendly, easily accessible, patient and empathetic.

4.7.1 Effect of over examination of women in labour on subsequent utilization of DAHP

A controversial finding which the researcher came across with most women emphasizing on it is the issue of over examination of the vagina during delivery. According to a mother of six;

''Most HPs are unable to predict the actual time I will deliver. They insert their fingers into my vagina anyhow when am in labour. I don't feel comfortable with that at all. I have stopped utilizing DAHP services after my second delivery at the Asikuma hospital'. I now utilize the services of a TBA in my village who gives me correct time for my delivery without 'unnecessarily' inserting her finger in my vagina''

This revelation though unfortunate, has a huge toll on the level of utilization of DAHP services. On the contrary, the interview with the managers of the CHPS compounds revealed that, the vaginal examination (VE) which is done every four hours is to determine the length (CM) of the foetus from the cervix. A midwife explained that;

''The main objective of the VE is to ascertain whether the woman can undergo normal delivery or has to be sent to the bigger facility to undergo caesarean operation (CS). Since we do not have a reliable means of transport, we do it earlier than the normal stipulated time so as to avoid any excessive delay in the labour situation. This helps us to prevent complications which can result in maternal mortality''.

4.7.2 Summary of objective 1

Having analysed the factors as enumerated by the respondents and the interviews granted by the midwives/nurse managers and the DHIO, the researcher is convinced that, the need characteristics of sickness, perceived presence of diseases and experience of complication during previous pregnancy constitute the major determining factor for utilizing ANC and DAHP services among rural women in Asikuma Odoben Brakwa (AOB) district.

Aside this major factor, the age of the woman during pregnancy, number of previous births, educational background, economic empowerment/income level and most importantly, the

geographic accessibility/distance to nearest health facility where respondents could get all needed ANC services were contributing factors to utilizing ANC and DAHP services.

Surprisingly, the issue of cultural dynamics, societal norms, taboos and religious faiths did not in any way have negative influence on decisions to utilize ANC services such that, even fetish priests who formed part of the respondents utilized ANC services during their last pregnancy. Again, religious bodies in AOB contribute immensely to the public education to improve upon utilization of ANC and DAHP services in the district. The effect of vaginal examination is a source of worry to most rural women and so, alternative measures must be developed to enhance utilization of DAHP services by rural women especially in AOB.

4.8: Objective 2 – Relationship/Dependency between provision of access and utilization of ANC and DAHP servicers.

The second objective of the study was to determine whether the provision of access (both geographic and financial) has had an influence on the utilization of ANC and DAHP services among rural women in Asikuma Odoben Brakwa district. This was tested using two separate hypotheses; Pearson correlation coefficient matrix and a cross tabulation/Chi-square test of dependency.

4.8.1: Hypothesis 1

Ho 1: There is no relationship between provision of HF and utilization of ANC and DAHP among rural women in AOB

Ha 1: There is a relationship between provision of HF and utilization of ANC and DAHP among rural women in AOB

NB: Geographic accessibility in the context of this study was based on two issues; availability of HF in a woman's village or catchment area and the distance between a woman's place of permanent residence and the nearest HF where she could utilize ANC or DAHP services.

The following rule of thumb was applied in analysing the outcome of the SPSS data view.

The closer the Pearson's correlation coefficient (r) value was to -1 or +1, the more strongly the relationship between the two variables of interest. Positive or negative sign attached to the value depicts the kind of relationship between the two variables respectively. If positive, it implied that, as one variable increased in value, the second variable would also increase in value and vice versa. When there is a negative value, it implied that as one variable increases, the other variable would decrease. When 0 it shows there is no relationship between the two variables (Garczynski, 2014).

Table 4.13 Pearson correlation coefficient matrix between Geographic Accessibility and Utilization of ANC and DAHP

Geographic accessibility/ Utilization	outputs	Month/timing of first ANC visit	Total number of ANC visits	Place of delivery	Assistance during delivery
Availability of HF in a woman village	Pearson correlation	.236**	- .132*	.024	.059
	Sig (2 - tailed)	.000	.031	.698	.334
	N	267	267	267	267
Distance to Nearest Health facility	Pearson correlation	.194**	-.109	.015	.076
	Sig (2 - tailed)	.001	.076	.811	.239
	N	267	267	267	267

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Table 4.13 established the relationship between availability of a CHPS compound /HF in a respondent's village coupled with the distance covered to the nearest FH/CHPS and their effect on outcome variables. From the table, it is evident that both availability of HF and the distance to nearest HF were statistically significant (P = 0.000 and P = 0.001 respectively) but

weakly correlated with timing of first ANC visit (r = 0.236, r = 0.194). This implies that, there is a positively weak correlation between both availability of HF and distance but highly significant at 0.000 and 0.001 level of confidence indicating that, when the distance to the nearest HF increases, there is the tendency for the time of first ANC visit to also increase. Thus the longer the distance, the late/more months a woman spends before making 1st ANC visit and vice versa.

There was a negatively weak correlation (r= -0.132 and r = -0.109) which is significant at 0.031 ($p < 0.05$) confidence level between availability of HF and insignificant at 0.076 ($p>0.05$) between distance covered and the total number of ANC attendance. This implies that, the more the distance between a respondent place of residence and a HF the less the total number of ANC visit the respondent is likely to make (when distance increases, number of attendance decreases).

Moreover the insignificant correlation also depicts that, from the data imputed; distance or availability of health facility in ones village did not really correspond to utilization of ANC. In effect, there is the likelihood that there may be a HF or a short distance between a particular respondents place of residence/village yet that woman might not utilize ANC services more than the one with a longer distance or no CHPS compound in her village.

Interestingly there was no correlation (relationship) between availability of HF/distance to nearest facility and the place respondent delivered their last baby and again it is not significant ($p > 0.05$, thus P = 0.698 and P = 0.811). Since there is no significant correlation or relationship (r = 0.024 and 0.015) between availability of HF and distance to health facility and place of delivery (POD), the researcher is of the view that, the decision by rural women in AOB to deliver at a particular place of their choice does not have any relationship at all with whether there is a HF within their catchment area/short distance to nearest HF or not.

On the table again, the Pearson coefficient correlation matrix gives clear evidence that there is no relationship (r = 0.059, r = 0.079 not stared) between availability of HF/distance and skilled delivery. Thus the person who supervises child delivery/labour session of a pregnant rural woman in AOB has no bearing on the availability of HF in the person's village. From the above information, it can be deduced that, there is a relationship between availability and total number of ANC visits but there is no relationship between HF and POD and HF and skilled delivery. This implies that, indeed there is a relationship between geographic accessibility and utilization of ANC services. Therefore, we reject the null hypothesis and conclude that provision of geographic accessibility can influence utilization of ANC services.

4.8.2: Hypothesis 2

Ho 2: Utilization of ANC services is not dependent on the distance between a woman's place of residence and the nearest health facility

Ha 2: Utilization of ANC services is dependent on the distance between a woman's place of residence and the nearest health facility

Table 4.14: Cross tabulation between Distance to nearest HF and total number of ANC.

		DISTANCE TO NEAREST HEALTH FACILITY/CHPS COMPOUND					
		BELOW 1KM	1-5 KM	6-10 KM	11-15 KM	ABOVE 15 KM	Total
Total visits during last pregnancy	ANC Less than 4 visits	36	17	44	34	2	133
	4+ visits	22	13	53	35	3	126
Total		58	30	97	69	5	259

Source: Researchers' Field Data (2015)

Table 4.14 shows the cross tabulation between availability of health facility within the catchment area of a pregnant women defined by the distance to the nearest health facility and the level of utilization of ANC services (total number of ANC visits). Women were grouped according to the WHO suggested 4+ visits. Similarly the distances to the nearest health

facility were ranked in a 5 km interval. From the cross tabulation results, it is evident that, more of the women (36) who stayed less than 1 km to the nearest HF did less than 4 visits therefore not meeting the WHO accepted number of visit. Interestingly a fewer number of women (22) met the criteria. This was same for women who stayed 1 – 5 km from the nearest HF.

Surprisingly, more of the women (53 and 35) who stay farther from the nearest HF (6 – 10 km and 11 – 15 km) met the 4+ visits as compared to (44 and 34) who did not meet the requirement respectively. These results imply that, the distance to a HF does not necessarily influence utilization of ANC visits as fewer women closer to HF did not meet the 4+ visit but rather more women staying farer distances met the criteria.

Table 4.8.3: Chi – Square Test of Dependency of ANC utilization on Distance to HF

	value	df	Asymp. Sig. (2-Sided)
Pearson CHI –Square	4.776	4	.311

Source: Researchers' Field Data (2015)

A Chi – Square test used to authenticate the statistics of the cross tabulation gave a statistically insignificant p value of 0.311 (p> 0.05) which is far greater than the range of dependency (0<p> 0.05). This value gives a clear indication that, utilization of ANC services is not dependent on distance to health facility.

Therefore, the study failed to reject Ho 2 and conclude that utilization of outcome variables is indeed not dependent on distance to HF. Thus availability of HF/CHPS compound does not necessarily imply utilization.

4.8.3: Hypothesis 3

Ho 3: There is a no relationship between possession of FMHCP card and utilization of ANC services

Ha 3: There is a relationship between possession of FMHCP card and utilization of ANC services

Table 4.15: Pearson correlation coefficient matrix between Financial Accessibility and Utilization of ANC and DAHP

Financial Accessibility/ Utilization	outputs	Month/timing of first ANC visit	Total number of ANC visits	Place of delivery	Assistance during delivery
Possession of Free Maternal Healthcare Policy card	Pearson correlation Sig (2 - tailed) N	.604** .000 267	- .480* .000 267	.124* .043 267	.170** .005 267

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

From table 4.15, it is evident that there is a statistically significant and strongly positive relationship between enrolment on FMHCP and timing of first ANC visit at 0.01 level of confidence (r = 0.604, n = 267, p = 0.000). This indicates that, one's enrolment is likely to affect her decision to utilize ANC early. Thus, a woman's knowledge on the existence of FMHCP and subsequent enrolment on the policy is relevant to her early usage of ANC. In that, a person must visit an ANC section for her to be registered on the policy.

Interestingly there was a statistically significant and an averagely negative correlation between enrolment on FMHCP and total number of ANC visit (r = -.480, n = 267, p = 0.000). This suggests that, an increase in enrolment does not really reflect a high number of ANC attendances. Thus, every woman who pays her first ANC visit is automatically registered on

the FMHCP and so it does not necessarily imply that the woman will continue to utilize the service afterwards and vice versa. In this regard, a woman can start ANC service late but can make more visits than the one who starts early.

There was a weak and statistically significant relationship between FMHCP and place of delivery ($r = .124$, $n = 267$, $p = 0.043$). This result predicts that, though the decision of a rural woman within AOB to deliver her child at a particular place is least determined by the persons possession of FMHCP, there is the tendency that FMHCP would affect ones choice to deliver at a specific place. In this regard, it can be deduced that, rural women in AOB decide on where to deliver based on their personal conviction without any consideration for user fees (money to pay for utilizing DAHP services).

Surprisingly, on the issue of relationship between FMHCP and skilled delivery, there was a statistically significant ($p = 0.005$) but weak correlation between them ($r = .170$, $n = 267$, $p = .005$). This result suggests that, when more women are registered with FMHCP it would have an impact on utilization of the total number of skilled delivery.

Therefore, the study rejects Ho 3 and concludes that, there is a relationship between possession of FMHCP card and utilization of both ANC and DAHP services.

4.8.4: Hypothesis 4

Ho 4: Utilization of ANC services among rural women in AOB is not dependent on possession of FMHCP card

Ha 4: Utilization of ANC services among rural women in AOB is dependent on possession of FMHCP card.

Table 4.16: Cross tabulation between possession of FMHCP Card and utilization of ANC

		DO YOU HAVE FREE MATERNAL HEALTHCARE POLICY (FMHCP) CARD		Total
		YES	NO	
Total ANC visits during last pregnancy	Less than 4 visit	131	1	132
	4+ visit	126	0	126
Total		257	1	258

Source: Researchers' Primary Data/Questionnaire

Table 4.16 above shows that, 257 out of the 267 respondents possessed the FMHCP card. Surprisingly a greater majority of these women (131) did not meet the suggested 4 or more visits whereas 126 met the criteria. Again 9 women did not answer the question on FMHCP and so were not included in the computation. Since a higher percentage of the women who possess FMHCP card did not fully utilize the approved number of ANC visits, we can deduce that, possession FMHCP card does not necessarily warrant utilization.

Table 4.17 Chi – Square test

	Value	df	Asymp. Sig. (2-Sided)
Pearson CHI –Square	0.958	1	0.328

Source: Researchers' Primary Data/Questionnaire

The Chi - square test of independence yielded a p-value higher than the level of significance p>0.05 (P=0.328). This shows that, one's possession of FMHCP card does not necessarily imply full utilization of ANC. Thus utilization or otherwise of ANC services among rural women in AOB does not depend on possession of FMHCP card.

Therefore the study fail to reject Ho 4 and conclude that utilization of ANC among rural women in AOB is not dependent on the possession of FMHCP card.

4.8.3 Summary of Objective 2

In fusing the results and conclusions drawn from the four separate but interlinked hypotheses, the study confirms that, indeed there is a relationship between access and utilization of ANC and DAHP services among rural women in AOB, but there is no guarantee that, the provision of these accessibility measures would imply full utilization of such services.

4.9.0 Objective 3: Trends of utilization of general ANC and DAHP services among women in AOB district

This objective was to measure how the utilization of ANC and DAHP has increased or decreased after the introduction of CHPS compound system and implementation of the FMHCP in the district. By this two methods were employed. A trend analysis of the secondary data gathered from the district health report showing the level of utilization of new ANC registrant per year, the total number of ANC visits for each year, number of women making 4 or more visit per year and the number of skilled and TBA assisted delivery for each year 2006 to 2014 then and an interview with the managers at the CHPS compounds and the DHIO of AOB on their view about the current trend of utilization of ANC and DAHP services in AOB.

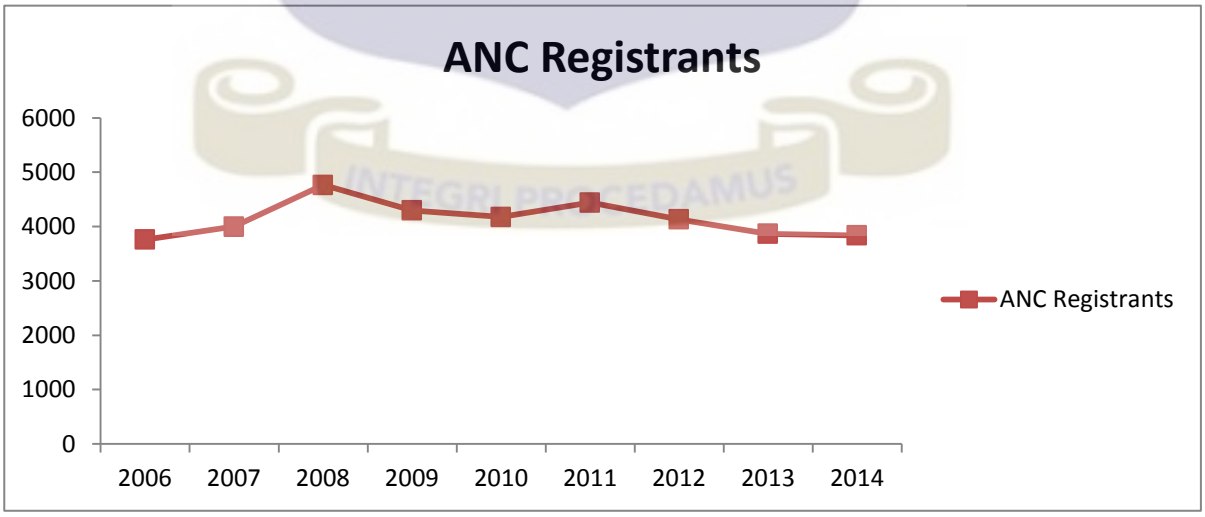
Table 4.18 shows the raw statistics of utilization of outcome variables from 2006 (one year after introduction of FMHCP)

Table 4.18: Statistics of MHC utilization in AOB from 2006 - 2014

Data element	2006	2007	2008	2009	2010	2011	2012	2013	2014
ANC Registrants	3760	4000	4764	4298	4175	4442	4133	3868	3835
ANC clients making 4th visit	1624	1837	2397	3051	5360	5526	**1116**	**1006**	**920**
Total ANC attendance	14237	14675	15143	15400	19785	22486	23953	24467	23253
Number of skilled deliveries (DAHP)	2559	2459	2665	3122	3110	3401	3476	2261	2246
Number of deliveries by TBAs	943	881	476	657	758	954	722	939	934

Source: AOB district health report (2012 pg 14-16) and 2014 (pg 26 -29)

Figure 4.11: trend of new ANC registrants in AOB from 2006 - 2014



Source: AOB Distric Health Report 2012 and 2014

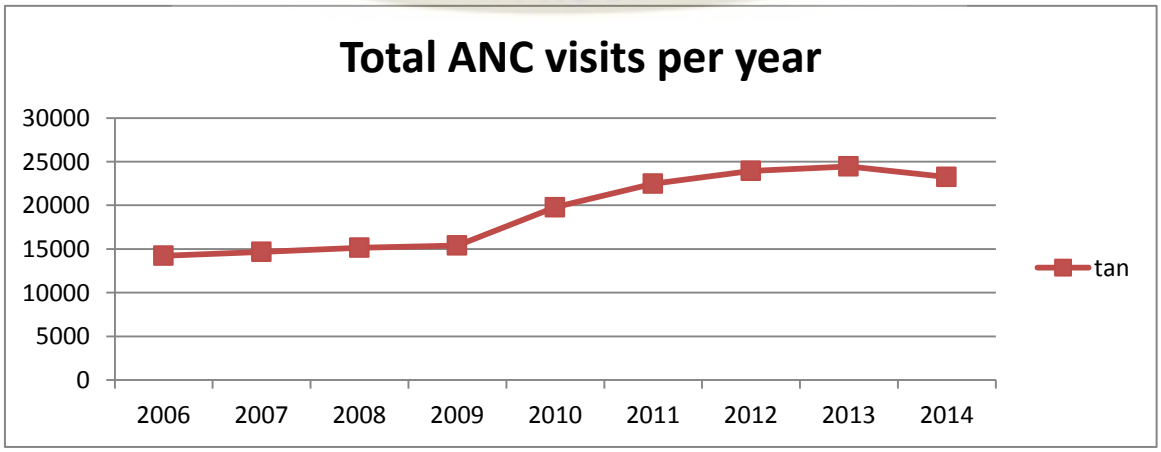
In the context of this study, ANC registrants refer to the total number of fresh pregnancies that visited any of the CHPS compounds in the seven CHPS zones and the two health facilities at Breman Brakwa and Odoben as well as the main catholic hospital at Breman Asikuma.

From figure 4.11 above, it is seen that the number of new registrants who sought ANC services from all the HFs in the district increased steadily after a year of the introduction of the FMHCP, recording the district record of 4764 in 2008. This high number of new registrants was attributed to the community education which made more women conscious of the need to seek ANC services during pregnancy (AOB DHIO, 2015).

As at the fourth year after the introduction of the FMHCP, the number of new entrants reduced marginally and same happened in 2010. Surprisingly there was a slight increase in 2011. The number of new registrants then began to reduce marginally in 2012, 2013 and 2014. On the good note, this continuous reduction in new registrants was highly welcome by the district health directorate (DHD) since it gave a reflection of the efforts they had put in place to ensure more women utilize family planning services rather than getting pregnant and utilizing ANC services.

> ***"Total ANC attendants and deliveries declined in 2012 to 2014 as compared to 2011 probably as a result of Marie stopes International intervention in family planning services in the district" (DHIO, 2015)''***

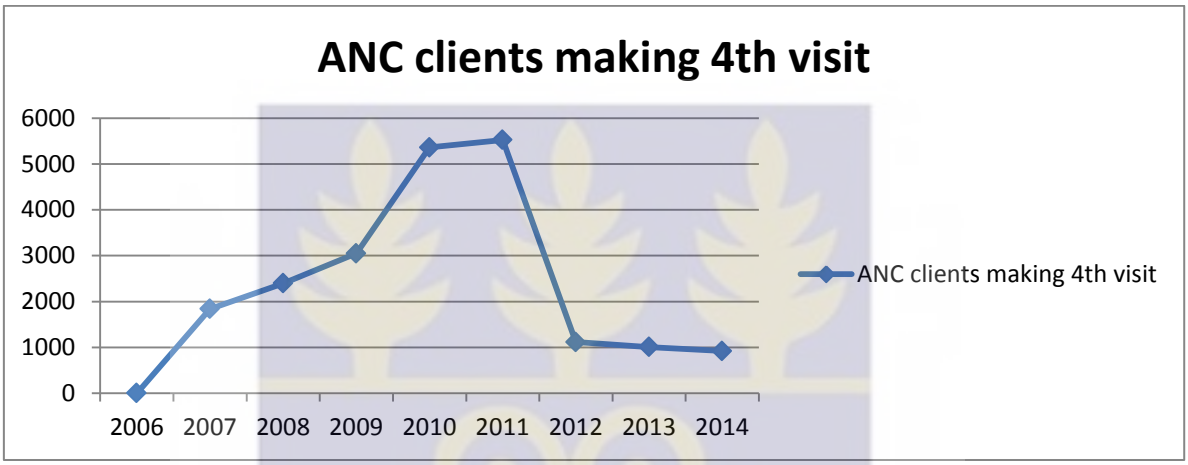
Figure 4.12: Total ANC visit for AOB per year (2006 – 2014)



Source: AOB district health report (2012 pg 14-16) and 2014 (pg 26 -29)

From Fig. 4.12 above, it can be seen that, there was gradual increase in total ANC visit in 2006 to 2009. From 2009 to 2010 there was a very significant increase. The number then continued to increase gradually to 2012. Just as it happened in the number of new registrant, the total number of ANC began to decrease marginally from 2012 to 2014.

Figure 4.13: Yearly Statistics of Women Who Had 4+ Visit from 2006 - 2014



Source: AOB district health report (2012 pg 14-16) and 2014 (pg 26 -29)

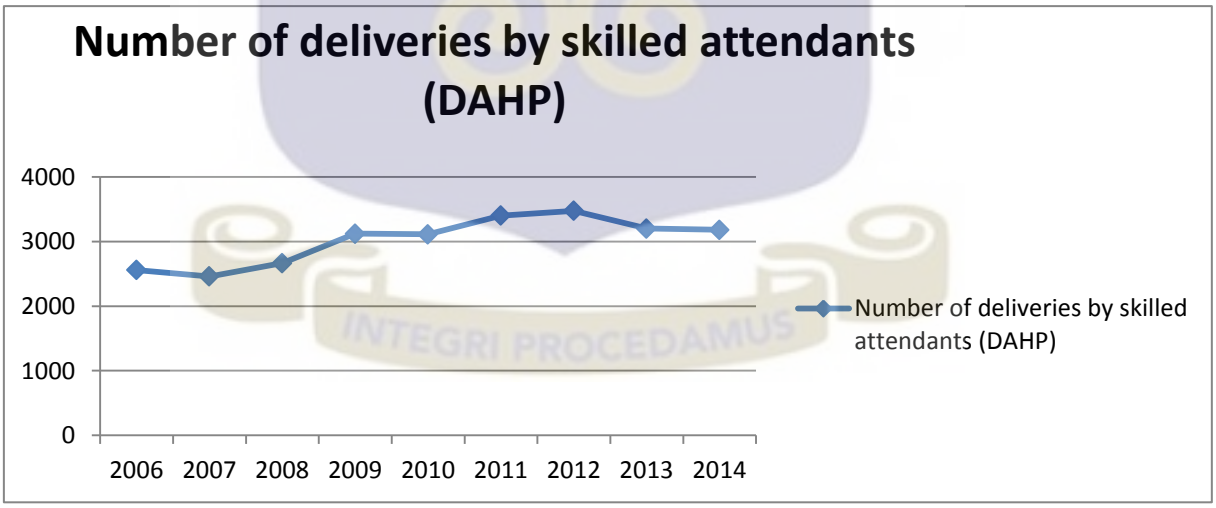
The number of times a pregnant woman visits the ANC section of a HF to utilize ANC services is a critical component of reducing maternal mortality. It helps in protecting both the woman and the unborn baby (WHO, 2010; 2014). In this regard, the WHO stipulates that at least every pregnant woman should make 4 or more visits to ANC before delivery. Figure 4.13 shows the trend of utilization of ANC visits from 2006 to 2014 in two stages. Thus, from 2006 to 2011, the data was recorded for the total attendances of all women who had 4+ visits.

From the trend graph above, it is clearly seen that from the onset of the introduction of the FMHCP, the total attendances of women who made 4+ ANC visit continued to increase at a steadily fast rate from 2006 to 2009. Within 2009 to 2010, there was a sharp increase and then a slight increase in the attendance between 2010 and 2011. This trend shows that, most women within AOB utilized 4+ visits.

The statistics of 2012 to 2014 was recorded as the exact number of women who made 4+ visit. Shockingly, the number continued to reduce marginally from 2012 to 2014. This the researcher feels is a worrying situation especially as there has been several interventions to ensure that women utilize all ANC services.

With this indication, the DHIO associated it to two factors. On the negative aspect, differences in the socio demographic characteristics which affect utilization such as age, number of previous births, education level, the lack of employment/ wealth and more importantly the geographic accessibility were considered as causing the marginal reduction. The positive aspect of the reduction was attributed to the work of Marie Stopes International which has contributed about 39% of family planning strategies in the district. This family planning is believed to have influenced or streamlined more women's choice to reduce pregnancy rather than becoming pregnant and utilising ANC or DAHP services.

Figure 4.14: Trend Analysis Graph representing Deliveries Assisted Health Professionals



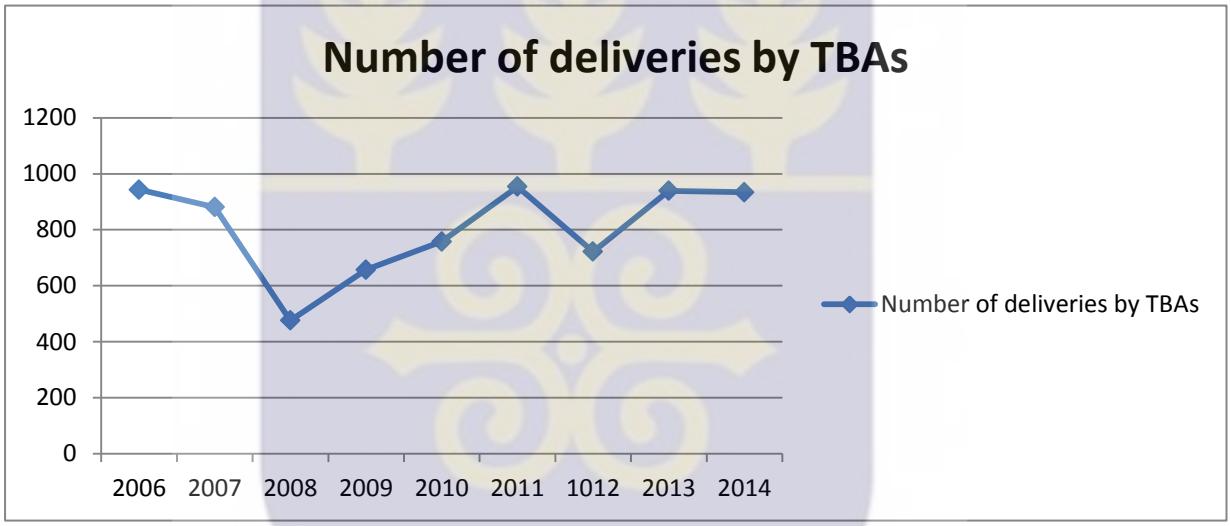
Source: AOB district health report (2012 pg 14-16) and (2014 pg 26 -29)

According to WHO (2010), the person who supervises the delivery process of a pregnant woman has a great effect on the survival of the mother and the child. In this regard, it is

important that every woman receives the supervision of trained health personnel during delivery.

From the trend graph above, it can be seen that, from 2006 to 2009, there was a steady rise in utilization of skilled delivery reflecting a decrease in TBA assisted deliveries. The trend continues to increase steadily until 2012 to 2014 where it saw a marginal reduction. This effect coincided with rise in TBA assisted deliveries thereby giving an indication that within AOB district, when the number of skilled delivery reduces, TBA deliveries increase and vice versa.

Figure 4.15: Trend graph representing number of TBA assisted deliveries



Source: AOB district health report (2012 pg 14-16) and 2014 (pg 26 -29)

From figure 4.15 above, it is evident that TBA utilization has seen so much inconsistency over the years under review. Within the first three years after introduction of FMHCP, the total number of TBA assisted deliveries that the DHD was able to record continued to reduce showing an indication that more women in rural areas had resorted to utilizing skilled delivery (compared to skilled deliveries graph above). The number then began to increase reaching the district highest of 954 TBA assisted deliveries in 2011 (statistics of 2011 saw a marginal reduction in ANC attendants and 4 + visits).

Comparing the rate of increment to that of skilled delivery, it is seen that within the period under review (2008-2011), it can be deduced that more rural women utilised TBA assisted

deliveries. Between 2011 and 2012, the number is reduced depicting much utilization for skilled birth. The quest for TBA assisted delivery again increased marginally in 2013 and 2014 while that of skilled delivery reduced tremendously. In conclusion, the researcher is convinced that, as the number of skilled delivery increases TBA assisted deliveries decreases and vice versa.

4.4.0 Interview with Nursing managers and DHIO on trends of utilization of ANC and DAHP services.

To establish the trends of utilization of ANC and DAHP services among women in AOB and especially rural women as depicted by the statistics provided in the AOB district health report of 2012 and 2014, the nursing managers and the DHIO were asked to share their general view on the theme. On the part of the nursing managers and midwives, they were of the view that, there has been a steady increase in utilization of both ANC and DAHP at all the CHPS zones. They explained that

> *ANC services are highly utilized seeing over 15% increase in utilization each year but the pace of DAHP utilization is very slow.*

On the part of the district health information officer (DHIO) he stated that;

> "*Generally there has been an increase in utilization in both ANC attendance and DAHP since 2006 to date. This increase is partially as a result of the introduction of the Free Maternal Healthcare Policy (FMHCP) and the expansion of healthcare services to the door steps of the rural folks through the establishment of more CHPS compounds in the district. Aside this, the major factor has to do with our outreach programs where we go to villages to educate women on the need to utilize maternal healthcare services during pregnancy and childbirth". Despite the increase in ANC attendance since 2006 to date, there were marginal decreases in 2012 to 2014 as compared to 2011. The decrease in ANC visits and total number of ANC is somehow welcomed because it gives the DHD the joy that our partnership with Marie stopes on family planning is really working (AOB, district health report 2014, pg 33).*

4.4.1 Summary of trends of utilization

From the above findings, it is evident that, utilization of ANC and DAHP has had a steady increase from the onset of the FMHCP and the expansion of coverage within the year 2006 to 2014. Nevertheless there has been some marginal reduction in utilization at some points.

CHAPTER FIVE

DISCUSSION OF RESULTS

5.0 Introduction

The main aim of this study was to examine how the provision of CHPS compounds and FMHCP has influenced utilization of maternal health care services among rural women in Ghana. With this in mind, the factors that influenced the choice of a rural woman to utilize ANC and DAHP services were ascertained, the relationship between these provisions and utilization were tested and the trend of utilization after the introduction of these policies examined to know how the policies have affected utilization of ANC and DAHP services. This chapter discusses the findings of this study in the light of what exist in literature with regards to studies on the utilization of Maternal Healthcare (MHC) services in general and ANC and DAHP services in particular. The chapter also discusses certain findings from the study that are not grounded in theory but are very important to be considered for policy and research.

5.1 Factors that influence utilization of ANC and DAHP services among rural women in Asikuma Odoben Brakwa (AOB).

The first objective of this study was to determine the factors that influence the utilization of ANC and DAHP services among rural women in Asikuma Odoben Brakwa district. Findings revealed very unique factors that influence ANC and DAHP of which some confirms exist in literature and others completely defiling what exist in literature.

5.1.1 Age of a mother

Age of a mother has been identified by several studies in Ghana as a major determinant for utilization of MHC services by women in general (Ameyaw, 2011; Abor *et al*, 2013; Daniels *et al*, 2013). Elsewhere in sub - Saharan Africa, findings by Chaibva (2008) confirmed this assertion in a study conducted in Zimbabwe where she found women within their twenties utilizing ANC services more than those in their teens and above 35 years. The findings also revealed that, the age of a rural woman in AOB influences her choice to utilize either ANC or

DAHP services to a large extent, thereby confirming findings by Daniels et al (2013) in her study at Akuapem North district in Ghana.

Again, the findings suggest that, women below the age of 22, and especially those having their first pregnancy acknowledge the importance of ANC services and as such utilize ANC visits earlier than those above, and more especially women above 35 years. This therefore confirms the report of GDHS (2008) which suggested that, women between the ages of 20 and 34 years utilize antenatal and postnatal healthcare services more than those below or above. Moreover, the findings of this study do not support a section of findings by Chaibva (2008) in her study conducted in Zimbabwe which found that, women below 20 years were more likely to initiate antenatal care (ANC) late or not to attend at all because of fear of being teased by her peers or not being married.

However, the study agrees with her findings concerning women above 35 years, not willing to utilize ANC due to shyness, being overage or having many previous experiences of birth. In this regard, the study revealed that, most of these women only sought ANC services after their first trimester, and more so only when they perceived the presence of sickness, thereby confirming the conceptual framework developed by Anderson *et al* (1975) and adapted for this study.

The study further indicates that, rural women in AOB are less likely to utilize ANC services within their first trimester and therefore contravenes suggestion by the World Health Organization (WHO) that, it is most appropriate for every woman to make her first ANC visit within her first trimester (1-3 month) of pregnancy in order to establish a cordial relationship with the health provider.

5.1. 2 Mothers level of Education

Several studies in Ghana (Ameyaw, 2011; Tawiah, 2011; Abor *et al*, 2013; Saeed *et al*, 2013**)** have found the level of education of a woman to be a key determinant for utilization of

maternal healthcare services. Similar studies in other sub-Saharan Africa have shown that, the level of knowledge of mothers influences their decision to utilize ANC services (Kiwanuka *et al*, 2008; Babalola, 2014). Findings of this study on education also affirm that educational level affects utilization and specifically that, most women who willingly (without being sick) utilized ANC and DAHP services were among those who had at least completed Junior High School (JHS).

In a related view, the responses of the AOB DHIO and the nursing managers revealed that, due to the low level of education of most rural women in AOB, it is very difficult convincing them to accept and use MHC. They rather prefer using their own method of medication during pregnancy. This revelation goes to confirm the assertions as indicated in the GDHS (2008) that, the perception or knowledge level of women affects their level of utilization to a large extent. Therefore the need to intensify and where necessary inculcate public education on the need to utilize ANC and DAHP services is key to reducing the negative effects of the low level of education on utilization of such services.

5.1.3 Marital status

Marital status has been found to be a determinant to utilization of ANC and DAHP in most sub-Saharan African countries (Abor *et al*, 2013; Gedefaw *et al*, 2014). Surprisingly this is not the case with study participants in AOB, where both married and unmarried women had little influence from their husbands or fiancé on their decision to utilize ANC and DAHP. This finding defeats assertion by Gedefaw *et al* (2014) that suggests that married women utilize ANC services more than the unmarried. Even women who were married lamented their husbands played little or no role in ensuring their use of ANC services.

This revelation, the researcher deduce is as a result of the low level of education of partners/husbands of these women who had little or no education and so do no appreciate the importance of supporting their wives to utilize ANC services. Again, opinions by the nurse

managers showed that, married women ate at a disadvantage as they are not allowed to utilize ANC due to their husband's autocratic demands for them to work on the farm especially during farming seasons thereby disputing the findings of Daniels *et al* (2013) and Gedefaw *et al* (2014).

5.1.4 Employment/income status

The study found out that, employment status of women had an effect on their decision to utilize ANC services (AOB DHIO, 2015). In this regard, the findings revealed that since most of the women had no special vocation, peasant farming was their main source of employment. To this effect, they did not have enough monies to travel to the CHPS zone or pay for some of the ANC services thereby supporting earlier findings by Abor *et al* (2013) and Daniels *et al* (2013). Similarly, Esena *et al* (2013), in an analysis to determine the factors associated with utilization of skilled delivery services in the Ga East Municipality of Ghana, found occupation and level of household income as major determinants to low use of ANC therefore agreeing with why some married women are mostly not empowered and so depended on their husbands to provide them money to attend ANC services as earlier revealed by Kabeer (2005), and more recently Chirowa et al (2013).

In a related development, this study revealed that, few women who had their own means of income (traders, dressmakers, hairdressers and teachers) were better informed about their health needs and so they utilized almost all ANC services including 4+ ANC visits, ultra scan services, lab and purchase of medicine outside the NHIS approved drugs as well as DAHP better than those who were unemployed. This revelation agrees with findings by Martey *et al* (1995) and Abor *et al* (2013) which emphasized income/wealth status of women as a key determinant for the utilization of ANC and vice versa. Again, findings of this study agreed with findings of similar studies on utilization of ANC in sub Saharan Africa (Kiwanuka *et al*, 2008; Chirowa *et al*, 2013; Babalola, 2014 and Gedefaw *et al*, 2014), which indicated that,

cost of medical care and inability to pay as a result of low income status contribute to low use of ANC services.

In the view of the researcher, if these previous studies found low income levels as a key element to low use of ANC services in Ghana and this study has confirmed it, then there is the need to properly investigate how Ghana is rated as having achieved MDG 1 as indicated by (WDI, 2013; UNDP, 2014; World Bank, 2014).

Again, the researcher is of the view that, if rural women in AOB are unable to fully utilize social services such as ANC and DAHP services due to financial constraints, then there is the need to critically look at whether the various poverty reduction strategies that have been implemented such as Ghana Poverty Reduction Strategy (GPRS 1), Growth and Poverty Reduction Strategy (GPRS 2, 2006-2009), Ghana Shared Growth and Development Agenda (GSGDA 2010-2013), Micro – Finance and Small Loans Centre (MASLOC), Livelihood Empowerment Against Poverty (LEAP), and Savannah Accelerated Development Authority (SADA) has really achieved their intended objectives of reducing poverty among the poor and village dwellers while empowering women.

5.1.4 Number of Previous Births

Findings of the study support the earlier findings of Daniels *et al* (2013) in her study that looked at the factors that influenced utilization of maternal healthcare services in selected rural communities in the Akuapem north district of the Eastern region of Ghana where she found that, women who had had an earlier birth found DAHP less important. Similarly, the study supports Arthur (2012) which also indicated that the number of previous births of a woman affect utilization and further suggested the need for policy concentration on ensuring women with earlier children utilise ANC services.

In other developing countries such as Kenya, Uganda and Nigeria, the number of previous birth was also seen as an important determinant to utilization of MHC and especially TBA

assisted delivery (Eijk, 2008; Kiwanuka *et al*, 2008; Babalola, 2014). This study also realised that, most women repeated issues of past event without consideration to the positives or negatives of it. Most women in this study emphasized the fact that, their mothers and grandmothers delivered in the house and therefore see no need to go contrary. They only utilized ANC but patronised DAHP less, therefore supporting findings by Eijk (2008).

5.1.5 Cultural and Religious influence on utilization of ANC and DAHP.

Several studies have identified the issue of cultural and religious dynamics to be a major factor in the utilization of maternal healthcare services in sub-Saharan Africa where cultural beliefs and societal norms have existed for years (Pelto, 1987; Leslie and Gupta, 1988 as sited by Ameyaw, 2011). Similarly, studies by Mekonnen *et al* (2003) in Ethiopia and Babalola (2014) in Nigeria strongly associated utilization of MHC with religion, cultural and ethnic differences suggesting that different religious backgrounds are prone to utilizing MHC differently due to their belief systems and societal norms.

In the context of Ghana and particular among rural women, Addai (1998) found that, in indigenous rural settings, the influence of cultural beliefs on decision making to seek professional medical care can only occur after exhausting their own cultural/folk remedies and family resources. Surprisingly, these powerful assertions have been negated by the findings of this study.

Thus, the findings of the study on culture showed that, out of the 267 respondents who answered the questionnaire, only 1 could not state whether culture has an influence on her decision to utilize ANC and DAHP services. All the 266 stated their choice to or not utilize ANC or ADHP had no bearing on their cultural beliefs. This shocking but interesting revelation rejects the claim by Mekonnen et al (2003), Abor *et al* (2013) and Babalola (2014) that, ethnicity and religion are among determinants of utilization of MHC services.

Again, all women including three fetish priestesses who formed part of the study participants stated that, their cultural dynamics, practices or specific societal norms and values did not affected their decision to utilize ANC or DAHP services in any way. Interestingly, women who did not utilize any ANC or DAHP service during their last delivery were convinced that they did not do so due to any cultural influence. This situation in the view of the researcher is as a result of the continuous modernization or influence/infiltration of western culture on the lives of the ordinary citizenry in Ghana as well as the growth of modern scientific and technological advancement in information flow. Again, the District Health Directorate (DHD) of AOB emphasized that, the lack of influence of culture on utilization of ANC and DAHP services could be the result of the DHD's collaboration with Marie Stopes International embarked on door to door public education on the need to eschew cultural influence and embrace modern scientific trends of seeking MHC.

On religion, despite study participants belonging to different religious denominations, all women indicated that their religions allow and even encourages the utilization of ANC and DAHP services during pregnancy. This surprising revelation gives a clear signal that, the revelations by the New Crusading Guide investigative journalist; Anas Aremeyaw Anas on how religious faiths had influenced a group of people to dissociate themselves from seeking medical care in the Brong Ahafo region of Ghana (the Messiah of Mentukwa) as well as that of TV3 Mission team in the Volta region of Ghana did not have any effect at all on rural women in AOB. Again even the traditional believers/ fetish priest indicated utilizing ANC services during their pregnancy.

In this vain too, the DHIO indicated that there is collaboration with the Local Council of Churches in the district to educate and encourage their members to utilize ANC and especially DAHP services during delivery.

5.2 Relationship between provision of access and utilization of ANC and DAHP

Studies in many sub-Saharan Africa countries have revealed that, distance to a health facility and transportation problems are key indicators to utilizing ANC and DAHP (Kiwanuka *et al*, 2008; Esena *et al*, 2013; Babalola, 2014). In order to check the authenticity of this assertion, the relationship between access variables and their impact on utilization of ANC and DAHP, a correlation matrix in SPPS version 20 was used to analyze the interaction. Results from the matrix revealed that, the Pearson product-moment correlation coefficient for availability of HF and outcome variables shows a least relationship as was computed. The result showed that, though there was a relatively high significant correlation between availability of HF in respondent's village and the timing of first ANC and a weak and negative correlation with total number of ANC. The correlation was statistically insignificant with utilization of POD and assistance during delivery.

This results shows that there is minimum correlation indicating that, availability of CHPS compounds within a respondent's catchment area though it influences utilization (Kiwanuka *et al*, 2008; Abor *et al* 2013; Babalola, 2014), it does not guarantee utilization of ANC services (Maloreh-Nyamekye, 2013). Again the Chi - Square test it is evident that utilization of ANC services is not dependent on distance to health facility. This finding indicates that, women do not necessarily utilize ANC and DAHP due to proximity thereby confirming findings by Akinleye *et al* (2009) and Maloreh-Nyamekye (2013) that, proximity to a HF does not guarantee utilization of specific healthcare services.

5.2.1 Relationship between enrolment on FMHCP and Utilization of DAHP

From the reasons assigned to decision of women to utilize DAHP (skilled delivery), it was realized that, majority of them did not give so much recognition to the existence of the FMHCP before choosing where to deliver. They rather considered the attitudes of the HPs during delivery confirming earlier findings by Esena *et al*, (2013). They rather preferred

TBAs whom they described as been accessible, caring and empathetic during delivery (DHIO, 2015).

This result predicts that, the decision of a rural woman within AOB to deliver at a particular place is least determined by the persons possession of FMHCP therefore supporting the assertion by Ameyaw (2011) and Wen-Ying *et al* (2013) that, taking the financial burden (cash 'n' carry system of health care services/ financial ability to purchase health) off the shoulders of expectant mothers is not enough to increase utilization of maternal healthcare services and eventually reduce maternal mortality.

This specific finding of the study is indeed crucial, as it reiterates the point raised by Jehu-Appiah *et al* (2011) on how the entire NHIS from which the FMHCP was derived is not indeed benefiting the poor. In his assertion, he emphasized that; though the policy was to help reduce the financial burden (out of pocket) on expectant mothers, other factors aside financial obligations (cash and carry) hinder the poor from fully enjoying the policy. In this regard, the researcher is of the view that, the reasons that influence decisions to utilize ANC and DAHP are unique in AOB; hence the influence of the introduction of the FMHCP is very minimal.

Again the findings clearly show that, FMHCP is not being enjoyed to the fullest by the poor who cannot transport themselves to the HF to enjoy the services. In short, utilization of ANC services is not solely dependent on possession of FMHCP.

The percentage of respondents who preferred TBAs (60.3%), according to the DHIO was attributed to the numerous numbers of TBAs in the district. Again the attitudes of HPs has been the leading cause for the continuous existence of TBAs in the district and Ghana at large, thereby confirming findings by Esena *et al* (2013) in Ga East Municipality of the Greater Accra region of Ghana that more women re-utilizing the services of TBAs due to the characters of HPs and the availability of these TBA in most rural communities in Ghana.

5.3.0 Timing /month of initiating 1st ANC and total number of ANC visit

The WHO (2010; 2014) stipulates that, every pregnant woman should at least visit or utilize ANC services 4 times before delivery. This the WHO explains would afford the pregnant woman the opportunity to constantly interact with the service provider while sharing or discussing, concerns on the pregnancy with the HPs. Findings of this study revealed that, though majority of the women did not initiate their first ANC visit within the first trimester, about half of them were able to satisfy the WHO suggestion of 4 or more visits. The high number of ANC visitation though encouraging, the study gathered did not happen as a result of the respondents' free will to utilize the service. It happened as a result of the perceived or presence of sickness or an experience of complication during a former pregnancy which motivated them to seek experts' attention.

This situation of women's wish to seek medical (ANC or DAHP) services only when they were sick therefore confirms the assertion by Anderson *et al* (1973), Fiedler, (1981) and Fosu (1994), who found in separate studies that a woman must be intrinsically convinced that her present condition or disease is serious and as such needs expert attention and again, has the belief that the treatment would indeed be beneficial to her before she would utilizing the service (Fosu, 1994). Sickness or perceived needs for expert medical attention therefore remains the most important factor influencing a woman's decision to utilize ANC services as confirmed by this study.

The researcher is of the view that though much effort is being put into making women utilize ANC and DAHP during pregnancy, the aspect of self decision to utilize ANC must be hammered at the grass roots so that there would be a reduction in need characteristics being the leading influence in ANC and DAHP utilization.

5.3.1 Number of previous Births

On utilization of DAHP, the study found that, majority of the women within rural areas in AOB and especially those above 33 years did not see the need to utilize the service. Thus about 69.7% of women delivered in the house. This behaviour, the researcher deduced was due to the experience(s) they have acquired over the years having gone through more than one or more deliveries without utilizing the service. This scenario goes to confirm an aspect of the predisposing factors in the conceptual framework adapted from Anderson *et al* (1973) as well as findings by Kiwanuka et al (2008); Abor *et al* (2013); Daniels et al (2013) and Babalola, (2014) which suggested that the number of birth or children a woman has, has a strong effect on her choice to utilize DAHP services.

5.3.2 Utilization of Delivery Assisted by Health Professional (HP) and presence of TBAs

Another important finding of the study was the numerous TBAs who operate in the district. Their activities largely affected utilization of DAHP. Most women found places/homes of TBAs more convenient to deliver rather than in HFs citing proximity, easy accessibility, friendly and caring nature of TBAs and accurate timing/prediction of when to give birth as reasons for continuously enjoying their services. This situation goes to confirm a worry expressed by the District Health Information Officer of AOB who indicated that,

> *"Attitudes of most of the young nurses towards respondent are not cordial and that has continuously been of one the lead cause of utilizing services of TBAs rather than HPs".*

This revelation is a confirmation of the continuing existence of TBAs in sub Saharan Africa and Ghana in particular. They continue to exist as a result of poor behaviours/attitudes of health professionals towards clients as indicated by Esena, *et al* (2013) and Daniels *et al* (2013).

5.3.3 Effect of over examination of women in labour on subsequent utilization of DAHP

The finding of this study indicates that, though unfortunate, the issue of vaginal examination (VE) has a toll on the level of utilization of DAHP services. This goes to confirm that, rural women do not have enough confidence in the work of the HPs but rather they enjoy the services of TBAs as revealed by Daniels *et al* (2013) and Esena, *et al* (2013). In the opinion of the researcher, the perceived over examination is a good practice and has to be well explained to the rural women who are usually less educated and may not understand the essence of certain practices.

5.4.0 Trends of Utilization

Within the period 2009 to 2010, there was a sharp increase and then a slight increase in ANC attendance. This trend shows that, most women within AOB had 4+ ANC visits which confirm what was realised in the objective 1 where 125 of respondents representing 46.8% made more 4 or more visits to ANC centres during their last pregnancy. In this regard, the study can confirm that, rural women in AOB conformed to the WHO suggestion of 4+ ANC visit during pregnancy. Interestingly, the number of attendance reduced marginally in the period from 2012 to 2014. This apparently was due to the activities of Marie Stopes International on prevention of pregnancies (family planning) rather than utilization of ANC and DAHP.

In summarizing the trend of utilization, the study can conclude that, over the period under review, rural women in AOB have increased their utilization level in ANC more than DAHP.

CHAPTER SIX

SUMMARY, RECOMMENDATION AND CONCLUSION

6.0 Introduction

This chapter summarises the whole study while it attempts to highlight the key findings of the study as well as suggest ways by which utilization of ANC and DAHP services among rural women in AOB, Central Region and Ghana at large can be improved.

6.1 Summary

The study was centered on four independent but practically connected objectives aimed at examining how the provision of access (both geographic by way of CHPS compound and financial through the introduction of the FMHCP) has influenced the current trend of utilization of ANC and DAHP services among rural women in Asikuma Odoben Brakwa (AOB).

The objectives of the study were; to ascertain the factors that influenced utilization of ANC and DAHP services among rural women in AOB; examine the link between access and utilization of ANC and DAHP in the AOB district; examine the trend of utilization of ANC and DAHP in AOB from 2006 – 2014; and suggest measures to improve upon access, and subsequent utilization of ANC and DAHP services among rural women and women in general in Ghana. In this regard, the health seeking behavioural model developed by Anderson et al (1973) was adapted and cultural and religious influence on utilization added to make it the CADN model (cultural, access, demographic and needs characteristics).

With regard to ***Objective* 1**, it was realised that, majority of pregnant women in AOB utilized ANC services due to needs characteristics (evidence of sickness, perceived presence of illness or experience of complication during a previous pregnancy). The number of previous births was a key factor for not utilizing DAHP. Other factors such as age of the mother, level of

education, employment/income status also influenced utilization to an extent. Cultural and religious practices and marital status had no bearing on utilization.

On ***Objective 2***, proximity to health facility (HF) though influences the decision of rural women in AOB to utilize ANC and DAHP services to an extent, none, partial or full utilization of the services did not necessarily depend on proximity to HF. Possession of free maternal healthcare policy card shows a woman's knowledge about ANC services but it does not necessarily imply a person with the card would utilize all ANC and DAHP services to the letter.

Cost of transportation to HFs where laboratory and scan services centres are available, coupled with the user fee (cash and carry) women pay for utilizing these services and the longer time they spend at these HFs are major factors that discouraged rural women within AOB from fully meeting the standard of 4+ ANC visits as proposed by the World Health Organization.

Objective 3 showed a relatively positive increase in the level of utilization of both ANC and DAHP services between 2006 and 2012, but suffered a marginal reduction especially in ANC attendance from 2012 to 2014. This reduction, though seen as negative to the ordinary person, was regarded as somehow positive by the District Health Directorate since it showed the impact of the contribution of Marie Stopes International in promoting utilization of family planning (controlled birth) measures rather than getting pregnant and utilizing ANC.

Measures to improve upon utilization of ANC and DAHP services is very important at this crucial moment, if Ghana indeed, is to reduce the current maternal mortality rate of 350 per 100,000 live births to the 185 as suggested by the WHO.

6.2 Recommendations for academic, policy and practice

Recommendation for this study is based on the numerous suggestions that were stated by the rural women during data collection. It also incorporates the suggestions by the nurse managers/midwives and the district health information officer. Again special observations made by the researcher during data collection are stated for consideration and necessary action. The suggestions are grouped under three thematic areas; improving accessibility, need for public education and contribution of NGOs in promoting utilization of ANC and DAHP services.

On the issue of accessibility, it is recommended that, the government through the Ministry of Health (MOH), the Ghana Health Service (GHS) and other related agencies should collaborate with the District Assemblies (DAs), the District Health Directorates (DHD) and assembly members to build more CHPS compounds in the district so as to improve upon geographic accessibility. In this regard, other essential services that are part of ANC services such as Ultra-sound scan and laboratory test should also be established or made operational at selected health facilities to encourage more women to utilize the service and subsequently visit ANC clinics more.

Again, the government and all related agencies should ensure that the Free Maternal Healthcare Policy (FMHCP) is fully operational and meets its intended objectives. In this regard, it is highly recommended that, all services that form part of the ANC and DAHP services should be free in order to encourage all women, irrespective of social, economic or demographic background to enjoy all ANC services during pregnancy.

Similarly, the government, MOH, GHS, should collaborate to provide more motor bicycles/car at each CHPS compound to ease transportation of health professionals to the village and where necessary pregnant women in times of difficulty to the nearest higher level HF. Thus the study found that in situations where women in labour are unable to get to the

CHPS compound as a result of bad roads which make drivers not willing to ply the route, the nursing manager (HPs) went to the specific community to attend to such a woman.

It is also a matter of urgency that repairs and construction of linkage roads be one of the topmost priorities of DAs. By so doing, drivers will be willing to ply such roads and reduce the delay in transportation to the few available CHPS compounds.

On the issue of education, it is recommended that, the MOH through the regional and DHD should be tasked and provided with resources to embark on constant training and orientation of all nurses (both newly trained and already working) to respect and implement the patient charter. By so doing, there could be a bridge in gap between patients especially the pregnant women and the HPs and thereby improve utilization of MHC especially DAHP services at CHPS compounds and reduce TBA assisted deliveries. Moreover, the various DAs should join in the fight to reducing the operations of traditional birth attendants (TBAs) who have not received any form of training. In this direction, the DAs should collaborate with relevant stakeholders in education, religion and other sectors to support the DHD in training untrained TBAs since their activity will continue to exist for some time.

In the same direction, all relevant stakeholders, especially, NGOs, religious bodies and educational institutions should support the DHD in their quest to educate rural women on the need to effectively and constantly utilize ANC services especially within their first trimester of pregnancy and during delivery. In this regard, the DHD should be assisted to assign community health nurses to all electoral areas so as to improve effectiveness of community and home visits to educate women on maternal healthcare services.

Through the department of policy, planning, monitoring and evaluation, the MOH should ensure that, DHDs have functioning research departments which will constantly carry out research on topical issues within individual district so as to make realistic and evidence based

recommendations to enhance specific contextual policy formulation. This will in turn reduce the generalization of issues as are reported in most GDHS documents.

Regarding the role of the telecommunication industry in enhancing utilization of ANC and DAHP services, it is recommended that, they strive at directing their efforts toward developing communication systems that can enhance effective/smooth phone calls to HFs in terms of labour and other emergencies. Again such communication devices should be made in a way that it usage would not attract any charges (should be part of company's cooperate social responsibility). By so doing, communities can contact HPs within their catchment area to provide assisted deliveries even if they are unable to go to the CHPS compound (s) as a result of delay in getting a means of transport.

6.3 Suggestion for future Research

More attention should be focused on investigating specific contextual/demographic factors that influence utilization of general maternal healthcare services (ANC and DAHP), and more importantly skilled delivery which is relatively on the low side in most rural areas as suggested by various studies across Africa. Again, future research should be directed at inter and intra - regional analysis of the impact of the free maternal healthcare policy to ascertain its contribution to improving or otherwise to the level of utilization of maternal healthcare services.

6.4 Conclusion

Based on the findings of the study, the researcher is of the view that, the major determining factor for utilization of ANC and DAHP services by rural women within Asikuma Odoben Brakwa district in particular and Ghana at large is the perceived presence of sickness. In this regard, rural women in AOB if not all rural women in developing countries, must be convinced of their state of sickness before deciding to utilize medical (ANC) services. Age,

number of previous births, employment status/level of income and level of education all contribute to utilizing ANC services.

It can also be said that, the main objective for establishing the CHPS compound system to provide basic primary healthcare needs to especially rural folks is indeed on the right path. Unfortunately, the aspect of utilization of ANC and DAHP services cannot be emphatically stated as increasing due to the expansion of these CHPS compounds. Other key elements of modern ANC services of which rural women have to travel long distances to undergo such as Ultra- sound Scan and Laboratory test account for the unwillingness of most women to fully satisfy the recommended 4+ ANC visits.

On possession of Free Maternal Healthcare Policy (FMHCP), it can be concluded that, almost all women who have ever visited any HF/CHPS compound while pregnant is enrolled on the FMHCP. Thus the policy has had a level of positive effect on utilization where most women no longer hesitate to visit ANC due to financial constraints (direct payment). Once again, the cost of utilizing certain services which are not catered for by the FMHCP (Ultra- sound Scan, Laboratory test and some medicines) coupled with the cost of transportation and delays at the HFs continue to hinder the achievement of the intended objective of removing all financial barriers associated with utilization of ANC and DAHP services. This in effect, causes most rural women to stop utilizing ANC services and subsequently utilize the services of TBAs.

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APPENDICES - RESEARCH QUESTIONNAIRE

ACCESS AND TRENDS OF UTILIZATION OF MATERNAL HEALTH CARE SERVICES IN ASIKUMA ODOBEN BRAKWA DISTRICT IN THE CENTRAL REGION

CONFIDENTIALLY

This questionnaire is purposely for academic work. The researcher is a student offering MPHIL in Health Services Management at University of Ghana (University of Ghana Business School) researching on the topic**: Access and Trends of utilization of Maternal Health Services in Asikuma Odoben Brakwa District in the central region of Ghana.** The researcher humbly pleads with respondents to provide the right and accurate responses so as to serve as basis for arriving at the most proper findings, discussions and logical conclusions. Thank you for accepting to assist the researcher in this regard.

SECTION 1: **Socio-Demographics – this section is intended to provide basic information on the respondent and associate the influence of their biographic and social status to their choice to utilize maternal healthcare services?**

AGE AT BIRTH

1. How old are you? **(Please tick [√] as appropriate)**

a) 13 - 17 [ ]
b) 18 – 22 [ ]
c) 23 - 27 [ ]
d) 28 – 32 [ ]
e) above 33 [ ]

PLACE OF RESIDENCE

2. How many years have you been living in this community? **(Please tick [√] as appropriate)**

a) 1- 3 years [ ]
b) 4 - 6 years [ ]
c) 7 - 9 years [ ]
d) 10 - 12 years [ ]
e) Above 13 years [ ]

MOTHERS' EDUCATION

What is your highest level of education?

a) None [ ]
b) Primary [ ]
c) JHS [ ]
d) SHS [ ]
e) Tertiary [ ]
f) Other (please specify) [ ] ……

HUSBAND/ PARTNER'S INFORMATION

Please tick [√] as appropriate

4. What is your marital status?

a) Single [ ]
b) Married [ ]
c) Widowed [ ]
d) Separated [ ]
e) Fiancé [ ]
f) Other (Specify) [ ] ……

5. If married, how long have you been married?

a) 1- 3 years [ ]
b) 4- 6 years [ ]
c) 7- 9 years [ ]
d) 10- 12 years [ ]
e) above 13 years [ ]

6. Do you live with your husband currently?

a) Yes [ ]
b) No [ ]

7. What is your husband's highest level of education?

a) None [ ]
b) Primary [ ]
c) JHS [ ]
d) Secondary [ ]
e) Tertiary [ ]
f) Other (please specify) [ ] ……

EMPLOYMENT/INCOME STATUS

8. What kind of employment are you in?

a) Formal [ ]
b) Informal [ ]
c) Self employed [ ]
d) Other (please specify) [ ] ……

9. On the average, how much do you earn in a month …….

Previous Births

10. How many children do you have? ……..

11. How old is you oldest child? ……..

12. How old is your youngest child? ……..

ACCESS/ENABLING FACTORS

Availability of Healthcare Centers

13. Is there a health centre/ CHPS compound in your locality? ……..

14. Approximately what is the distance between your house and the health centre/ CHPS compound? **(Please tick [√] as appropriate)**

a) Less than 1 km [ ]
b) 1 - 5 km [ ]
c) 6 - 10 km [ ]
d) 11 - 15 [ ]
e) Above 15 km [ ]

15. By what means do you go to the health centre/ CHPS compound? **(Please tick [√] as appropriate)**

a) By foot [ ]
b) By car [ ]
c) By motor bike [ ]
d) Other (please specify) [ ] ……

16. Averagely how many minutes/hours do you spend before getting to the CHPS compound?

a) Less than 10minutes [ ]
b) At most 20 minutes [ ]
c) Between 20 -40 minutes [ ]
d) Between 40 - 60 minutes [ ]
e) Above 60 minutes [ ]

17. Approximately how much do you spend on transport any time you visit the CHPS? **(Please tick [√] as appropriate)**

a) below 2 Ghana cedies) [ ]
b) Between 2 to 4 cedies [ ]
c) Between 5 to 7 cedies [ ]
d) Between 8 to 10 cedies) [ ]
e) Above 10 cedies [ ]

AVAILABILITY OF HEALTH PROFESSIONALS AT THE CHPS COMPOUND

18. What type of health professionals are at the health centre/ CHPS compound (more than one answer is accepted)? **(Please tick [√] as appropriate)**

a) Medical doctors [ ]
b) Registered nurses [ ]
c) Community health nurses [ ]
d) Midwives [ ]
e) Others (please specify) [ ] ……

19. How would you grade their work output in terms of health professional patient relationship a) Very bad [ ]
b) Bad [ ]
c) Good [ ]
d) Very good [ ]
e) Excellent [ ]

Affordability /Income (ability to pay)

20. Do you pay for the MHC services provided at the CHPS compound? **(Please tick [√] as appropriate)**

a) No [ ]
b) Yes [ ]
c). Both Yes and No [ ]
d) other (please specify) [ ] ……..……

21. If **YES** by what means do you pay? **(Please tick [√] as appropriate)**

a) Direct/out of pocket []
b) health insurance [ ]
c) Other (please specify) [ ] ……

22. If direct payment, how much do you spend on each visit? **(Please tick [√] as appropriate)**

a) Less than Gh© 2 cedies [ ]
b) Between Gh© 2 - 4) [ ]
c) Between Gh© 5 - 7) [ ]
d) Between Gh© 7 - 10) [ ]
e) Above Gh© 10 [ ]

CULTURAL/RELIGIOUS FACTORS

Cultural factors

23. Do cultural believes have influence on seeking MHC services? **(Please tick [√] as appropriate)** a) Yes [ ]
b) No [ ]
c) Don't know [ ]
d) Not sure [ ]

24. If **yes** what specific believes influence your level of utilization of MHC services?

……
……
……

Religious factors

25. What religion do you belong to? **(Please tick [√] as appropriate)**

a) Christianity [ ]
b) Islam [ ]
c) Traditional [ ]
d) Other (please specify) [ ] ……

26. Does your religion allow you to utilize all the MHC services? (ANC, Delivery in a health institution)

……

27. If no which of the MHC services does your religion not allow you to utilize?

……
……
……

28. What reason (s) does your religion give for not allowing you to utilize specific maternal healthcare services?

……
……
……

SECTION 4 - NEED CHARACTERISTICS

27. How many times did you visit ANC during your last pregnancy or current pregnancy? **(Please tick [√] as appropriate)**

a) 0 [ ]
b) 1 [ ]
c) 2 [ ]
d) 3 [ ]
e) 4 and above [ ]

28. What motivated you to visit or access MHC services during your last pregnancy? **(Please tick [√] as appropriate)**

a) I was sick [ ]
b) Because of my earlier experience [ ]
c) My husband forced me [ ]
d) my friends advised me to [ ]
e) other (please specify) [ ] ……

SECTION 5 (OUTCOME VARIABLES) - This section is to evaluate how utilization of MHC services (ANC and DAHP) has occurred among women in the district over the years. Thus all the factors affecting utilization should result into the outcome variables.

29. List the number of children you have (at most 5), and state how many months old was the pregnancy when you had your first visit to Antenatal Care (ANC) in each case, the total number of visit you had before delivery, the Place of Delivery (POD) in each case and whether you your Delivery was Assisted by a Health Professional (DAHP)

Number of birth	Year of birth	Time of first visit to ANC	Total Number of ANC visits	Place of delivery (POD)	DAHP (Yes/No)
1st					
2nd					
3rd					
4th					
5th					

30. Which of the following reasons accounted for your choice to using or to use MHC during your current/subsequent pregnancies (multiple answers is allowed)? **(Please tick [√] as appropriate)**

a) Proximity of health facility/ CHPS compound [ ]
b) Presence of qualified health professionals [ ]
c) Removal of user fees/ FMHCP [ ]
d) Desire for quality care [ ]
e) Previous experience of complications during a former pregnancy [ ]
f) Adherence to advice of husband/ parents / friends [ ]
g) Fear of unqualified TBA [ ]
h) First pregnancy so want to protect child well [ ]

31. On the whole was the use of MHC services during your pregnancies helpful in any way? **(Please tick [√] as appropriate)**

a) Yes [ ]
b) No [ ]
c) Not applicable [ ]

31a. If **YES** state some of the benefits of utilizing MHC service **(at least two)**

……

……

……

31b. If **NO** state some of the negative /disadvantages of utilizing MHC service (at least two)

……

……

……

……

32. ON THE WHOLE WHAT DO YOU SUGGEST SHOULD BE DONE TO IMPROVE UPON ACCESS AND UTILIZATION OF MATERNAL HEALTHCARE SERVICES IN ASIKUMA ODOBEN BRAKWA DISTRICT?

(AT LEAST TWO SUGGESTIONS)

……

……

……

……

……

……

THANK YOU FOR BEING A PART OF THIS EXERCISE

UNIVERSITY OF GHANA - LEGON

INTERVIEW GUIDE FOR NURSE MANAGERS AND THE DISTRICT HEALTH INFORMATION OFFICER OF ASIKUMA ODOBEN BRAKWA DISTRICT

TOPIC

ACCESS AND TRENDS OF UTILIZATION OF MATERNAL HEALTH CARE SERVICES IN ASIKUMA ODOBEN BRAKWA DISTRICT IN THE CENTRAL REGION OF GHANA

CONFIDENTIALLY

This interview is purposely for academic work. The researcher is a student offering MPHIL in Health Services Management at University of Ghana (University of Ghana Business School) researching on the topic**: Access and Trends of utilization of Maternal Health Services in Asikuma Odoben Brakwa District in the central region of Ghana.** The researcher humbly pleads with you to provide the right and accurate responses so as to serve as basis for arriving at the most proper findings, discussions and logical conclusions. Thank you for accepting to assist the researcher in this regard.

INTERVIEW GUIDE FOR MIDWIVES/NURSE MANAGERS

1. Name of health facility/CHPS compound? ……

2. Which year was it established? ……..

3. How many years have you been working here? ……

4. In your opinion what factors influence utilization of ANC services in your CHPS zone?

……

……

5. What challenges do you face in discharging your duties?

……

……

6. What do you suggest should be done to improve upon utilization of ANC and DAHP services in your CHPS zone?

……

……

INTERVIEW WITH DISTRICT HEALTH INFORMATION OFFICER

1. How long have you been the DHIO in the district? ……

2. In your opinion, what are the factors that influence utilization of ANC and DAHP services among rural women in AOB?

……

……

3. What challenges does your outfit face in ensuring full utilization of ANC and DAHP services by all women in AOB?

……

……

4. In your opinion, what can be done to improve upon ANC and DAHP services in AOB?

……

……