

**SCHOOL OF PUBLIC HEALTH**

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**FACTORS INFLUENCING UTILISATION OF ANTENATAL CARE AMONG  
WOMEN ATTENDING THE SHUKURA COMMUNITY HOSPITAL, ABLEKUMA**

**DISTRICT**

**BY**

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## DECLARATION

With the exception of the duly acknowledged references, I, AFUA BIRAGO MARFO, hereby declare that this research is the result of my own original work at the Department of Health Policy Planning and Management in the School of Public Health of the College of Health Sciences in the University of Ghana. It has not been presented for any other degree in this university or elsewhere either in whole or part. I am responsible for the views expressed and the factual accuracy of its contents.

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## **DEDICATION**

This work is dedicated to my parents, Mr. and Mrs. Kwakye – Marfo. Mum and Dad, thank you for bringing out the best in me.

## ACKNOWLEDGEMENT

I am most grateful to God for the strength, knowledge, and guidance throughout my Life. With boundless love and appreciation, I would love to express my heartfelt gratitude to all people who in diverse ways contributed to the success of this study. I am indebted to Dr. Augustine Adomah – Afari for his constructive support and encouragement whiles undertaking this study.

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## ABSTRACT

**Background:** Maternal mortality is a great worry to most health financing groups and policy makers in developed and developing countries. Comparatively, antenatal care utilisation has been high in Ghana: pregnant women looking for antenatal care from a skilled provider, increase debates that increasing care given to maternal health internationally has been focused on reducing maternal mortality.

**Objective:** The main objective of the study was to assess factors that influence the utilisation of antenatal care. The specific objectives were; to determine the patient, community and health care provider factors that influence the utilisation of antenatal care at the Shukura Community Hospital.

**Methods:** A descriptive cross sectional study was carried out and a total of 405 mothers were selected by a systematic random sampling method who were interviewed by use of a pretested interviewer's administered questionnaire. Consent was sought from each selected participant, privacy and confidentiality was observed during the interview.

Data was analyzed using SPSS version 21; Chi Square was computed to establish relationship between the dependent variable and independent variable. Level of significance was set at  $p < 0.05$  and the data were presented in form of figures and tables. Logistic regression was used to determine the relationship between the three independent variables and the dependent variable/outcome.

**Conclusion:** The study concludes that occupation of the husband has an influence on the utilisation of ANC. High proportions of the partners who were employed had their women attending ANC more than partners who had no occupation. Relatively, majority of the women attended the Antenatal Care because the health care facility was easily accessible. National health insurance promotes ANC attendance but this study observed that quiet a number of the

women who had access to a valid National Health Insurance Card did not use the card to access free ANC but were rather using the cash and carry system.

**Recommendations:** Male partners should be encouraged to be involved in the ANC attendance of their women/spouse, Health care facilities should be made accessible to pregnant women to enable them attend ANC throughout the period of pregnancy. The National Health Insurance Authority should set up approaches to improve the services on the free maternal healthcare policy to aid women attending the ANC with NHIS cards.

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## LIST OF ABBREVIATIONS

ANC	Ante Natal Care
FMCP	Free Maternal Care Policy
GHS	Ghana Health Service
NHIS	National Health Insurance Scheme
MDG	Millennium Development Goal
MMR	Maternal Mortality Ratio
MOH	Ministry of Health
OPD	Out Patient Department
PNC	Post Natal Care
TBA	Traditional Birth Attendant
UN	United Nations
UNICEF	United Nations Children's fund
WHO	World Health Organisation

## CHAPTER ONE

### INTRODUCTION

#### 1.0. Background to the study

It was projected that, roughly 303,000 women died between 1990 and 2015 (WHO, 2016). Women of childbearing age all over the world notwithstanding race, education, marital status or occupation are faced with the agony of pregnancy's likelihood of leading to the loss of the mother (Senah, 2003). Some researcher's debate that there may be no singular way or method to lower maternal mortality figures (Alvarez *et al.*, 2009). However, Alvarez *et al.* (2009) uphold the significance of solid health systems that take account of assisted deliveries as well as maternal advocacy for women's rights. While significant progress was made in regions such as North Africa and Asia during the period spanning 1990 and 2015, the Maternal Mortality Ratio (MMR) declined globally by only 2.3% annually during the period 1990 to 2015 (WHO, 2016).

Available data indicate that about 529,000 maternal deaths are recorded annually (Ronsmans & Graham, 2006). According to UNICEF (1996), about 585,000 women die from pregnancy - related complications yearly with developing countries, particularly Sub-Saharan Africa, accounting for about 99%.

Generally, maternal mortality (MM) is a great worry to most health financing groups and policy makers in developed and developing countries (WHO/UNICEF, 1996). In spite of all the massive financing device and contributions being employed to decrease the challenges of maternal mortality rate, achievements to date, however, have not been satisfactory (Shiffman,

2004). The idea of maternal mortality has become an everyday phenomenon of the modern world (Senah, 2003).

Senah (2003), argues that in the past 20 years, women died from pregnancies in silence and pain - families mourned their dead while husbands hoped for another wife to bear them children. This researcher explains that the preceding period had people coming to terms with the situation and so they felt compensated that the children of the dead mother were alive. Universal attention however, began to emphasize more seriously on maternal deaths in the 1980s following a publication by Rosenfield and Maine (Senah, 2003).

It has been noted that women encounter numerous difficulties including pregnancies, which eventually lead to maternal deaths (Ikhtiar, 2015). The key noted cause is poor nutrition and poverty, poor sanitation, lack of education as well as lack of access to health care. When they are more vulnerable, these affect women during pregnancy and delivery (Ronsmans & Graham, 2006). Maternal death is generally known to be caused by postpartum hemorrhage; heart-related and infectious diseases, related to unsafe abortions among others. Farah and Rasheed (2009), contend that even though efforts are made towards reduction in maternal mortality, the progress to meet set goals have been rather slow with a clear picture of inequalities reflected at the global arena. This situation is considered rather sad and embarrassing manifestation of failure of the health and social systems (WHO, 2014).

Nonetheless, the year 2000 onwards saw the acceleration of the decline in maternal mortality rising to 5.5% (WHO, 2016). To this end there is international collaboration to reduce maternal mortality significantly (WHO, 2016). The SDGs have heightened optimism as SDG Goal 3 aims at reducing global MMR to less than 70 per 100,000 births.

Over the past couple of decades, main issues of concern at international meetings have to do with refining maternal health and reducing maternal mortality (Farah & Rasheed, 2009; UN, 1994, 2000). Many organizations in developing countries have been implementing various programmes linked to issues of maternal and maternal health. In most cases conscious efforts have been made to address the situation with intra ministerial collaboration (United Nations Economic and Social Commission for Asia and the Pacific, 2008).

The Sustainable Development Goals (SDGs) are a new, universal set of goals that enjoin member states of the UN to formulate policies over the next 15 years to achieve (UN, 2015). Indications are that there are high-level governmental and administrative commitments to meet these goals but maternal mortality still constitutes a key challenge confronting the developing world.

The situation is no different from the case of Ghana as explained under the problem statement section. Although some studies have been conducted on the topic, it appears that current knowledge of the situation in the Ablekuma District in general, and the Shukura Community Hospital in particular was limited. Thus, the study sought to assess factors influencing utilisation of Antenatal care among mothers attending the Shukura Community Hospital so as to fill the gaps in knowledge.

### **1.1 Problem Statement**

Sub-Saharan Africa has the highest record of maternal mortality, accounting for 66% as well as the highest MMR at 546 per 100,000 live births (WHO, 2015). Evidently, complications of pregnancy or delivery largely account for maternal death (GHS, 2014). A Ghana Health Service (GHS) document indicated that Antenatal Care (ANC), especially the ANC3 coverage

continued to fluctuate negatively, from 74% in 2010 to 77% in 2012, then to 73% in 2013 (GHS, 2014). The World Health Organization argues that it is being gradually recognized that maternal health outcomes are not only of a biological and individual factors, but also of other factors like wealth, ethnic background, education, among others (WHO, 2013).

Variety of studies on maternal mortality have been done over the world, including African Countries such as Ghana with some of them finding the reasons and the likely causes of deaths in pregnant women (Hovert, 2007). Hovert (2007) identifies some of these reasons, inter alia, as abortion, hypertension, and poverty. Other studies have contended that the situation has arisen largely because of the absence of appropriate policies to enable women access to proper health as well as the ‘feminization of poverty’ (WHO, 2012). In Ghana, the introduction of the Free Maternal Care policy, in 2008, has resulted in a significant improvement in antenatal care (Odame *et al.*, 2013). The free maternal health policy aims to aid pregnant women in the country to access health care free of charge during pregnancy and six months post-natal. The policy also aimed at meeting the Millennium Development Goal five (MDG5) - reducing maternal mortality by 2015 (WHO, 2012).

It was an open secret that until the Free Maternal Care policy was introduced in Ghana, expectant mothers waited till very late into their pregnancy before reporting for ante-natal care or even waited till contractions before reporting to the hospital. (GHS, 2014) It has been argued that, the introduction of the free maternal care policy was in line with scraping of user-fees in all public health facilities in 1957 after Independence with the aim of providing free universal care (Nyonator & Kutzin, 1999; Agyepong & Adjei, 2008). It is also noteworthy that maternal mortality continues to be an issue of concern in Ghana in spite of the introduction of the free maternal policy (WHO, 2013).

The question therefore, is, with these state interventions why does it appear to be a challenge in reducing maternal mortality in Ghana? Could it be due to financial barrier to accessing healthcare? Some of the answers could be seen from the perspectives of how patient factors, health provider factors and community factors have an influence on women's decision to access ANC (Ensor & Cooper, 2004; Tlebere *et al.*, 2007; Agus & Horiuchi, 2012).

Various factors are considered as having a bearing on antenatal uptake; these include Maternal education, husband's educational background, marital status of women, availability and of care, household income, women's employment status as well as exposure to media disclosure are identified as patient factors affecting antenatal care uptake, together with a history of obstetric complications: Agus and Horiuchi (2012), identified parity as a the factor that influence women's receiving less than the recommended four ANC visits during pregnancy. Lack of knowledge of the western healthcare system and poor language proficiency were the most frequently reported impeding factors (Boerleider *et al.*, 2013).

Other studies have identified health provider factors to be responsible for challenges that women face in accessing ANC (Agus & Horiuchi, 2012). For instance, Agus and Horiuchi (2012), point out the need to understand women's perceptions of health services that they received. Ensor and Cooper (2004), argue on the other hand that women see labour and delivery as a period of main health dangers that requires biomedical care, and most women desire to give birth in a health facility. Mrisho *et al.* (2009), note that scarcities of staff, equipment and supplies were common complaints in the community in Tanzania.

Community factors, which includes cultural beliefs and ideas about pregnancy have been said to have had an effect on antenatal care use (Simkhada *et al.*, 2008). Agus and Horiuchi (2012),

report that women who were encouraged by their family to get ANC services had higher traditional beliefs score than women who encouraged themselves. These researchers note that traditional beliefs followed by lower income families had the greater influence on preferring TBAs, with the opposite trend for preferring midwives.

In Shukura community which is located in the Ablekuma district of Greater Accra, it is anticipated that there is a high record of pregnancy amongst women with some of them who are jobless and others who have their partners' also jobless and a high record of pregnancy related diseases.

## **1.2. Justification of the study**

The incidence of maternal mortality still occurs though the free maternal policy has been existing for the past nine years, (WHO, 2013). A number of studies have assessed the effect of free maternal care on access to and utilization of health care facilities, antenatal care and deaths (WHO, 2013). This study seeks to examine the patient factors, community factors and health provider factors that influence the utilization of ANC under the FMCP.

It is important to evaluate patient factors, particularly the socio-demographic characteristics to determine their influence on women's utilization of ANC (Agus, & Horiuchi, 2012). In their systematic review of factors for non-western women's utilization of prenatal care, Boerleider *et al.* (2013), found that the category demographic, genetic and pregnancy characteristics and the category accessibility of care only included impeding factors. These analysts argue that the factors found in the review provide specific indications for identifying non-western women who are at risk for not using prenatal care adequately and for developing interventions and

appropriate policy aimed at improving prenatal care utilization. Nevertheless, it appears that no such study has been conducted to assess how patient factors, especially socio-demographic factors could influence access to ANC among women attending the Shukura Community Hospital. Thus, this study will seek to fill this gap in the literature accordingly.

Crucially, the health provider factors, especially attitude of health care providers and availability of essential medicines could serve as strong incentives for women to always wanting to attend ANC (Mrisho *et al.*, 2009). Mrisho *et al.* (2009), posit that antenatal and postnatal care could offer significant opportunities for relating the health system and the community by reassuring women to deliver with a skilled attendant. These researchers advise that addressing staff shortages through intensifying training opportunities and incentives to health care providers and developing postnatal care guidelines were key steps to improve maternal and newborn health.

Kruk, Rockers, Mbaruku, Paczkowski, and Galea (2010), found that in addition to several individual factors, positive village perception of doctor and nurse skills and negative perception of traditional birth attendant skills were associated with higher odds of facility delivery. Despite this suggestion, it looks like studies (Ofori-Adjei, 2007), have minimally explored how health provider factors influence utilisation of ANC in Ghana in general and at the Shukura Community Hospital in particular. Admittedly, in Ghana and other Sub-Saharan African countries, the influence of community factors such as culture, customs, traditions and beliefs on women's access to and utilisation of ANC cannot be overlooked (Mrisho *et al.*, 2009). Mrisho and associates (2009), propose that efforts to increase antenatal and postnatal care must concentrate on looking at geographical and economic access while striving to make services more culturally sensitive.

Kruk *et al.* (2010), propose that community opinions of the quality of the local health system impact women's decisions to deliver in a clinic. These analysts recommend that improving quality of care at first-level clinics and communicating this to communities may assist efforts to increase facility delivery in Sub-Saharan Africa. Nonetheless, it seems that there is dearth of literature on community factors and their influence on utilisation of ANC among women attending the Shukura Community Hospital. This study is an effort towards bridging the knowledge gap.

Another motivation for the study is based on the researcher's own experience as a woman and a staff of the health sector of Ghana. Having been exposed to the challenges confronting women in accessing health care both geographically and financially, the experiences gained will be brought to bear on the discussion of the topic under consideration. Therefore, it is expected that the study will make recommendations to policy makers on the possible improvements to be made to the free maternal health care policy. Additionally, it will increase the evaluation papers that look at what happens, what can be done and will have to be done needs to be considered towards attaining the desired goal of the policy. Notably one of the parts of public health policy is to make health care, universal, affordable and accessible to everyone (WHO, 2013). Hence, a focused effort is needed to reach out to those women who are currently, excluded from antenatal care.

### **1.3. General Objectives of the Study**

The main objective of the study is to assess the factors influencing utilization of antenatal care services under the free maternal care policy (FMCP) at the Shukura Community Hospital.

### **1.3.1. Specific Objectives**

More specifically, the study aims:

1. To examine patient factors influencing utilisation of ante natal care at the Shukura Community Hospital.
2. To assess provider factors influencing utilisation of ante natal care at the Shukura Community Hospital.
3. To determine community factors influencing utilisation of ante natal care at the Shukura Community Hospital.

### **1.3.2. Research Questions**

To achieve the above specific objectives, this study will focus on addressing the following questions:

1. Which patient factors influence utilisation of antenatal care at the Shukura Community Hospital?
2. Which provider factors influence utilisation of antenatal care at the Shukura Community Hospital?
3. Which community factors influence utilisation of ante natal care at the Shukura Community Hospital?

### **Outline of the dissertation**

The report is divided into six chapters. Chapter one presents the introduction where the background to the study, problem statement, justification, general and specific objectives and research questions have been presented.

In the chapter two, literature Review and the conceptual framework have been presented

Chapter three presents the methodology which consist of the study design, study area, study population, sample methods, data collection, quality assurance and ethical considerations

Chapter four presents the results

In chapter five, the discussion of the study's findings as they relate to existing literature has been presented.

Chapter six presents the summary, conclusions and recommendations of the study. Here, the contribution to knowledge, limitations to the study and future research have also been presented.

## CHAPTER TWO

### LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

#### 2.0. Introduction

This chapter presents analysis of related studies on the subject matter. It is divided into seven sections which are maternal care, maternal health care policy, access to health care /ANC, patient's factors influencing utilisation of health care, health provider factors influencing utilisation of health care, community factors influencing utilisation of health care and conceptual framework.

#### 2.1. Maternal health care

The health of a woman during pregnancy and childbirth as well as the post-delivery period is referred to as maternal health. (WHO, 2009). Maternal Health care and with child health are acknowledged as is an important pointer so health status future generations. Action on maternal health is usually directed at increasing access to antenatal care, preventing maternal deaths and preventing poor birth outcomes. (WHO, 2009).

The Millennium Development Goals (MDGs), which is a set of global agreed upon health and development indicators, intended to decrease the ratio of maternal deaths by three quarters as well as achieve universal access to reproductive health by 2015 (UN, 2010). Some countries were unable to meet the MDGs, however the adoption of the Sustainable Development Goals following lapse of the MDGs aim at reducing maternal mortality rate globally to less than 70 per 100,000 live births by 2030. This will emphasize on universal health care coverage (UN, 2017).

Antenatal care utilisation has been relatively high in Ghana: pregnant women seeking care from skilled care givers, increased from 82% in 1988 to 97% in 2014 (GSS, 2014). Sari (2009) contends that the increased attention to maternal health universally has been focused on the reduction in maternal death. Meanwhile, this researcher notes that until two decades ago, worldwide consideration on the rate of maternal mortality had not been acknowledged properly. Economic and Social Commission for Asia and The Pacific (2008), points out that although thorough estimate of MMR requires structured vital registration, longitudinal studies of pregnant women and household surveys in Nepal showed that, the vital registration system has a limited coverage while national level survey, that concentrate on estimating maternal death is nonexistent.

Farah and Rasheed (2009), suggest that these are due to the inadequacies within the civil registration systems, lack of knowledge of the pregnancy status of the deceased, adding to inaccurate medical certification of the cause of death. Senah (2003), agrees with this stating that maternal mortality figures globally are oppressed with an amount of problems owing to the fact that: all deaths of women of reproductive age (15-46 years) and the cause of deaths are not known, a small number of countries tally birth and death with even less registering the cause of death, and it is even not clear if the death occurred during pregnancy or not.

Sari (2009), notes that maternal health has assumed global significance due to the huge gap in the status of well-being between mothers in rich and the poor countries. Farah and Rasheed (2009), indicate that this difference becomes even more frightening when cross-country comparisons of the lifetime risk are taken into account. For instance, in out of 1 in 47,600 in Ireland, there are 1 in 7 in Niger women dying in the pregnancy period or during delivery.

Filippi *et al.* (2006) further pointed out that the world's maternal deaths were stipulated to be 500,000 and over.

Filipi *et al.* (2006), argues that issues of maternal and child care do not receive the needed international financial attention notwithstanding stated intention. They indicate that struggle for funding for maternal health issues is met with aggressive competition from even relatively highly funded program addressing diseases such as tuberculosis, malaria and HIV/AIDS. Subsequently, the World Health Organization (WHO, 2015), has outlined three critical issues triggering maternal deaths (Kunst & Houweling, 2001; Sari, 2009). WHO notes further that the first of these vital causes is the absence of access and utilization of essential obstetric services, (WHO, 2015).

The WHO (2014) report states MMR and maternal health care utilization correlate negatively. The available data suggest that if all females could have access to effective reproductive health care services this could result in the prevention of 88 to 98 percent of all pregnancy-related deaths. (Kunst & Houweling 2001). The low social status of women in developing countries is also considered a significant factor. (WHO, 2015). It points out that this reduces their access to economic resources as well as basic education. Consequently, end up without the needed capacity to make informed decisions relating to their nutrition and health (WHO, 2015). Poor diet coupled with physically exhausting activities is identified as contributing to poor maternal health outcomes (Nikolopoulos *et al.*, 2017).

It is a dreadful occasion when a woman dies from pregnancy or child birth related problems in every Ghanaian society, sometimes demanding elaborate ritual cleansing of the whole society (Senah, 2003). Such deaths are considered to be caused by evil spirits or impurity. Senah (2003), explains that in other communities in the Volta Region, the dead pregnant women are

quickly buried in what is considered un-dignifying, often at midnight with the excuse that this will avoid transfer of evil spirits (Senah, 2003).

To further avoid maternal deaths or its occurrence, all Ghanaian cultures put across elaborate nutritional and communicative codes for pregnant women to make sure not that it is not only safe delivery but also the delivery of healthy children (Senah, 2003). Senah (2003), indicates a woman dressing up in order not to expose her stomach or navel; a woman should not buy food from outside or eat in public. Even though all these procedures are put in place to avoid maternal deaths, the WHO/UNICEF estimate shows Ghana's rate of pregnancy related complications to be 740 per 100,000 live births with the Ministry of Health in Ghana estimating this to be 214 per 1,000 live births (Senah, 2003).

### **2.1.1. ANC Attendance/Visits**

Basic obstetric and antenatal care in Ghana is generally provided by players in the health system. These include the health centers and health posts at the communities as well as Private Faith based health facilities and private midwifery homes (Witter *et al.*, 2009). District hospitals and those above them, namely regional and tertiary hospitals most of which are operated by the Ghana Health Services undertake emergency and comprehensive obstetric care. It is worth noting that mission sector is mostly located in more remote regions of the country. In some situations, trained Traditional Birth Attendants (TBAs) carry out deliveries and they tend to refer more complex cases to hospitals. (Witter *et al.*, 2009).

The World Health Organization (WHO, 2016), recommends that a pregnant woman visit the hospitals eight times for ANC. In conformity to WHO standards Ghana, NHIS makes provision for at least four or more visits (NHIS, 2017). There have been a number of studies affirming

the correlation between the utilization antenatal care and positive maternal outcome (Moos *et al.*, 2008). The United Nations Economic and Social Commission for Asia and the Pacific (2008), states further notes that in addition to helping women identify complications and potential risks antenatal care also helps in planning for safe delivery which is key maternal health. On the other hand, some studies note inadequate number of ANC visits has close relation with lack of detection of higher risk factors (Flenady *et al.*, 2011). Similarly, studies assert that low rates of ANC visits have a 63% higher risk for complications during pregnancy (Coria-Soto *et al.*, 1996; Magadi *et al.*, 2000). Although antenatal care cannot be said to be the overall answer to the prevention of all obstetric emergencies, the successful management of pregnancies and the consequent wellbeing of the child depends largely on information provided by antenatal service providers. (Coria-Soto *et al.*, 1996; Magadi *et al.*, 2000).

### **2.1.2. Skilled delivery**

Over the past few years last few years there has been concerted global recognition on the need to address the unmet health needs of pregnant women and children However not much progress has been made in this direction. Tsegay *et al.* (2013). In Sub-Saharan Africa it is estimated that 162,000 women still die each year during pregnancy and childbirth, this is considered most worrying because it is as a result of the lack of accessibility to skilled delivery attendance and emergency care. Similarly, Mpembeni *et al.* (2007), showed that view that access to skilled attendant during deliveries could result in reductions in maternal death. They note a key indicator for monitoring progress in achieving MDG-5 of improving maternal health, is the ratio of births that receive attention from skilled birth attendants.

Moyer and Mustafa (2013) categorized the associated factors with facility based delivery into maternal, social, antenatal-related, facility-related, and macro-level factors. Similarly, Moyer,

Dako-Gyeke, and Adanu (2013), in a systematic literature review compared rates of skilled birth attendance, facility delivery, maternal mortality, and early neonatal mortality across nations and regions since they argued that facility based neither delivery nor the association between hospitals based birth and national maternal and early neonatal mortality rates were not understood in Sub-Saharan Africa (SSA).

Witter *et al.* (2009) affirmed that, Ghana's persistently high MMR were projected to be between 214 to 800 maternal deaths per 100,000 live births. Senah (2003) observed that although these figures point to the total maternal related deaths of Ghana, there are regional variations. For instance, there are increasing social variations, with amounts of skilled attendance either stagnant or decreasing for poorer women. Indications shows that the three northern regions of the country record the maximum levels of poverty and maternal deaths as well as lowest levels of supervised deliveries (Witter *et al.*, 2009).

The Demographic and Health Survey data showed that whereas deliveries with health professionals escalate from 85% to 90% from 1993 to 2003 for the richest quintile, deliveries with health professionals for the poorest quintile dropped from 25% to 19% (GSS, 2014). For example, nationally, 45% of births were attended by a medical practitioner (79% in urban areas, 33% in rural); 31% by traditional birth attendants (TBAs) and 25% were unsupervised (GSS, 2014). Moyer and Mustafa (2013), suggests factors that are mostly consistent with facility based delivery include education on maternal health, spacing of deliveries, rural and urban residence, household wealth and socioeconomic status, accessibility to facility, as well the number of ANC visits.

### **2.1.3. PNC Attendance/Visits**

Literature shows that, identifying and treating complications arising from the delivery is important for both the mother and the child whereas mothers also get important information from health providers. (Tesfahun, Worku, Mazengiya, & Kifle, 2014). Studies argue that postnatal care (PNC) for mothers and newborns is gathering increased attention, especially through global initiatives such as every Newborn Action Plan and Ending Preventable Maternal Mortality (Kearns, Caglia, Hoope-Bender, & Langer, 2016).

In examining what determines of utilization of maternal services in Nigeria, focusing on individual, Babalola and Fatusi (2009), focused on household, community and state-level factors and noted that although maternal health services utilisation operates through some aspects at various levels (individual, household, community and state), depending on the indicator of maternal health services, the relevant determinants could vary. Babalola and Fatusi (2009), recommend that the most effective promotional intervention for maternal health service utilization was to target the underlying individual, household, community and policy-level factors, such that there is the need for these interventions to reflect the absolute roles of the various fundamental factors.

## **2.2. Maternal Healthcare Policy**

The government of Ghana makes several efforts to ensure complete health for its citizens (GHS, 2016). To achieve this, it uses the services of the Ministry of Health and the Ghana Health Service. The MOH contributes greatly to the economy of the country, which tries so hard to make sure the health of all people in Ghana including women of reproductive age is improved (GHS 2016).

Ghana's current health policy regarding payment for services could be related to the events in 1985, when the Hospital Fees Regulations (LI 1313) required fees being demanded for health services (Asante & Aikins, 2007). Asante and Aikins (2007), note that utilization of health services in Ghana dropped as a result of the introduction of this user fees. These researchers explain that to balance the adverse effects of the "Cash and Carry" system and especially its significances on the poor, the Government in turn commissioned various studies into alternatives - principally insurance-based (Asante & Aikins, 2007). This came out with a policy on national health named the National Health Insurance Scheme at a cost moderate and affordable to all citizens to reduce the burden of health care. To begin with, numerous efforts were assigned into scrutinizing the feasibility of a national health insurance scheme.

The representation of the National Health Insurance Scheme (NHIS) Act (Act 650), in 2003, delivered the basis for setting up health insurance schemes at the district level in Ghana, which was to provide financial access to quality basic health care services to all residents in Ghana (Brugiavini, & Pace, 2016). The NHIS came into full operation in September, 2005, with 128 schemes. At present, cumulatively about, 11,007,849 people have been registered under the NHIS (NHIS, 2016).

The Free Maternal Care Policy, which is available to all pregnant women, was introduced as one of the tools in addressing maternal and infant mortality (Schieber, Cashin, & Saleh, 2012). By the policy, a pregnant woman who has never registered – register for free; access care for free. In addition, a woman who is already registered and gets pregnant when her membership has expired – renews for free; access healthcare for free. Moreover, a pregnant woman who is already registered and still an active member can access care for free (NHIS, 2010).

The maternal benefit package includes the following: no premium is charged for a new registration or renewal of membership; no processing fee is charged for registration or renewal and there is no waiting period (Gajate-Garrido, & Owusua, 2013). The pregnant women have six antenatal visits and all other medically necessary visits are captured as OPD visits (GHS, 2014). In addition, all deliveries, including Caesarean and all other emergencies arising from the delivery are catered for free. Pregnant women have two post-natal visits within six (6) weeks, and benefit from all other NHIS covered benefits. Further, there is a full year cover, no matter when the pregnant woman is able to register. In addition, there is free care for the baby on the mother's NHIS ticket for 90 days (NHIS, 2016). The main impact of such a policy is to prevent complications that are likely to affect the lives of these children at an early stage of life. These complications are; severe anemia, neonatal death due to obstructed labour and illnesses such as pneumonia among others (Filippi *et al.*, 2017). Thus, among the key aims of the MCHP is to promote access to healthcare (Schieber *et al.*, 2012).

### **2.3. Access to Healthcare / ANC**

Key issues that could influence access to ANC discussed in this study are availability of medicines, affordability and accessibility of the services. The issue of defining access to healthcare is a complicated one (Obasi, 2013), and has attracted the attention of policy makers, both in the developed and developing worlds - many health problems are preventable and curable through improved access to health care services (Kuffour, 2011). For instance, the National Healthcare Disparities (2011) report, states that most of the women from western world, such as those in USA have better access to maternal health care services. This supports these mothers to utilise the health care services fully thus reducing MMR. Though this is the

case in such countries, the report also indicates that, there are women who still have challenges in accessing health care services.

In Ghana, MMR is frequently linked to the three delays: Postponements in the home and in accessing the health facility and delays at the health facility (GHS, 2015). According to a Ghana Health Service (GHS, 2015), report, the initial delay is making a decision on whether to seek care. The report indicates there is little or no information and inadequate knowledge and these are causes for the delay in responding to initial warning signs of complications of pregnancy and danger signals during labour. Secondly, the delay is linked to the restrictions that women have in accessing health facilities. Weak referral linkages as indicated exist between community, health centers and district hospitals making it difficult for women in emergency situations to get the care they need (GHS, 2015).

The condition as it is stated is worsened by poor road and communication networks, distant health facilities, and a lack of transportation and inadequate community support (GHS, 2015). The third delay occurs between the time the woman arrives at the health facility and the facilities' response in providing appropriate care (GHS, 2006). This was confirmed by Mpembeni *et al.* (2007), who observed that the huge inconsistency in the rate of maternal deaths was due to differences in access and use of maternal health care services in Tanzania. Since it is assumed that access to and utilisation of ANC could reduce maternal mortality (McDonagh, 1996), it is therefore, important to understand factors that influence utilisation of ANC as shown below.

## **2.4. Factors Influencing utilisation of Antenatal Care**

This section presents a review of related literature on factors that influence utilisation of ANC. Boerleider and colleagues (2013), report that a numerous including, communication, position in host country, social network, migration, expertise of the care provider, culture and personal treatment were found both facilitating and impeding factors for non-western women's utilization of prenatal care. In this study, these factors have been categorized into patient, health provider and community factors, as explained below.

### **2.4.1. Patients Factors (Socio-demographic characteristics) Influencing Utilization of Ante natal care**

Studies show that the use of Maternal Health Care Services in developing countries can be influenced by factors such as the socio-demographic characteristics (SDC) of women; culture; and availability and accessibility of the services (Mekonnen & Mekonnen, 2002; Owino, Igberase, Isah & Igbekoyi, 2009). Boerleider *et al.* (2013), note that provision of information and care in women's native languages was the most frequently reported facilitating factor for non-western women's utilization of prenatal care.

Most studies show an association between factors such as education, income, ethnicity, religion, culture, age, parity and decision-making influence to utilization of MHCS as well perceived benefits, perceived susceptibility, perceived severity and cues to action (Adukwu, 2015).

#### **Socio-demographic factors influencing Utilisation of ANC**

This part presents the chosen socio-demographic factors influencing utilisation of ANC. These socio-demographic factors include; women's education, husband's education, parity, birth

order and interval, intendedness of pregnancy, age of women at marriage or at pregnancy, marital status, religion, caste and ethnicity, family size, and knowledge of family planning and ANC (Abajobir, Kisely, & Najman, 2017). Simkhada, Teijlingen, Porter, and Simkhada (2008), also found the following factors affecting antenatal care uptake: Education on maternal health, Educational level of husband, marital status, cost, availability, household income, occupation of the women, media exposure and having a history of obstetric complications. Some of these factors have been explained below.

### **Age**

Studies found that the use ANC was intensely associated with woman's age at the time she marries at and the time she gets pregnant (Mugo, Dibley, & Agho, 2015). In rural north India and in Nepal, the age at which a woman marries was positively associated with attendance for ANC (Pallikadavath *et al.*, 2004; Sharma, 2004). Though in Jordan the age at which a woman marries was not a major predictor of utilization of ANC (Obermeyer & Potter, 1991). Early ANC was patronized by most of the women in their thirties and more often than teenagers and older women. Women who married at the age of 19 or above were frequently going for ANC compared with teenagers (Bhattia & Cleland, 1995; McCaw-Binns *et al.*, 1995; Miles-Doan & Brewster, 1998; Matthews *et al.*, 2001). Magadi, Agwanda, and Obare, (2007), found that teenagers were usually more likely to receive insufficient antenatal care and have non-professional deliveries in Sub-Saharan Africa.

### **Educational Background**

Studies found that the level of education of the woman was the greatest predictor of ANC visits thus women who had good education were likely to obtain the suggested number of ANC visits (Nielsen *et al.*, 2001; Erci, 2003). Early ANC visits are more likely to be patronized by educated women than women with little or no education (Miles-Doan & Brewster, 1998; Matthews *et*

*al.*, 2001). On the other side, there was no association of education of the woman and utilization of ANC services in Pakistan (Nisar & White, 2003). Women's education occurred as a vital factor in a qualitative study, which lead to an appreciation of the importance of ANC (Mumtaz & Salway, 2005).

### **Religion**

Studies showed that religion played a substantial role in ANC utilization (Deo, *et al.*, 2015). In India, women who were in the Islamic religion were much more likely to seek routine ANC than other religions (Bhattia & Cleland, 1995; Pallikadavath *et al.*, 2004). Mekonnen and Mekonnen (2003), found significant variation in the acceptance of ANC by religion. Muslim women, Orthodox and Protestant religions were more likely to use ANC in Ethiopia (Mulatu, 2017). On the other hand, religion was not a statistically significant predictor of ANC utilisation in India (Navanee-tham & Dharmalingam, 2002), and in Ghana (Overbosch *et al.*, 2004).

### **Ethnicity**

In Hausa culture in Nigeria, the strongest factor in non-utilization was 'God's Will' (Adamu & Salihu, 2002). This might be due to the fact that ethnicity and caste/status play a significant role in ANC utilization (Deo, *et al.*, 2015). The native women Guatemala who do not speak Spanish used biomedical services less with more marginalized groups less likely to use ANC (Glei *et al.*, 2003). For instance, people of low socioeconomic status, racial and cultural sectors and are excessively represented among those with access problems in the US (National Healthcare Disparities, 2011).

### **Marital Status**

Tsegay *et al.* (2013) discovered the occurrence of maternal health care utilisation and its elements among rural women aged 15-49 years in Tigray, Ethiopia. These researchers found that factors associated with ANC utilisation were among others, marital status, proximity of health facility to the village, while use of institutional delivery was mainly associated with parity, education, having received ANC advice, a history of difficult/prolonged labour, and husbands' occupation.

### **Occupation**

A woman's occupational background could facilitate her decision to utilise ANC (Fotso, Ezeh, and Essendi, 2009). Thus, Fotso *et al.* (2009), mentioned the need increase the female education to change the ideas of the importance of skilled maternal health care and also to improve households' funds

### **Parity**

Studies indicated strong associations between parity and ANC use. While higher parity was generally a barrier to satisfactory use of ANC (Dahiru, & Oche, 2015; Sharma, 2004; Paredes *et al.*, 2005), Found that in Ethiopia high parity women have a tendency to use the service more often than primiparous women (Mekonnen & Mekonnen, 2003). Women in India Similarly had their first ANC earlier in higher parity (Matthews *et al.*, 2001).

### **Family size**

Another important factor in the use of ANC in some studies was size of a family and structure (Simkhada, 2008). It was revealed that there was little patronage of the ANC by women from nuclear families than women who emerged from extended families (Fareed, Faridi, & Ayyoub, 2016). Studies found that the order and spacing of birth were significantly associated with ANC visits (Mesfin, 2017). Higher order births were associated with a late start or inadequate

use of ANC (Rosenberg, 2015). Women who had given births after an interval of more than three years were more regular in the use of ANC than those had previous birth within two years (Westoff, & Potter, 2015). Furthermore, it was observed that concentration on pregnancy was a statistically significant determinant of ANC use; women who were not keen on keeping their pregnancies started ANC late and had less frequent visits (McCaw Binns *et al.*, 1995; Magadi *et al.*, 2000; Erci, 2003; Paredes *et al.*, 2005).

### **Husband's Educational Background**

Studies indicated the educational level of the husbands was linked to the use of ANC (Navaneetham & Dharmalingam, 2002). Navaneetham and Dharmalingam (2002) found that Andhra Pradesh, husband's education was a statistically significant predictor unlike Karnataka in India. The educational level of the husband's was a stronger predictor than a woman's education in the Philippines (Gipson & Hindin, 2015).

### **2.4.2. Health Provider Factors Influencing Utilisation of ANC**

This section presents health provider factors influencing utilisation of ANC.

#### **Attitude of Healthcare Providers**

Although the World Health Organisation (WHO, 2008), report, showed that the major causes of newborn deaths include bleeding, hypertension, anaemia, unsafe abortions, infections and obstructed labour; and the fact that these are the easily and most identifiable of maternal deaths, there are several other reasons associated with maternal deaths. Such other reasons could include the attitude of health care providers towards clients at the facilities. This could result in low utilisation of facility based services. For instance, Tsegay *et al.* (2013), conclude that there was a relatively acceptable utilisation of ANC services but extremely low institutional

delivery in Ethiopia, noting that classical socio-demographic factors were associated with both ANC and institutional delivery attendance. These analysts recommended that ANC advice could contribute to increasing institutional delivery use.

Kyomuhendo (2003), reports that in Uganda, the last resort considered was the use of primary health units and the referral hospital, including when complications occur. This researcher found that lack of skilled staff at primary health care level, complaints of abuse, neglect and poor treatment in hospital and poorly understood reasons for procedures, plus the views of the health workers that women were ignorant, that the women were reluctant to deliver in health facilities and seek care for complications

### **Waiting Time**

Magadi *et al.* (2000), found that use of ANC was associated with waiting time for the services. The time facility is opened for the ANC service was vital for urban slum-dwelling women in Bangladesh whereas long waiting times were obstructions to use ANC (Chowdhury *et al.*, 2003, Mathole *et al.*, 2004).

### **Availability of Medicines**

Findings show that health centres readiness to respond to obstetric emergencies was generally, insufficient in terms of skilled attendants, equipment, supplies and drugs, and motivated staff (GHS, 2015). Studies showed that use of ANC was associated with the availability of the healthcare service (Magadi *et al.*, 2000). Women who resided closer to a village health worker/nurse were more likely to get adequate and early ANC visits than women without a village health worker (Nielsen *et al.*, 2001).

### **Accessibility of the services**

Studies in Hadiya zone in Southern Ethiopia found that ANC use was influenced by accessibility of the services, mainly where they live, distance and transport to the healthcare

facilities (Lire, 2017). Town and countryside status did not appear as statistically significant after holding constant regional status and other variables in Turkey (Celik & Hotchkiss, 2000). Utilization of ANC in Pakistan had no substantial difference between urban and slum areas. (Alam *et al.*, 2005), whereas those living in developed regions of the country were utilizing ANC compared with rural regions (Celik & Hotchkiss, 2000).

Distance was significantly associated with ANC use (Magadi *et al.*, 2000; Gleib *et al.*, 2003). Healthcare facilities that were located far from the women's residential address was associated with fewer antenatal visits (Magadi *et al.*, 2000), and lower interest in ANC (Nielsen *et al.*, 2001).

### **Affordability**

Financial barrier is one of the most important limits when it comes to seeking the seeking of a skilled care during delivery in Ghana is (Senah, 2003). A study on costing maternal health care in one district in 1999 found cost recovery rates of between 152% for deliveries and 211% for caesareans in mission hospitals, but did not shed light on affordability relative to women's income in Ghana (Witter *et al.*, 2009). Problems such as under-funding of exemptions from user fees in general have also been found, which have meant that exemptions are available in theory, but not always in practice if the provider is not reimbursed for lost income (Witter, Arhinful, Kusi, & Zakariah-Akoto, 2007).

Women with high economic status were more likely to obtain acceptable and early ANC than those with low economic status (Magadi *et al.*, 2000; Matsumura & Gubhaju, 2001; Sharma, 2004).

High salaried female workers participated more in the ANC (McCaw-Binns *et al.*, 1995). In contrast, interestingly in India, ANC through healthcare facilities was higher among

unemployed women than women who had jobs. (Pallikadavath *et al.*, 2004). The proportion of women receiving ANC at home was higher among working women although it was not statistically significant (Pallikadavath *et al.*, 2004). Women married to unemployed men had inadequate ANC compared with those whose husbands had jobs (Ciceklioglu *et al.*, 2005), but the field of employment of the household's head was not statistically significant (Obermeyer & Potter, 1991).

### **2.4.3. Community factors influencing ANC Care**

This section presents analysis of community factors influencing ANC.

#### **Source of information on ANC**

Some women assessed ANC very late because they were uncertain about the pregnancy (Oxenford, Daley, Lewis, Hill, & Chitty, 2017). In Zimbabwe both women who lived in the cities and villages were knowledgeable on the benefits of ANC for their health and that of their unborn child (Manda-Taylor, Sealy, & Roberts, 2017). Similarly, ANC was not seen as essential unless there was physical distress during pregnancy or women had problems in the last pregnancy or delivery (Mohammed, 2017).

Kyomuhendo (2003), suggests that there should be proper interventions to address the barriers between rural mothers and the formal health care system, which is inclusive of community education on all aspects of vital obstetric care and sensitization of service providers to the condition of rural mothers. Accordingly, a study found that women who have knowledge on family planning were more likely to attend ANC visits in Nepal (Sharma, 2004).

### **Cultural Beliefs**

Moyer and Mustafa (2013), conclude that facility based delivery is a complex issue that is influenced by characteristics of the pregnant woman herself, her immediate social circle, the community in which she lives, the facility that is closest to her, and context of the country in which she lives. In Zimbabwe, women were afraid of their blood being used for witchcraft and sorcery if they had to be taken care of by a bad health attendant, and they also were not in favour of their HIV status being recorded in their health book particularly when it was HIV positive (Aura, 2014).

Studies revealed that, it was so shameful to be seen pregnant and this lead to the fact that pregnant women could not wear tight dresses when attending ANC (Ohaka, 2016). Women's perceptions of the risk factors associated with adverse obstetric outcomes were significantly related to the probability of seeking ANC. Women who had prior foetal loss or neonatal death were more likely to receive ANC (Sandall *et al.*, 2016). Anastasi *et al.* (2015), and Tesfaye *et al.* (2017), highlighted that the complications experienced during earlier pregnancies had a positive effect on early and adequate attendance for ANC.

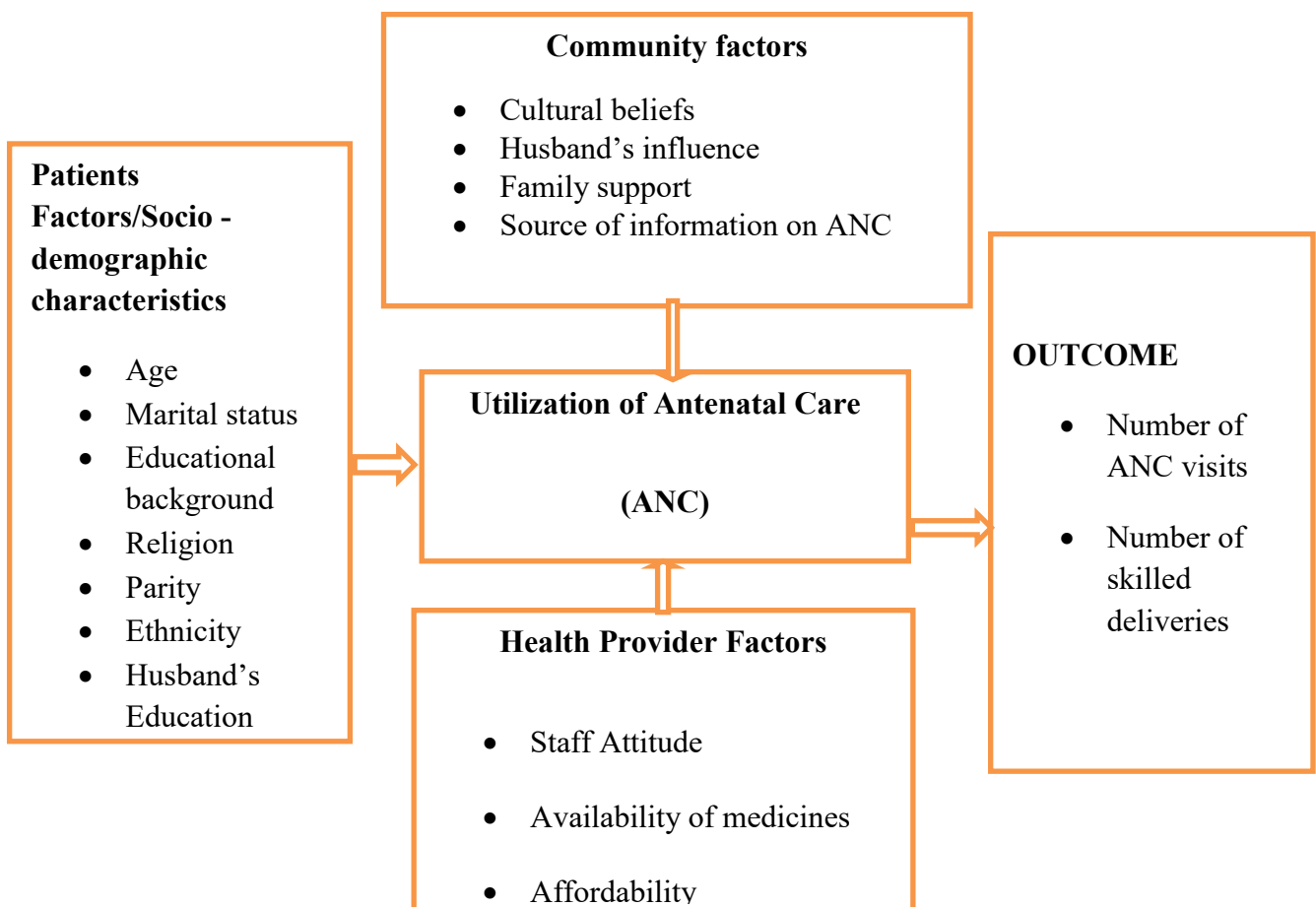
### **Husband's Influence**

It is anticipated that the husbands have some influence on their spouses' decision to utilise ANC - as a result, studies have suggested the need to involved husbands/men in issues relating to ANC and its utilisation (Mpembeni *et al.*, 2007). For instance, Mpembeni *et al.* (2007), recommend that the following to be addressed to be able to enhance the plans laid in achieving the MDG targets which are to improve coverage of health facilities, raise awareness for both pregnant women and their partners on what to look out for as signs of danger during pregnancy & delivery and also to strengthen counseling on facility delivery and individual birth preparedness.

Certain traditions and cultures in the country maintain that women must wait for approvals from male relatives before seeking help or health care (GHS, 2015). Tsegay *et al.* (2013), found that factors associated with ANC utilisation were among others, husband's occupation, while use of institutional delivery was mainly associated with husbands' occupation, among others in Ethiopia

## 2.5. Conceptual Framework

Based on the review of literature on the concepts underlying maternal health, mortality and related issues, the conceptual framework in figure 2.1 represents the three factors that influence the use of ANC. The patient factors that are assumed to have an influence on utilisation of ANC are; age, marital status, and educational background. The health care provider factors (staff attitude, availability of medicines), which have an influence on utilisation of ANC refer to the activities that constitute interactions between the client and the health care worker. The community factors (cultural beliefs, husbands influence) describe the norms and beliefs in the community that allow or prevent pregnant women in Shukura from using ANC services.



### **Figure 2.1: Conceptual Framework of Utilisation of ANC at the Shukura Community Hospital**

On the basis of the literature review, it was observed that there was dearth of knowledge of the factors that influence utilisation of ANC in the Ablekuma District, especially at the Shukura Community Hospital. The gaps in the literature have thus been explained under the justification of the study section (1.2, pages).

#### **2.6. Summary of the chapter**

The findings from this review revealed various factors that influence the utilisation of ANC by women in different parts of the world. There was lack of significant existent literature on the specifics of the topic of study for this research. Without a doubt, when considered together, it is clear that results of previous studies on the factors influencing the utilisation of ANC are inconclusive. Added to this, to date, no significant work has the factors that influence the utilisation of ANC by pregnant women attending the Shukura Community Hospital.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1. Introduction**

This chapter discusses the methods used for the study. It focuses on the study design, profile of the study area, study population, sampling and sample size, sampling procedure, data collection and method of analysis, pre-testing, and ethical consideration.

#### **3.2. Study design**

A descriptive quantitative cross-sectional study was carried out to assess the influence utilization of Antenatal care among women attending the Shukura Community Hospital, Ablekuma district. This design was advantageous because it allowed the researcher to collect firsthand information from the respondents for addressing the stated specific objectives and at the end of it data was quantified for easy reporting of the utilization of antenatal care services.

#### **3.3. Study area**

The study was conducted at Shukura, a suburb of Ablekuma South constituency, located in the Accra Metropolitan Area (AMA), in Accra the capital of Ghana. Ablekuma South constituency is one of the eleven (11) Sub-Metropolitan Districts of the Accra Metropolitan Assembly. It is bounded on the east by the Odododiodio constituency, on the west by Weija constituency, on the south by the Gulf of Guinea and on the north by Ablekuma Central and North constituencies. Ablekuma South District had a population of 213,914 (male = 101,392, female = 112,522) according to the 2010 Population Census (GSS, 2010). It has eight suburbs namely;

Gbenu, Mampong Okai, Mamprobi, Korle Gonno, Korle Bu, Chorkor, Mamsralor and New Mamprobi.

Shukura is an urban community with the predominant religious group being Muslims. It is bounded to the north by Banana Inn, to the south by Korle Gonno, to the west Chorkor, and to the east by Laterbiokoshie. The occupations of the people are fishing, trading and civil service.

### *Shukura Community Hospital*

The Shukura community has only the Shukura Community Hospital as primary level hospital with a few clinics and maternity homes (GSS, 2010). It has a staff strength of 300 health workers and 20 non clinical staff. The Shukura Community Hospital offers the following health care services

- Out Patient
- In patient
- Pharmacy
- Laboratory
- Dental
- Eye Care
- Adolescent Reproductive
- Child welfare
- Antenatal
- Post Natal
- Ultrasound

Shukura Community Hospital was selected because of the unique location in a visibly populated area of Ablekuma North.

Location of the Shukura Community Hospital is shown in figure 3.1.



**Figure 3.1: Location of the Shukura Community Hospital. Source: Google Map Data (2017).**

### **3.4. Study population**

The population for the study was women of child bearing age (15-49 years) attending the Shukura Hospital antenatal care clinic at the time of the study. Pregnant women (attending PNC) will be chosen for this study because they are viewed to be much more informed of the pros and cons of the ANC services and can reflect better.

#### **3.4.1. Inclusion criteria**

All women between the ages of 15-49 years who will be attending postnatal clinic

### **3.4.2. Exclusion criteria**

This study will not involve women who will be going for antenatal visit at the time of study because they may be obliged to give only positive feedback since they are still in the process of using the services that are being assessed due to fear or potential intimidation by the healthcare workers.

## **3.5. Study Variables**

This was a descriptive study to establish only associations between the dependent and the independent variables.

### **3.5.1. Dependent variable**

Utilization of antenatal care

### **3.5.2. Independent variables**

1. Patient's factors: Socio-demographic characteristics, etc.
2. Provider factors: staff attitude, waiting time, availability of medicines etc.
3. Community factors: cultural beliefs, husband's influence, social infrastructure

### 3.6. Sampling method

A systematic random sampling method was used to select the study participant where a register from the postnatal care clinic was used to do the sampling as the sampling frame which had a list of all registered mothers attending PNC clinic for that particular day of data collection. An average number of postnatal mothers per every other day were obtained from the postnatal clinic and a total of 405 mothers were interviewed with 45 mothers per day.

#### 3.6.1. Sample size Determination

The sample size will be determined using the Cochran's (1977), formula,

$$N = \frac{Z^2 Pq}{d^2}$$

Where,

N = Minimum sample size

Z = Standard normal deviation of 95% confidence interval

P = Prevalence

q = 1-p = 1-0.52 = 0.48

d = degree of precision = 0.05

Substituting,

$$N = 1.962 \sqrt{(0.50)(0.48)}$$

$$(0.05)^2$$

$$N = 368.87$$

This was increased to 405 to cater for the 10% non-response rate.

### **3.7. Data Collection – Questionnaire Design and Administration**

Mothers who came for post-natal clinic (a retrospective data collection on ANC amongst women attending PNC) at the Shukura Community Hospital were explained in detail, the study to be conducted to get their approval to become participants.

The questionnaire was divided into three parts. The first part seeks to find out individual factors including, age, marital status, religion and occupation influencing the utilisation of ANC. The second part considers community factors including, family support, culture that influence the utilisation of ANC (a retrospective data collection on ANC amongst women attending PNC, which enabled the researcher to gather the information in an orderly manner). The third part is the service provider factors including, accessibility to health facility, availability of medicine, and attitude of healthcare workers that influence the utilisation of ANC in the Shukura Community Hospital. This was a retrospective data collection on ANC amongst women attending PNC. A structured questionnaire was designed and either self-administered by participants or interviewer-administered to participants who could not read, by the research assistants after interpreting the questions to them. Each questionnaire was administered within 20-30 minutes. The duration for data collection process four weeks.

### **3.8. Data Analysis**

The questionnaires were cleaned up by checking for serial numbers, date and time of interview, and the interviewer's number. Each questionnaire was checked to ensure that every question, which was supposed to have only one answer does not have more, and that no question was skipped. Collected data was coded and entered into excel and subsequently migrated into SPSS (version 21) software for statistical analysis. Frequency distribution was done to compute proportions on age, educational level and occupation.

Analysis and presentation of the results involved the following: descriptive analysis was done to examine the background characteristics of the respondents; bivariate analysis (Chi Square test) was done to determine relationships between the independent variables (patient, provider and community) and the outcome variable (to be assessed according to the number of antenatal visits and supervised deliveries); and multivariate logistics regression analysis, which helped to estimate association between the independent variables (patient, provider and community) and the outcome variable (number of antenatal visits and supervised deliveries). The level of significance of the relationship between the variables was set at ( $p < 0.05$ ).

### **3.9. Quality Assurance**

To ensure reliability and validity of the data, a well-designed questionnaire containing all the details necessary to achieve the set objectives was administered to assist in obtaining the right information from the clients. The research assistants were trained to acquire knowledge for the data collection. There was daily monitoring and supervision to ensure high quality.

### **3.9.1. Training of Research Assistants**

The three research assistants who were engaged were given some training before the commencement of the study. The training involved the following: general overview of the study, which included explanation of the study; going through the questionnaire for in depth understanding of the variables; and role play performance, which helped stimulate the data collection process in the local language (Ga).

### **3.9.2. Pretesting of the Questionnaire**

Pretesting of the questionnaire was done at the Royal MMR Hospital at Glefe in the Ablekuma District. This was because the respondents there had the same characteristics as that of the study area. This ensured the validity of the test instrument to be used.

### **3.10. Ethical Considerations**

**Ethical approval:** After completion of the research proposal development an ethical approval with ID number GHS-ERC027/03/18 was sought from Ghana Health Service Ethical Review Committee for the study to commence.

The approval letter was sent to the Medical Director of Shukura Community Hospital with an introductory letter from the head of department of Health Policy Planning and Management at the School of Public Health.

**Consent:** A participant written informed consent was sought from study participants who were evidenced by the respondent appending a signature onto the consent form so as to take part in the study after giving her adequate information about the study.

**Confidentiality:** Anonymity and confidentiality were taken care of and any potential personal identifier like email address, name, mother's identification number were replaced by a unique identifier or labeling after getting the already filled and returned questionnaire which was kept under lock and key for safe custody and the questionnaires will be destroyed after five years.

**Privacy:** Voluntary participation was exercised, interviews were held in conducive locations without interruptions, there was withdrawal at any time in interviews when any interruptions occurred.

**Potential risks and benefits:** A study is health promotional and beneficial to entire population, however no direct benefit to participant, no direct payment in form of money for the participation. However, participants will be refreshed with snacks and soft drinks during the interviews. Respondents will be informed that the information they provide will help the researcher to understand effect of maternal health policy on utilization of ANC in particular and health service delivery in general. The information will be beneficial in the long run as it will arouse policy makers to pay more attention to patient satisfaction the study's variables will help influence utilisation of ANC. Thus, their participation in the study will not involve any risk or cost.

**Environmental ethics:** Reduction in use of papers, recycling was used for any used papers, electronic data was mainly encouraged during analysis of data.

#### Participation in the Research

Participants were informed that their participation in the study was voluntary and their decision not to volunteer would not influence the nature of the ongoing relationship they have with the investigator or the School of Public Health or the Shukura Community Hospital.

**Conflict of interest**

The principal investigator declared that there was no conflict of interest to disclose in this study and was objective as much as possible.

## CHAPTER FOUR

### RESULTS

#### 4.0. Introduction

This chapter presents the results of the study based on the analysis of the questionnaires administered to the participants in this study. There are three sections therein.

#### 4.1. Socio-Demographic and Socio-economic characteristics of respondents

This section presents the results for the data collected and analyzed using SPSS and Excel packages. Data was collected from 405 systematically sampled women meeting the inclusion criteria at the Shukura Community Hospital between June and July 2018. The main characteristics are detailed in table 4.1. Most of the respondent were between the ages of 15-20 years 200(49.4%) and this was closely followed by those between 21 – 25 years, 165(40.7%). A greater percentage of the women were married, 304 (75.1%) and had obtained education to the Junior High Level, 160(39.5%) and 79(19.5%) with no education. Traders/fish mongers 195(48.1%) were predominant as regards to their occupation with 80(19.8%) who were unemployed. As shown in table 4.1, 250(61.7%) were Christians with the other 155(38.3%) as Muslims. Percentage for Husband's / Partner's highest level of education was Senior High Level, which were 141(34.8%). Majority of the partners of the respondents were self-employed, 174(43.0%) with only 16(4.0%) unemployed. Out of the 405 women attending ANC, a percentage of 307(75.8%) utilised ANC throughout their pregnancy with the remaining 98(24.2%) not utilising ANC.

**Table 4.1 Socio-Demographic and Socio-economic characteristics of respondents**

<b>Characteristics</b>	<b>Frequency</b>	<b>Percentage</b>
<b>ANC USE</b>		
Yes	307	75.8
No	98	24.2
<b>Age (yrs)</b>		
15-20	200	49.4
21-25	165	40.7
36 and above	40	9.9
<b>Marital Status</b>		
Married	304	75.1
Single	29	7.2
Separated/divorced	24	5.9
Cohabiting	48	11.9
<b>Education level of mother</b>		
No education	79	19.5
Primary	34	8.4
Junior secondary	160	39.5
Senior secondary	111	27.4
Tertiary and above	21	5.2
<b>Occupation of the mother</b>		
Trader	195	48.1
Self employed	94	23.2
Government	36	8.9
Unemployed	80	19.8
<b>Religion of the mother</b>		
Christian	250	61.7
Islam	155	38.3
<b>Husbands level of education</b>		
No education	46	11.4
Primary	56	13.8
Junior secondary	112	27.7
Senior secondary	141	34.8
Tertiary and above	50	12.3
<b>Husbands Occupation</b>		
Trader	160	39.5
Self-employed/Artisans	174	43.0
Government	55	13.6
Unemployed	16	4.0
TOTAL	405	100.0

## 4.2. Health Provider factors influencing utilization of ANC

Table 4.2 presents results of a univariate analysis of the health provider factors influencing the utilisation of ANC. A higher proportion of the respondents chose to go for ANC at the Shukura Community Hospital by themselves, 330(81.5%) due to reasons such as accessibility /proximity, which constituted, 187(66.2%) followed by previous satisfaction from facility, 86(21.2%), then good staff attitude, 31(9.1%) with the least proportion being emergency and lack of finance, which was summed up to 11(2.7%) of the respondents.

The remaining 75(18.5%) of the respondents who did not choose to come to the facility by themselves had the following reasons, 49(12.1%) got recommendations from friends and family, 26(6.4%) had their place they attend clinic and 8(2.0%) found themselves at the facility because they had a referral from another health facility. With satisfaction derived from medication given during ANC, 388(95.8%) of the respondents were satisfied, 390(96.3%) of the respondents enjoyed the overall satisfaction at the facility and 342(80%) were willing to attend ANC at the same facility if they were to get pregnant again.

About 369(91.1%) of the respondents indicated that the health workers at the Shukura Community Hospital were friendly and 309(76.3%) of the respondents also agreed that the waiting time for ANC was reasonable with 96(23.7%) who said the waiting time was too long. About 315(77.8) agreed that there was a midwife to attend to them during the ANC visits and 365(90.1%) of the respondents showed that there was the presence of a skilled birth attendance during delivery.

**Table 4.2: Health Provider factors influencing utilization of ANC**

<b>Characteristics</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Did you choose SCH by yourself</b>		
YES	330	81.5
NO	75	18.5
<b>Reason for Choosing SCH by yourself</b>		
Financial	3	0.7
Emergency	8	2.0
Previous satisfaction	86	21.2
Good staff Attitude	37	9.1
Accessibility	187	46.2
<b>Reasons for not choosing SCH by your self</b>		
Having a personal hospital	26	6.4
Recommended by a friend/family	49	12.1
Referral	8	2.0
<b>Patient's satisfaction with medications</b>		
Yes	388	95.8
No	12	3.0
not sure	5	1.2
<b>Valid NHIS card</b>		
Yes	341	84.2
No	64	15.8
<b>Will you choose SCH again for ANC</b>		
Yes	324	80.0
No	8	2.0
dont know	25	6.2
<b>Enjoying overall services for ANC</b>		
Yes	390	96.3
No	2	0.5
dont know	6	1.5
<b>Staff attitude</b>		
Friendly	369	91.1
Unfriendly	25	6.2
Indifferent	11	2.7
<b>Waiting time for ANC</b>		
Reasonable	309	76.3
too long	96	23.7
<b>Reasons for attending SCH for ANC</b>		
Accessibility	253	62.5
Referral/recommendation	15	3.7
Affordability (FMCP)	29	7.2
Good Quality of ANC services	102	25.2
Emergency	6	1.5

<b>Presence of a midwife during visits</b>		
Yes	315	77.8
No	17	4.2
Not sure	63	15.6
<b>Did you get all your Lab test at SCH</b>		
		0.0
Yes	367	90.6
No	38	9.4
<b>Did you get all your medications at SCH</b>		
Yes	362	89.4
No	43	10.6
<b>Availability of skilled birth attendant</b>		
Yes	365	90.1
No	11	2.7
not sure	29	7.2
Total	405	100

#### 4.3. Community factors influencing utilization of ANC

Table 4.3 shows results of a univariate analysis of the community factors that influence the utilization of ANC. The results showed that half of the respondents lived very close to Shukura Community Hospital, 205(50.6%) whilst 114(28.1%) of them lived in the surrounding towns which are Mateheko, Banana Inn, Russia and Dansoman. The others who lived very far from the facility 83(20.5%). Another finding was that a little below half 197(48.5%) of the respondents lived with less than five people in their various households. About 74(18.3%) of them lived with between 6 and 10 people, 62(15.3%) lived with between 11 and 15 people while 68(16.8%) lives with 16 and above number of people.

With findings on partner support, the results showed that a little above half of the women received financial support from their partners during pregnancy 242(59.8%) and 133(32.8%) had support from their partners with households' chores during pregnancy. Almost all the respondents believed that ANC visit was very good during pregnancy, 371(91.9%) with only

18(5.2%) who didn't believe it was good. There were 15(3.7%) of the women who were indifferent as to whether it was good or not good. Almost all the respondents had other pregnant women from their homes that had ever attended or still attending Shukura Community Hospital for ANC, 372(91.9%).

In addition, 130(32.1%) of the respondents had the belief that ANC visit throughout pregnancy was to acquire knowledge of pregnancy and pregnancy outcomes, 116(28.8%) of the respondents believed that ANC visits were good for regular check on baby's health whilst 76(18.8%) had the belief that ANC visits during pregnancy reduce complications during child birth. Only a few had the belief that ANC visits were good because it was for free, 10(2.5%) and 7(1.7%) who believed that it was good for mother's health.

**Table 4.3: Community factors influencing utilization of ANC**

<b>Characteristics</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Which part of Accra do you live</b>		
Shukura	205	50.6
Dansoman	36	8.9
Banana inn	26	6.4
Mataheko	24	5.9
Russia	28	6.9
other place	83	20.5
<b>How many people are there in the household</b>		
1-5	197	48.6
6-10	74	18.3
11-15	62	15.3
16 and above	68	16.8
<b>Partner support during pregnancy</b>		
Provide funds	242	59.8
Help with households	133	32.8
Others	12	3.0
No Support	10	2.5
Emotional support	2	0.5
<b>Belief on ANC visits</b>		
Good	371	91.6
not good	18	4.4
Indifferent	15	3.7
<b>Do all pregnant women in your family attend ANC</b>		
Yes	372	91.9
No	21	5.2
Don't know	11	2.7
<b>Reasons for belief in ANC</b>		
Good for baby's health	116	28.6
To acquire knowledge on pregnancy and pregnancy outcomes	130	32.1
Reduces complications	76	18.8
Due to the free maternal policy	10	2.5
Good for mothers health	7	1.7
<b>TOTAL</b>	<b>405</b>	<b>100.0</b>

Table 4.4 shows results of a Pearson's chi-square test of independence were carried out to establish the association between patients' factors and use of ANC. It revealed that there were significant associations between marital status, religion, husband's level of education, husband's occupation and use of ANC by women. Those who were married were more likely to use ANC as compared with those who were single,  $X^2(3, N = 405) = 71.5, p < 0.05$ , Christians were more likely to go for ANC as compared with Muslims,  $X^2(1, N = 405) = 8.89, p < 0.05$ , those with their husband's level of education as junior level of education and above were more likely to attend ANC as compared with those with no education  $X^2(4, N = 405) = 23.3, p < 0.05$ , those whose husbands were employed were more likely to go for ANC as compared with those who were not employed,  $X^2(4, N = 405) = 14.5, p < 0.05$ . There was no significant association between age of the mother, occupation, education level of the mother and use of ANC ( $p > 0.05$ ).

**Table 4.4: Association between patient factors and utilization of ANC**

Characteristics	USE OF FMCP FOR ANC			df(chi)	p-value
	NO n(%)	YES n(%)	Total N(%)		
ANC USE	98(24.1)	307(75.9)	405(100)		
<b>Age (yrs)</b>					
15-20	50(25)	150(75)	200	2(207)	0.92
21-25	38(23)	127(77)	165		
36 and above	10(25)	30(75)	40		
<b>Marital Status</b>					
Married	49(16.1)	255(83.9)	304	<b>3(71.47)</b>	<b>0.001*</b>
Single	5(17.2)	24(82.8)	29		
Separated/divorced	19(79.2)	5(20.8)	24		
Cohabiting	25(52.1)	23(47.9)	48		
<b>Education level of mother</b>					
Co education	26(32.9)	53(67.1)	79	<b>4(9.089)</b>	<b>0.059</b>
Primary	12(35.3)	22(64.7)	34		
Junior secondary	37(23.1)	123(76.9)	160		
Senior secondary	20(18.0)	91(82.0)	111		
Tertiary and above	3(14.3)	18(85.7)	21		
<b>Occupation of the mother</b>					
Trader	38(19.50)	157(80.50)	195	<b>3(4.890)</b>	<b>0.18</b>
Self employed	27(28.7)	67(27.0)	94		
Government	9(25.0)	27(75.0)	36		
Unemployed	24(30.0)	56(70.0)	80		
<b>Religion of the mother</b>					
Christian	48(19.2)	202(80.8)	250	<b>1(8.894)</b>	<b>0.003*</b>
Islam	50	105	155		
<b>Husbands level of education</b>					
No education	15(32.6)	31(67.4)	46	<b>4(23.3)</b>	<b>0.001*</b>
Primary	25(44.6)	31(55.4)	56		
Junior secondary	28(25.0)	84(75.0)	112		
Senior secondary	25(17.7)	116(82.3)	141		
Tertiary and above	5(10.0)	45(90.0)	50		
<b>Husbands Occupation</b>					
Trader	53(33.1)	107(66.9)	160	<b>3(14.5)</b>	<b>0.002*</b>
Self employed	37(21.3)	137(78.7)	174		
Government	7(12.7)	48(87.3)	55		
Unemployed	1(6.3)	15(93.8)	16		
TOTAL	98(24.1)	307(75.9)	405(100)		

#### 4.4. Association between patient factors and utilisation of ANC

NOTE \* means significant findings at 95% confidence interval

#### 4.5. Association between health provider factors and Utilisation of ANC

Results in table 4.5 show a Pearson's chi-square test of independence which was carried out to establish the association between providers' factors and use of ANC. It revealed that there were significant associations between choosing SCH by themselves, reasons for choosing it, having a valid NHIS card, enjoying overall services, staff attitude, and presence of a midwife or skilled birth attendants at the hospital and the use of ANC by women ( $\chi^2(1, N = 405) = 23.69, p < 0.05$ ). Those who chose by themselves were more likely to use ANC as compared with those who were there due to recommendation or referral,  $\chi^2(1, N = 405) = 23.7, p < 0.05$ , those with valid NHIS card were more likely to go for ANC as compared with those with no card  $\chi^2(1, N = 405) = 34.57, p < 0.05$ , those with the presence of the midwife during ANC visits were more likely to attend ANC as compared with those with no education  $\chi^2(1, N = 405) = 102.5, p < 0.05$ . There were no significant associations between patients' satisfaction, waiting time and use of ANC ( $p > 0.05$ ).

**Table 4.5: Association between health provider factors and utilisation of ANC**

<b>Characteristics</b>	<b>NO n(%)</b>	<b>YES n(%)</b>	<b>TOTAL N(%)</b>	<b>df(chi)</b>	<b>p-value</b>
<b>Did you choose SCH by yourself</b>					
YES	55(16.7)	275(83.3)	330	<b>1(55.09)</b>	<b>0.001</b>
NO	43(57.3)	32(42.7)	75		
<b>Reason for choosing SCH by yourself</b>					
Financial	0(0.0)	3(100)	3	<b>4(23.69)</b>	<b>0.001</b>
Emergency	6(75.0)	2(25.0)	8		
Previous satisfaction	15(17.4)	71(82.6)	86		
Good staff Attitude	7(18.9)	30(81.1)	37		
Accessibility	23(12.3)	164(67.7)	187		
<b>Reasons for not choosing SCH by yourself</b>					
having a personal hospital recommended by a friend/family	21(80.8)	5(19.2)	26	<b>2(8.54)</b>	<b>0.14</b>
Referral	24(49.0)	25(51.0)	49		
	3(4.4)	5(3.4)	8		
<b>Patients satisfaction with medications</b>					
Yes	91(23.5)	297(76.5)	388	<b>2(4.52)</b>	<b>0.104</b>
No	6(50.0)	6(50.0)	12		
not sure	1(20)	4(80.0)	5		
<b>Valid NHIS card</b>					
Yes	64(18.8)	277(81.2)	341	<b>1(34.57)</b>	<b>0.001</b>
No	34(53.1)	30(46.9)	64		
<b>Will you choose SCH again for ANC</b>					
Yes	72(22.2)	252(77.8)	324	<b>2(4.52)</b>	<b>0.104</b>
No	4(50.0)	4(50.0)	8		
dont know	3(12.0)	22(88.0)	25		
<b>Enjoying overall services for ANC</b>					
Yes	92(23.6)	298(76.4)	390	<b>2(6.63)</b>	<b>0.036</b>
No	0(0.0)	2(100)	2		
dont know	4(66.7)	2(33.3)	6		
<b>Staff attitude</b>					
Friendly	83(22.5)	286(77.5)	369	<b>2(11.33)</b>	<b>0.003</b>
Unfriendly	13(52.0)	12(48.0)	25		
Indifferent	2(18.2)	9(81.8)	11		
<b>Waiting time for ANC</b>					
Reasonable	77(24.9)	232(75.1)	309	<b>1(370)</b>	<b>0.587</b>
too long	21(21.9)	75(78.1)	96		
<b>Reasons for choosing SCH for ANC</b>					
Accessibility	69(27.3)	184(72.7)	253	<b>4(4.87)</b>	<b>0.3</b>
Referral/recommendation	3(20.0)	12(80.0)	15		
Affordability (FMCP)	7(24.1)	22(75.9)	29		

Good Quality of ANC services	17(16.7)	85(83.3)	102		
Emergency	2(33.3)	4(66.7)	6		
<b>Presence of a midwife during visits</b>					
Yes	43(13.7)	272(86.3)	315	<b>2(102.5)</b>	<b>0.001</b>
No	6(35.3)	11(64.7)	17		
Not sure	46(73.0)	17(27.0)	63		
<b>Did you get all your Lab test at SCH</b>					
Yes	87(23.7)	280(76.3)	367	<b>1(0.516)</b>	<b>0.473</b>
No	11(28.9)	27(71.1)	38		
<b>Did you get all your medications at SCH</b>					
Yes	85(23.5)	277(76.5)	362	<b>1(0.955)</b>	<b>0.328</b>
No	13(30.2)	30(69.8)	43		
<b>Availability of skilled birth attendants</b>					
Yes	73(20.0)	292(80.0)	365	<b>2(45.76)</b>	<b>0.001</b>
No	3(27.3)	8(72.7)	11		
not sure	22(75.9)	7(24.1)	29		

#### 4.6. Association between community factors and utilisation of ANC

Table 4.6 presents results of a Pearson's chi-square test of independence carried out to establish the association between community factors and use of ANC. It revealed that there were significant associations between number of people staying in the household, partner support during pregnancy, beliefs in ANC and use of ANC by women ( $\chi^2(1, N = 405) = 26.12, p < 0.05$ ). Those who had 1- 5 people in the household were more likely to use ANC as compared with those who had 6 or more people in the household,  $\chi^2(1, N = 405) = 26.13, p < 0.05$ , those who had partner support during pregnancy by providing funds were more likely to go for ANC as compared with those who did not provide financial assistance  $\chi^2(4, N = 405) = 19.88, p < 0.05$ . There was no significant association between residential area in the area of the mother and use of ANC ( $p > 0.05$ ).

**Table 4.6: Association between Community factors utilisation of ANC**

Characteristics	Use of FMCP for ANC			df(chi)	p-value
	NO n(%)	YES n(%)	Total N(%)		
<b>Which part of Accra do you live</b>					
Shukura	52(25.4)	153(74.6)	205	<b>5(2.954)</b>	<b>0.707</b>
Dansoman	10(27.8)	26(72.2)	36		
Banana inn	8(30.8)	18(69.2)	26		
Mataheko	5(20.8)	19(79.2)	24		
Russia	4(14.3)	24(85.7)	28		
other place	18(21.7)	65(78.3)	83		
<b>How many people are there in the house you live</b>					
1-5	67(34.0)	130(66.0)	197	<b>3(26.129)</b>	<b>0.001</b>
6-10	19(25.7)	55(74.3)	74		
11-15	6(9.7)	56(90.3)	62		
16 and above	6(8.8)	62(91.2)	68		
<b>Partner support during pregnancy</b>					
Provide funds	42(17.4)	200(82.6)	242	<b>4(19.888)</b>	<b>0.001</b>
Help with households	47(35.3)	86(64.7)	133		
Others	2(16.7)	10(83.3)	12		
No Support	5(50.0)	5(50.0)	10		
Emotional support	0(0.0)	2(100)	2		
<b>Belief on ANC visits</b>					
Good	70(18.9)	301(81.1)	371	<b>2(72.157)</b>	<b>0.001</b>
not good	16(88.9)	2(11.1)	18		
Indifferent	12(80.0)	3(20.0)	15		
<b>Do all pregnant women in your family attend ANC at SCH</b>					
Yes	87(23.4)	285(76.6)	372	<b>2(3.056)</b>	<b>0.217</b>
No	6(28.6)	15(71.4)	21		
Don't know	5(45.5)	6(54.5)	11		
<b>Reasons for belief in ANC</b>					
Good for baby's health	22(19.0)	94(81.0)	116	<b>4(0.292)</b>	<b>0.99</b>
To acquire knowledge on pregnancy and pregnancy outcomes	22(16.9)	108(83.1)	130		
Reduces complications	13(17.1)	63(82.9)	76		
Due to the free maternal policy	2(20.0)	8(80.0)	10		
Good for mothers health	1(14.3)	6(85.7)	7		

#### 4.7. Binary logistic regression: Factors influencing utilisation of ANC among women

A binary logistic regression was carried out to establish the association of factors affecting use of ANC among women. The results in table 4.7 show that when all the factors that were found to be significantly associated with use of ANC were put into the model, it revealed that those factors, which had greater impact on the data as indicated at step 4 of the model, including husband's occupation, accessibility, valid NHIS card and presence of a midwife were significant. However, valid NHIS card and presence of midwives had a negative sign implying an inverse association with the use of ANC. This means that husband's education and accessibility of services had stronger associations with respondents' use of ANC.

Controlling for all other factors, therefore, the results showed that there was a significant association between husband's occupations, which increases the probability of use of ANC by 0.729 units. This is, equivalent to odds of 2.1 times of using ANC when the husband is employed as compared with when he is not employed (Exp (B)/OR= 2.1; 95% CI, 1.22 -3.49),  $p<0.05$ . Another significant association was between accessibility of the facility and ANC use. Respondents who had more access and perceived the facility to be accessible were 0.344 times equivalent to odds of 41% increase higher were more likely to use ANC than those who had less access to the health facility (EXP (B)/OR=1.41; 95% CI 1.007- 1.976),  $p<0.05$ . This could be due to the presence of a health facility within easy reach by the mothers in the community.

The beta coefficient for the valid NHIS and presence of midwives were significant with a negative sign showing an inverse association between these factors and use of ANC [(EXP (B)/OR= 0.18; 95% CI 0.82-0.417) and (EXP (B)/OR= 0.347; 95% CI 0.23-0.564)],  $p<0.05$  respectively. This implies that these factors are reducing the use of ANC by mothers for example. The odds of using ANC were reduced by 82% among those who had NHIS as

compared with those without the NHIS card. And presence of midwife was reduced by 65.5% among those who found a midwife at the center as compared with those who did not find a midwife at the facility. This implies that there was a need to establish why mothers did not want to use their NHIS cards to attend ANC.

**Table 4.7: Binary Logistic Regression: Factors influencing utilisation of ANC among women**

		B	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
						Lower	Upper
Step 1 <sup>a</sup>	presence of a midwife	-1.079	1	.000	.340	.222	.521
	Constant	2.075	1	.000	7.962		
Step 2 <sup>b</sup>	valid NHIS card	-1.593	1	.000	.203	.095	.434
	presence of a midwife	-1.013	1	.000	.363	.231	.571
	Constant	2.408	1	.000	11.113		
Step 3 <sup>c</sup>	hus_occ	.792	1	.003	2.208	1.317	3.702
	valid NHIS card	-1.699	1	.000	.183	.082	.406
	presence of a midwife	-1.074	1	.000	.342	.212	.551
	Constant	1.882	1	.000	6.569		
Step 4 <sup>d</sup>	hus_occ	.729	1	.006	2.073	1.228	3.498
	Accessibility	.344	1	.046	1.410	1.007	1.976
	valid NHIS card	-1.687	1	.000	.185	.082	.417
	presence of a midwife	-1.059	1	.000	.347	.213	.564
	Constant	.500	1	.488	1.649		

#### 4.8. Chapter summary

This chapter interpreted the analyzed results derived from the data set. It presented the findings in frequencies and percentages to show which of the factors were significant and those that were not significant with the p value set at  $p < 0.05$  and a confidence interval of 95%. The next chapter aims at describing the significance of the results in light of what was already identified about the **research** problem being considered, and to explain any new insights about the problem after taking the findings into consideration.

## CHAPTER FIVE

### DISCUSSION OF FINDINGS

#### 5.0. Introduction

This chapter focuses on shedding more light on the findings obtained from the data analysis gathered from the questionnaires and how they relate to prevailing literature in the field of study. It is divided into three sections; patient factors, health provider factors, and the community factors that influence the utilisation of ANC at the Shukura Community Hospital.

#### 5.1. Patients factors that influence the utilisation of ANC

The findings of the study discovered that almost all the mothers who participated in the study acknowledged the use of antenatal care 307(75.8%). Marital status was significantly associated as one of the patient or personal factors that influenced women to utilize the ANC service ( $\chi^2(3, N = 405) = 71.5, p < 0.05$ ). Comparing marital status and number of ANC visits revealed that ANC visit was high among the married women than those who were either single or co-habiting. This establishes the fact documented in other studies, which found that ANC utilization amongst women in South Sudan was strongly associated with women who were married during pregnancy (Mugo, Dibley, & Agho, 2015).

Religion had a role to play as the mothers who were Christians also utilized the ANC services more compared with Muslim mothers ( $\chi^2(1, N = 405) = 8.89, P < 0.05$ ). This confirms studies in Eastern Nepal which disclosed that religion played a significant role in ANC utilization (Deo *et al.*, 2015). On the other side, this study also contradicts the evidence in a systematic review,

which revealing that Muslims in the developing countries were much more likely to seek routine ANC than other religions (Bhattia & Cleland, 1995; Pallikadavath *et al.*, 2004).

The study revealed that most of the women had some level of education 304(80.5%). This suggests that mothers were pre-informed on the use of ANC services during pregnancy, which could be associated with the mother's level of exposure and access to information on antenatal care services that are given at the facility. The expectant mothers knew that they had to at least, visit the antenatal clinics at least, four times from time of conception till they deliver 371(91.6%). Majority of the respondents were adolescents but age was not significant ( $p>0.05$ ). This contradicts a finding that age strongly influences pregnant adolescents' decision on whether to utilize ANC in Bulawayo in Zimbabwe (Chaibva *et al.*, 2009).

The occupation of the women attending Shukura Community Hospital had no significant relationship with the use of ANC ( $p>0.05$ ). Therefore, this contradicts the findings of a study conducted in Nairobi, Kenya, which showed that a woman's occupational background could facilitate her decision to utilise ANC (Fotso, Ezeh, & Essendi, 2009).

The Husband's level of education was above primary level had their partners statistically significant in relation to the utilisation of ANC ( $X^2(4, N = 405) = 23.3, P < 0.05$ ). This finding corresponds to the findings of other studies, which reported that the husband's educational level was a stronger predictor than a woman's education in the Philippines (Gipson & Hindin, 2015). The women who lived with a smaller family tended to go for ANC more than those who lived with a larger family ( $X^2(1, N = 405) = 26.13, P < 0.05$ ). This also goes to prove that family size and structure proved to be significant factors in the use of ANC in developing countries as stated in some studies (Simkhada, 2008).

## 5.2. Health Provider factors that influence the utilisation of ANC

Moyer and Mustafa (2013), argue that facility based delivery is a complex issue that is influenced by characteristics of the pregnant woman herself, her immediate social circle, the community in which she lives, the facility that is closest to her, and context of the country in which she lives. In this study, majority of the women chose to attend ANC during pregnancy because of various reasons such as accessibility, previous satisfaction when facility was used by the women and good staff attitude 330(81.5%) Most of the women made the decision to comply with all the four major ANC visits because the facility was easily accessible 187(46.2%). This finding therefore, relates to the studies that found that ANC use was influenced by accessibility of the services, mainly place of residence, distance and transport to the healthcare facilities (Lire, 2017).

The waiting time for ANC visits at the facility had no significant relationship with the utilisation of ANC by the women attending the Shukura Community Hospital ( $p>0.05$ ). This finding contradicts the findings recorded in studies conducted in Kenya, which revealed that the use of ANC was associated with waiting time for the services (Magadi *et al.*, 2000). Other studies reported that the opening time of the service was also important for urban slum-dwelling women whereas long waiting times were a barrier to ANC use in Bangladesh (Manthole *et al.*, 2004).

The report from the World Health Organisation (WHO, 2008), talks about the major causes of newborn deaths, including bleeding, hypertension, anaemia, unsafe abortions, infections and obstructed labour; and the fact that these are the easily and most identifiable of maternal deaths. The report further stated that there are several other factors associated with maternal deaths with other reasons which could include the attitude of health care providers towards clients at

the facilities. This could result in low utilisation of facility based services. Contrary to this study, staff attitude did not have any significant association with the utilisation of ANC by the women attending Shukura Community Hospital ( $p > 0.05$ ).

Findings from a study in rural Burkina Faso indicated that the decrease of user fees was helpful to secure reasonable access to care across socio-economic groups, but that alone was not sufficient to ensure that all women use ANC and benefit from skilled attendance at birth (Tsega *et al.*, 2013). This disagrees with the findings of this study, which rather revealed that women with valid National Health Insurance Card were more likely to go for ANC as compared with those with no NHIS card  $\chi^2(1, N = 405) = 34.57, P < 0.05$ . However, this is in agreement with the finding of a study, which stated that financial constraint was the most important factor in non-use of ANC services, while the costs of the service, including transportation and necessary laboratory tests were major factors prohibiting service utilization (Simkhada *et al.*, 2008). Another study in Ghana also demonstrated that maternal health insurance status played a significant role in the uptake of the maternal, neonatal and child health continuum of care service (Browne *et al.*, 2016).

### **5.3. Community factors that influence the utilisation of ANC**

Almost all the women attending ANC at the Shukura Community Hospital had a positive belief in the use of ANC 371(91.6%). This strongly opposes to the qualitative studies conducted in South Africa among pregnant women, which suggested that most women saw little direct benefit from ANC and did not visit early if they had not experienced problems in previous pregnancies (McLean *et al.*, 2017). This finding rather shows a significant relationship with another study, which declared that either urban nor were rural women sure about the benefits

of ANC for their health or their unborn child in Zimbabwe (Manda-Taylor, Sealy, & Roberts, 2017).

The belief in ANC visits was associated with factors such as; to monitor the wellbeing of the unborn baby, to acquire knowledge of pregnancy and to reduce complications during delivery. This corresponds with literature which stated that women's perceptions of the risk factors associated with adverse obstetric outcomes were significantly related to the probability of seeking ANC (Sandall *et al.*, 2016).

Quite a number of the respondents had their husbands choosing the facility they attended the ANC 49(12.1%). The women who had their partners supporting them financially 242(59.8%) had the tendency of attending ANC followed by women whose partners gave them support with household chores 133(32.8%) during pregnancy. This suggests that a partner's support had a significant relationship with the utilisation of ANC by women attending Shukura Community Hospital ( $\chi^2(4, N = 405) = 19.88, P < 0.05$ ). This agrees with the literature which anticipated that the husbands have some influence on their spouses' decision to utilise ANC - as a result, studies have suggested the need to involve husbands/men in issues relating to ANC and its utilisation (Mpembeni *et al.*, 2007).

When all the patients' factors, health provider factors and community factors were put together, a logistic regression revealed that there was a negative association between the women who had access to the valid National Health Insurance Card and utilisation of ANC (EXP (B)/OR= 0.347; 95% CI 0.23-0.564). This therefore, suggests that, there were women who had access to a valid NHIS card for free healthcare on ANC but did not use the card to access the ANC services. However, this study is contrary to the study that indicated that increased utilization of health care services by the insured leading to increased workloads for providers influenced

their behavior towards the insured. The finding also suggested that most of the insured perceived and experienced long waiting times, verbal abuse, not being physically examined and discrimination in favor of the affluent and uninsured. . (Dalinjong, P. A., & Laar, A. S. (2012).

#### **5.4. Summary of the chapter**

This chapter described how the associations between the patients' factors, the health provider factors, and the community factors, and the utilisation of ANC by women attending Shukura Community Hospital compared with findings in current literature on the topic under study. The next chapter aims at presenting the summary, conclusion, and recommendations based on the findings from this study.

## **CHAPTER SIX**

### **SUMMARY, CONCLUSIONS, AND RECOMMENDATION**

#### **6.0. Introduction**

This chapter presents the summary, the conclusions, contribution to knowledge, recommendations, limitations to the study and future research.

#### **6.1. Summary of the study**

This section presents the summary of the study in relation to the general objective of the study. Thus the study to assessed factors influencing utilization of antenatal care services at the Shukura Community Hospital. Quantitative methods were applied to collect data from 104 women attending the hospital. The study generally concludes that the national health insurance promotes ANC attendance but this study observed that quiet a number of the women who had access to a valid National Health Insurance Card did not use the card to access free ANC but were rather using the cash and carry system.

#### **6.2. Conclusions of the study**

This section presents the conclusions of the study based on the specific objectives. Theses have been related to literature as well.

##### **6.2.1. Patient's factors influencing g utilisation of ANC**

The study found and concludes that marital status was significantly associated as one of the patient or personal factors that influenced women to utilize the ANC service; ANC visit was

high among the married women than those who were either single or co-habiting. That is to say that, the study concludes that the occupation of the husband had an influence on the utilisation of ANC because high proportions of the partners who were employed had their women attending ANC more than partners who had no occupation. The conclusion on the above objective confirms earlier findings of a study on ANC utilization amongst women in South Sudan (Mugo *et al.*, 2015).

### **6.2.2. Health Provider factors that influence the utilisation of ANC**

The conclusion of the study on the above objective was that majority of the women chose to attend ANC during pregnancy because of various reasons such as accessibility, previous satisfaction when facility was used by the women and good staff attitude. That is, relatively, majority of the women attended the Antenatal Care because the health care facility was easily accessible. A similar conclusion has been documented where ANC use was influenced by accessibility of the services, mainly place of residence, distance and transport to the healthcare facilities (Lire, 2017).

### **6.2.3. Community factors that influence the utilisation of ANC**

The study concludes that almost all the women attending ANC at the Shukura Community Hospital had a positive belief in the use of ANC. That is to argue that the belief in ANC visits was associated with factors such as; to monitor the wellbeing of the unborn baby, to acquire knowledge of pregnancy and to reduce complications during delivery. This conclusion is similar to earlier evidence that women's perceptions of the risk factors associated with adverse obstetric outcomes were significantly related to the probability of seeking ANC (Sandall *et al.*, 2016).

### **6.3. Contribution to knowledge**

The study makes contribution to knowledge in the fields of policy and practice, and methodology.

#### **6.3.1. Contribution to policy and practice**

The Government of Ghana implemented the free maternal health policy in 2008 to encourage pregnant women to access free ANC services till delivery. The aim of this policy was to help healthcare providers identify symptoms of pregnancy and related complications early. This would also help to prevent maternal and neonatal mortalities. Despite the fact that ANC is supposed to be free, it is assumed that most pregnant women are not making use of ANC services. Hence, the indicators used in this study clearly identified the utilisation of ANC under the free maternal health care policy and it showed that the ANC under the FMCP was under utilised. This means that there should be a system to check the reasons for the under utilisation of the FMCP for ANC. The findings of this study provides the basis on which future policy directions could go if policy makers and management of healthcare institutions consider the factors that influenced utilisation of ANC and even see how to develop strategies to address those factors which were not significant.

#### **6.3.2. Contribution to methodology**

This study contributes to methodology in that the quantitative methods applied helped in knowing the effect on the study location, sample used by pulling out a retrospective view of the factors that influence the utilisation of ANC. Thus, unlike the qualitative research method, the application of the quantitative research method helped to quantify the views of the women

who were accessing ANC services at the Shukura Community Hospital. Therefore, the findings of this study could be generalized to the population considered.

#### **6.4. Recommendation**

The following recommendations were made for consideration by stakeholders in the healthcare environment who are involved in providing family planning services, among others:

1. Patients or women should encourage their male partners to be involved in the ANC attendance of their women/spouse. This is because they have an influence on their women/spouse as to the decision-making on whether to utilise ANC or not.
2. Health care facilities should be made accessible to pregnant women to enable them attend ANC throughout the period of pregnancy. This could be done by removing the financial and geographical barriers to access.
3. The National Health Insurance Authority should set up strategies to improve the services on the free maternal healthcare policy to aid women attending the ANC with NHIS cards. It should also intensify the link between the NHIA and health facilities with respect to the operations of the help desk. This would enable women who are denied access to ANC for whatever reason, to make complaints accordingly.
4. Emphasis should be put on health education of women about the benefits of ANC while health workers also continue to create a friendly environment for pregnant women through improved patient's health and good work relationship.

### **6.5. Limitation to the study**

This study had limitations, which may affect the scope of the study as the data collected was from mothers attending Post Natal Care at the health facility. There is the possibility of mothers being biased due to the fact that they were still utilising the maternal care. The use of quantitative research method alone concealed the reasons behind the responses provided to the structured questionnaires by the respondents. The sample size used was also limited and the fact that only the Shukura Community Hospital was selected out of the healthcare institutions even in Accra alone (less talk about the entire country) made it difficult to make comparative analysis on district, municipal, metropolitan and regional basis.

### **6.6. Future Research**

In view of the limitations presented, it is suggested that future research should look at a qualitative research method in order to spell out a lot of the information that respondents in this study were not able to give in detail due to the restrictions on the questionnaire used. A future study could seek to include more than one healthcare facility, increase the sample size.

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## **APPENDICES**

### **Appendix A: Participant's consent form**

My name is Afua Birago Marfo. I am a graduate student from the School of Public Health, College of Health Sciences, University of Ghana, undertaking a research on 'Influence of free maternal care on utilisation of antenatal care among women attending the Shukura Community Hospital, Ablekuma District', in Greater Accra Region, Ghana. Some research assistants will be assisting in the study.

### **Purpose of the study**

The study seeks to find out the various factors that may influence women to utilise ANC under the free maternal care. Participants are required to share their experiences with the implementation of the policy by responding to questions.

### **Potential risks / benefits**

Be assured that the research come at no risk and no cost except the precious time that you will use to fill the questionnaire.

### **Privacy / confidentiality**

Personal information that will make you identifiable will not be included in the questionnaire. The questionnaires that clients will respond to will be anonymous (will not bear names of participants) so you will not be identified. Be assured that your privacy and confidentiality will be respected.

### **Data storage**

You are assured that the information gathered will be kept by the principal investigator and used to assess the facility and any amendment needed to be instituted to help provide better health care. The data will be stored on devices such as compact disks (CDs) and memory sticks for reference purposes. The data would be discarded after a period of five years.

### **Voluntary withdrawal and compensation**

You are free to be part of the study and decide to leave at any point you want. No one will be upset if you decide not to partake in the study. You can choose a place of convenience to answer the questions.

### **Dissemination of results**

The findings of this study would be presented in a report and made available to the School of Public Health in University of Ghana and the Shukura Community Hospital. The researcher also intends to use the findings to write manuscripts for publications in academic journals.

### **Participant's Consent**

The above document describing the benefits, risks and procedures for the research title "Influence of Free Maternal Care on Utilisation of Antenatal Care among Women Attending the Shukura Community Hospital, Ablekuma District" has been explained to me.

I have read or have had someone read all of the above, asked questions, received answers regarding participation in this study, and am willing to give my consent to participate in this study as a participant.

---

Date

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Name and Signature/Thumbprint or patient

**Statement by Person taking consent**

I certify that the nature and purpose in this research have been duly explained to the above individual.

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Date	Name and Signature of Person Who Obtained Consent
------	---

**Contacts for Additional Information**

If you have any further clarification, contact:

**Address**

Afua Birago Marfo

School of Public Health

College of Health Sciences

University of Ghana

P.O. Box LG13

Legon - Accra

**Telephone Number:** 0241299795.

**Email Address:**

In case of any concern you can contact the Ethics Administrator, Ms. Hannah Frimpong, GHS/ERC on 024-599-7061.

## Appendix B: Questionnaire

### Introduction

This study assesses the influence of free maternal care policy on utilisation of antenatal care by women at the Shukura Community Hospital, Ablekuma District. The findings will help improve ANC service delivery. Your response and contribution will be used for academic purposes and no disclosure will be made to any third party. However, you are allowed to discontinue this interview at any stage. Thank you.

### Section A: Patients Factors: Socio-demographic Characteristics

1. Age: .....  
15-20 years..... 21- 25 .....25 -30..... 31 -35.....  
36-40..... 41-45.....
2. Marital status: Married =1          Single =2          Separated/Divorced =3  
Cohabiting =4          Other (Specify) =5
3. Educational level completed:
4. No education =1          Primary =2          Junior Secondary =3  
Senior Secondary =4          Tertiary and above =5
5. Occupation: Trader = 1          Self Employed = 2          Government Worker = 3  
Unemployed = 4
6. Husbands level of Education:  
No education =1          Primary=2          Junior Secondary = 3  
Senior Secondary = 4          Tertiary and above =5
7. Husband's Occupation: Trader =1          Self Employed =2          Government  
Worker =3

Unemployed =4

8. Religion: Christianity =1 Islam =2 Other =3

9. How many times did you go for antenatal visits? (Pls tick  $\surd$ )

None Once =1 Two – three times =2 4 or more times =3

10. Did you choose Shukura Community Hospital by yourself?

Yes =1 No =2

10. If yes why? .....

11. If no why? .....

12. Were you satisfied with the medications given to you?

Yes =1 No = 2 don't know=3

13. Do you have a valid NHIS Card?

Yes =1 No =2 (if no, skip to question 17)

14. If yes, please specify if you used it to access healthcare for the ANC visits:

Yes =1 No = 2

15. If yes, how many times already?

Once =1 Two – three times =2 4 or more times =3

16. Will you come to Shukura Community Hospital here a for ANC if you get pregnant again

Yes =1 No = 2 don't know=3

17. Did you enjoy the overall services at the hospital for ANC?

Yes =1 No =2 don't know=3

**Section B: Health Provider Factors**

18. How would you describe the attitude of the staff at Shukura Community Hospital?

Friendly =1                  Unfriendly =2                  Indifferent =3

19. How would you assess the time you have to spend at the health facility?

Reasonable =1                  Too long =2

20. Why did you choose to come for ANC at Shukura Community Hospital?

.....

21. Was there a midwife present throughout your ANC visit?

Yes =1                  No =2

22. How did you find out about Shukura Community Hospital?

Friends (...)                  Husband (...)                  Self (...)

23. How far do you live from Shukura Community Hospital?

Close (...)                  far (...)                  very far (...)

24. Did you do all your lab tests at Shukura Community Hospital?

Yes =1                  No=2

25. Did you get all your medication at Shukura Community Hospital?

Yes =1                  No=2

26. Did you get enough time to discuss all your Health issues with the doctor / midwife?

.                  Yes =1                  No =2

27. Were there skilled birth attendants present during labour and delivery?

Yes =1                  No =2

**Section C: Community Factors**

29. Which part of Accra do you live?

.....

Shukura ..... Dansoman..... Banana in..... Other (specify).....

30. How many people are there in the household?

1-5 ..... 6-10.....11-15.....16 and above.....

31. Do all pregnant women in your household attend ANC?

32. if not, please explain? .....

.....

33. Are you allowed to make your own decision on where to attend ANC?

Yes =1

No =2

34. What support did your partner give during the pregnancy?

Provide funds for her up keep =1

Help with household chores =2

Others (specify) =3

35. Were you reluctant at a point in time to go for ANC at Shukura Community Hospital?

Yes =1

No =2

44. If yes why.....

36. What is your belief on ANC visits

Good=1

Not good= 2

Indifferent =3

37. Any reason for the answer above

.....

THANK YOU VERY MUCH