



**An Assessment of the Factors Affecting Utilization of Focused Antenatal Care at Mbaare
Health Centre III, Isingiro District**

By

Johnson Akankwasa

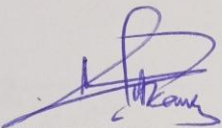
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Degree of Master Public Health of
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September, 2021

DECLARATION

I, **Johnson Akankwasa (18/BSU/MPH/018)**, hereby declare to the Senate of Bishop Stuart University, that this research report on “**An assessment of the factors affecting utilization of focused antenatal care at Mbaare Health Centre III, Isingiro district**” is my original work and has never been submitted for any master degree award in any institution. I further affirm that this dissertation has neither in whole nor in part been previously presented elsewhere for the award of any degree or academic award.

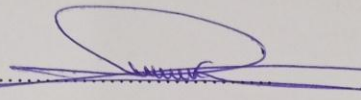
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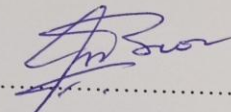
APPROVAL

This research report titled "An assessment of the factors affecting utilization of focused antenatal care at Mbaare Health Centre III Isingiro district" has been done under our supervision and is now ready for submission with our approval.

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Signature:  Date: 14-09-2022

MR. LABAN WASWA BRIGHT

Supervisor

DEDICATION

I dedicate this report work to God the almighty who makes all things possible, my ever-loving parents and the entire family, my classmates, all the authors cited in this project, and my friends for their concern, love, inspiration, and support to ensure that this project is completed.

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OPERATIONAL DEFINITIONS

Antenatal Care (ANC): This is the care receives from healthcare professionals during pregnancy. The purpose is to monitor the mother's health, and baby's health to support them to make plans which are right for their health.

Focused antenatal care (FANC). This is the care received by the pregnant woman with emphasis on the woman's overall health, preparation for childbirth, and readiness for complications. It is said to be a timely, friendly, simple, and safe service to a pregnant woman, furthermore, it contributes to maternal and neonatal outcomes similar to those of the traditional ANC model.

Maternal health- health of women during pregnancy, childbirth, and the postpartum period.

Maternal death- The death of a woman while pregnant or within 42 days of termination of gestation, irrespective of the duration and point of the gestation, from any cause related to or exacerbated by the gestation or its operation, but not from accidental or incidental causes.

Maternal morbidity- any injury, condition, or symptom on women that resulted from or worsened by pregnancy.

LIST OF ABBREVIATIONS

ANC	Antenatal care
DHS	Demographic and Health Surveys
FANC	Focused Antenatal Care
HBM	Health Belief Model
MDGs	Millennium Development Goals
MoH	Ministry of Health
STDs	Sexually Transmitted Diseases
UBOS	Uganda Bureau of Statistics
VHT's	Village Health Teams
WHO	World Health Organization

ABSTRACT

Background: Focused Antenatal care is an effective health intervention for averting maternal morbidity and mortality. Although there has been progressed improvement in antenatal care and access in Uganda, the use of FANC services remains low. The study was on the assessment of the factors affecting utilization of focused antenatal care at Mbaare Health Centre III Isingiro District. The specific objectives were to; determine socio-demographic, cultural behavioral, and health facility-based factors affecting the utilization of focused antenatal care services.

Methods: The study was cross-sectional and employed both qualitative and quantitative approaches for data capture and analysis. Information was captured from 359 women attending ANC using questionnaires and interviews. Data were analyzed using STATA version 13 to generate both descriptive and inferential statistics.

Results: the study found out main socio-demographic factors associated with the utilization of FANC services included level of education [AOR = 2.624; (95% CI: 1.056 – 6.516); p = 0.038], marital status [AOR = 0.47; (95% CI: 0.275 – 0.804); p = 0.006], and employment [AOR = 1.58; (95% CI: 1.014 – 2.46); p = 0.043] The study also identified tribe [AOR = 1.71; (95% CI: 1.11 – 2.641); p = 0.016] as the main cultural obstacle to FANC service utilization at the Health Centre. The study further identified poor behavior of the health workers [AOR = 0.51; 95% CI: 0.302 – 0.851; p = 0.01], long waiting time at the facility [AOR = 2.013; 95% CI: 1.12 – 3.62; p = 0.019] and un-flexible clinical hours [AOR = 2.72; 95% CI: 1.52 – 4.851; p = .001] as the main health facility based factors that affect utilization of focused antenatal care services.

Conclusion: as a result of the significant results, the study concludes that there are different socio-demographic, cultural behavioral, and health facility-based factors associated with the utilization rate of FANC services at Mbaare Health Centre III Isingiro District. Therefore, the study recommends Ministry of Health increases regular community sensitization campaigns to ensure greater awareness of the importance of ANC services among the vulnerable groups. It also recommends behavior change strategies through behavior change campaigns at the community level to provide a platform for both the health care workers to learn about the perceptions of women to get to know them better and also to use that opportunity to educate women on the benefits of FANC services.

Chapter One

Introduction

1.1 Background to the study

Antenatal care refers to interventions to curb maternal and infant mortality. It is a planned program of medical management of pregnant women directed towards; making pregnancy and labor a safe and satisfying experience (Beeckman et al., 2013). Antenatal care is concerned mainly with the prevention, early diagnosis, and treatment of general medical and pregnancy-associated disorders (Farah & Karim, 2016).

Antenatal care is one of the most effective health interventions for preventing maternal morbidity and mortality particularly in places where the general health status of the women is poor (Gupta et al., 2014). The antenatal period presents an important opportunity for identifying threats to the mother and unborn baby's health, as well as for counseling on nutrition, birth preparedness, delivery care, and family planning options after the birth

According to Ononokpono & Odimegwu, (2014) early entry to antenatal care (ANC) is significant in the early detection and management of critical pregnancy-related outcomes. The World Health Organization (WHO) proposes that pregnant women in developing countries to seek ANC within the first 4 months of pregnancy.

Globally 30% of women between the age group of 15-40 years do not have ANC, 46% of those who did not have ANC are in South Asia while 34% are in sub-Saharan Africa (WHO, 2015). This low use of services leads to death and disability due to untreated hypertensive disorders or due to mal- or sub-nutrition like iron deficiency anemia. There has been a significant increase in antenatal service use between the years 1990-2015, the increase has been more than 20% in all the regions of the world except the sub-Saharan regions where only a 4% increase was noted (Worku, 2013).

Africa has the highest burden of maternal mortality in the world and sub-Saharan Africa is largely responsible for the dismal maternal death figure for that region, contributing approximately 98% of the maternal deaths for the region (WHO, 2016). According to a report of Mexican DHS, socio-economic and other factors are linked to differentials in maternal mortality (Cabieses & Bird, 2014). For instance, women with no formal education are 9 times more likely

to die than those women who have finished high school, and women who live in highly marginalized areas are 3 times more likely to die than those who live in the least marginalized areas (Berhan & Berhan, 2014). A number of studies show that Women education influences their uptake and use of maternal health services. Educated women are more likely than are uneducated women to use ANC, to use it early and frequently, and to use trained providers and medical institutions, similarly education is positively associated with safe delivery. Female education was also seen to be a strong predictor of maternal mortality independent of income per head. Additionally, ones' place of residence significantly influences the use of maternal health care services. Rural women are generally less likely to give birth in health facilities than their urban counterparts (Abosse et al., 2010).

The lower rate of FANC utilization and delivery assistance services has been established as contributing factors for a higher rate of maternal mortality (Alemayeh & Adama, 2014). In disadvantaged regions of the world like Uganda where such service is poorly developed, maternal mortality has remained a big challenge in public health (Pell et al., 2013). To address these issues, different stakeholders at national and regional levels have implemented different strategies. However, in some countries where the infrastructure is poor, the ANC utilization is low, the assisted delivery rates have been progressively poor.

Uganda is one of the few countries that account for most of the maternal deaths; others include Nigeria, Bangladesh, Ethiopia, and India (Rutaremwana et al., 2015). According to the Ministry of Health, (2010), the maternal mortality rate of Uganda is 336/100,000 live births (UBOS and ICF Macro, 2012). This ratio is startlingly high given that the field of maternal health has received significant attention from the government (Chi et al., 2015). Pregnancy complications are more common and aggravated across.

Access to health services such as antenatal care services has been promoted as one of the ways to eliminate pregnancy-related complications. Antenatal consultations provide opportunities for health education, health promotion, and social support at both the individual and community levels (Finlayson & Downe, 2013). Especially in the rural setting, accessing antenatal care is an important step in bringing women into contact with the health care system. This contact has facilitated women's access to medical care for future health needs, including postnatal care. It is important for early diagnosis and prompt treatment for complications of pregnancy and other

illnesses that can arise during pregnancy, such as sexually transmitted diseases (STDs), malaria, and helminths infections. Promoting healthy behaviors and increasing knowledge about pregnancy and pregnancy-related complications among women, families, and communities are essential to the health and wellbeing of pregnant women (MOH, 2010).

Despite progress in increasing the use of antenatal care and access to health care facilities, the use of these services has remained low. Only 58.1% of births are attended by a skilled birth attendant, Different factors are related to the utilization of maternal health care services (Rutaremwa et al., 2015). Generally, socio-economic and demographic factors such as; mothers' education background, maternal age, source of livelihood, knowledge on danger signs, marital status, mothers' independency, birth order, religious background, house hold head's sex, household income levels, size of the household, husbands' education background, accessibility factors and factors related with women's perceived quality of maternal health care services. Mothers' knowledge of danger signs and autonomy were reported as significant determinants of care utilization (Rutaremwa et al., 2015).

In Isingiro district, the use of focused antenatal care services has remained low despite the efforts made to improve access to maternal health care services and reduce maternal mortality across the district (Rutaremwa et al., 2015). A large number of women still believe in an old culture that restricts them from attending such antenatal care services and as result, there has been an increasing number of mortality cases recorded. An assessment of the factors affecting utilization of focused antenatal care was paramount as it could help in designing policy measures aimed at promoting the utilization of the services hence addressing the alarming mortality cases across the Isingiro district and Uganda in general.

1.2 Statement of the Problem

Antenatal is the care given to pregnant women to have a safe pregnancy and a healthy baby (Chi et al., 2015). Antenatal care is an important determinant of the high maternal mortality rate and one of the basic components of maternal care on which the life of mothers and babies depend (UBOS) and ICF Macro, 2012). It is concerned mainly with the prevention, early diagnosis, and treatment of general medical and pregnancy-associated disorders. Yet, Antenatal care is significant strategy in improving maternal and infant health. To reduce the high maternal mortality rate, Government through agencies like MOH has offered and promoted free antenatal

care services as part of maternal health care services at public health facilities across the country (Rutaremwā et al., 2015). This is aimed at saving heavy mothers from pregnancy-related complications.

Despite the government efforts of having antenatal health care services in all public health facilities across the country, turn up for focused antenatal health care is as low as 11% for health facilities found in rural settings (Rutaremwā et al., 2015). For example, the number of pregnant mothers turning for focused antenatal health care at Mbaare Health Centre III Isingiro district has remained minimal even though the being facility is well equipped with manpower and supplies (Isingiro district health records 2019). Studies done in different settings have connected low turn up to focused antenatal health care services with different socio-demographic, cultural, and health facility-based factors. However, it remains unclear for the study area as no empirical study has been conducted yet to assess the situation at Mbaare Health Centre III Isingiro district. It is within this context that the study was carried out to explore the factors affecting the utilization of focused antenatal health services and recommend the appropriate measures for promoting the use of the services.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of the study was to assess the factors affecting the utilization of focused antenatal care services at Mbaare Health Centre III Isingiro district.

1.3.2 Specific Objectives

The study-specific objectives included;

1. To determine the socio-demographic factors affecting utilization of focused antenatal care services
2. To identify the cultural behavioral factors affecting the utilization of focused antenatal care services
3. To find out health facility-based factors that affect utilization of focused antenatal care services

1.4 Hypothesis

The following hypotheses were tested

1. Age has no significant effect on the utilization of focused antenatal care services
2. Level of education has no significant effect on the utilization of focused antenatal care services
3. Social status has no significant effect on the utilization of focused antenatal care services
4. Marital status has no the utilization of focused antenatal care services
5. Income status has no significant effect on the utilization of focused antenatal care services
6. Religion has no significant effect on the utilization of focused antenatal care services
7. Cultural behavioral beliefs and values have no significant effect on the utilization of focused antenatal care services

1.5 Justification of the Study

The maternal death rate is regarded as one of the bottlenecks of social-economic development in most developing countries (Berhan & Berhan, 2014). In most cases, these deaths occur before, during, and after delivery. The 2016/17 Demographic and Health Surveys (DHS) show that pregnancy-related mortality had not significantly reduced over the last two decades in Uganda (WHO, 2016). As one of the Millennium Development Goals, the Ugandan government through the ministry of health has been fighting hard to reduce pregnant-related mortalities by taking measures to improve quality and accessibility to maternal health care services such as antenatal care. Uganda is among the countries that formulated various strategies for improving maternal healthcare services (Ministry of Health, 2010). However, for the government and other public health stakeholders to take suitable actions to improve maternal health care services successfully, accurate information towards the problem that relies on an empirical investigation is needed. Few studies have been undertaken to investigate the factors responsible for the underutilization of focused antenatal health care in Uganda (Kisuule et al., 2013). Studying the socio-economic, cultural, demographic, and health service factors affecting the utilization of antenatal care services will be of great importance in designing possible measures for improving maternal health care service utilization.

1.6 Scope of the Study

The scope of the study was categorized into geographical, content, and time as discussed below;

1.6.1 Geographical Scope

The study was conducted at Mbaare Health Centre III Isingiro district. Mbaare Health Centre III is among the current functional Government Health Center threes' in the district. The Health Centre serves the Mbaare sub-county and other surrounding sub-counties in Isingiro District, and patients from neighboring districts. It offers different services ranging from maternity services, HIV testing and counseling, circumcision, and obstetrics care. The health center is estimated to serve over 15,000 people in the community who seek different medical services. Like most government Health Center III's in the country, Mbaare Health Centre III faces many challenges including non-functioning equipment, under-staffing, poor funding, over-worked staff, and slow payment of staff. The choice of Mbaare Health Centre III was attributed to low turn-up for FANC services as well as being convenient to the researcher.

1.6.1 Content Scope

The study was limited to factors for the utilization as the independent variable and utilization of focused antenatal care services as the dependent variable. It specifically; assessed the socio-demographic, cultural behavioral, and health facility-based factors that affected utilization of focused antenatal care services.

1.6.3 Time Scope

This study was conducted for a period of 10 months; from October 2019 to June 2020. The reviewed literature covered 8 years (2010 – 19) to come up with up-to-date findings on factors that affected the utilization of focused antenatal care services in Isingiro district.

1.7 Significance of the Study

Understanding factors that hinder delivery in health facilities is important to narrow the existing gaps in the health sector and improve the quality of health service delivered to pregnant mothers hence reducing maternal morbidity, mortality, and complications related to pregnancy and childbirth.

The findings of this study will contribute to the existing body of knowledge of the likely pregnancy complications related to the non-use of antenatal health care services and the factors affecting the use of antenatal health care services among pregnant mothers.

The findings will be disseminated to mothers who might get educated on the use of focused antenatal services. Such information could minimize the mothers' physical and possible psychological disorders, and create awareness to mothers about the importance of antenatal services.

The findings of this study will be a source of information to non- Governmental Organizations, government, and international bodies who are involved in promoting maternal health care services as a way of reducing mother and child deaths. The study will be useful to the policy makers, the ministry of health specifically in charge of women's welfare. The information obtained will provide a useful guide for formulating appropriate policies and programs for the promotion of antenatal health care.

The findings of the study will be helpful to the health sector's stakeholders in finding out precautionary measures of improving maternal health services among pregnant mothers in Isingiro District hence making maternal health services more accessible and usable among pregnant mothers.

The findings will provide up-to-date literature for academicians since the findings may be used as a basis for further research. The gaps identified will be explored for further research especially regarding the coverage.

1.8 Theoretical Frame Work

In the assessment of the factors affecting utilization of antenatal health care services among pregnant mothers, various theories and models will be reviewed for purpose of getting a foundation for conducting this study. The study will be hinged on both Andersen's healthcare utilization and health belief models.

Andersen Healthcare Utilization Model

Andersen's healthcare utilization model states that an individual's access to and use of health services is considered to be a function of three interrelated factors.

Predisposing factors: The socio-cultural characteristics of individuals that exist before their illness. These according to Andersen includes: Firstly, the social structure including education, occupation, ethnicity, social networks, social interactions, and culture. Secondly, health beliefs include attitudes, values, and knowledge that people have concerning and towards the health care system, and lastly, demographic factors including age and gender.

Enabling factors: Enabling factors according to Andersen are the “logistical aspects of obtaining care”. These are three in numbers. Firstly, personal/family: The means and know-how to access health services, income, health insurance, a regular source of care, travel, extent, and quality of social relationships. Secondly, a community that is available health personnel and facilities, and waiting time. Thirdly, possible additions, including genetic factors and psychological characteristics.

Need factors: These are the most immediate cause of health service use, from functional and health problems that generate the need for health care services. "Perceived needs helps to understand care-seeking and adherence to a medical regimen better, while evaluated needs is more closely related to the kind and amount of treatment that will be provided after a patient has presented to a medical care provider (Cabieses & Bird, 2014). This is divided into two, one is “perceived” that is how people view their general health and functional state, as well as how they experience symptoms of illness, pain, and worries about their health and whether or not they judge their problems to be of sufficient importance and magnitude to seek professional help." (Ononokpono & Odimegwu, 2014). Two is “evaluated” that is represents professional judgment about people's health status and their need for medical care." (Farah & Karim, 2016).

The Andersen healthcare utilization model will help in determining the socio-demographic factors influencing the utilization of focused antenatal care services.

Health Belief Model (HBM)

The health belief model is a psychological health behavior change model developed to explain and predict health-related behaviors, particularly with the uptake of health services (Farah & Karim, 2016) The health belief model was developed in the 1950s by social psychologists at the U.S. Public Health Service (Beeckman et al., 2013) and remains one of the best known and most widely used theories in health behavior research Gupta et al., (2014). The health belief model

suggests that people's beliefs about health problems, perceived benefits of action and barriers to action, and self-efficacy explain engagement (or lack of engagement) in health-promoting behavior (Cabieses & Bird, 2014). A stimulus, or cue to action, must also be present to trigger the health-promoting behavior (Worku, 2013). This model is important to this study in that it will help in determining the cultural and health facility-based factors affecting the utilization of focused antenatal care services.

1.9 Conceptual Framework

Independent variables

Dependent variables

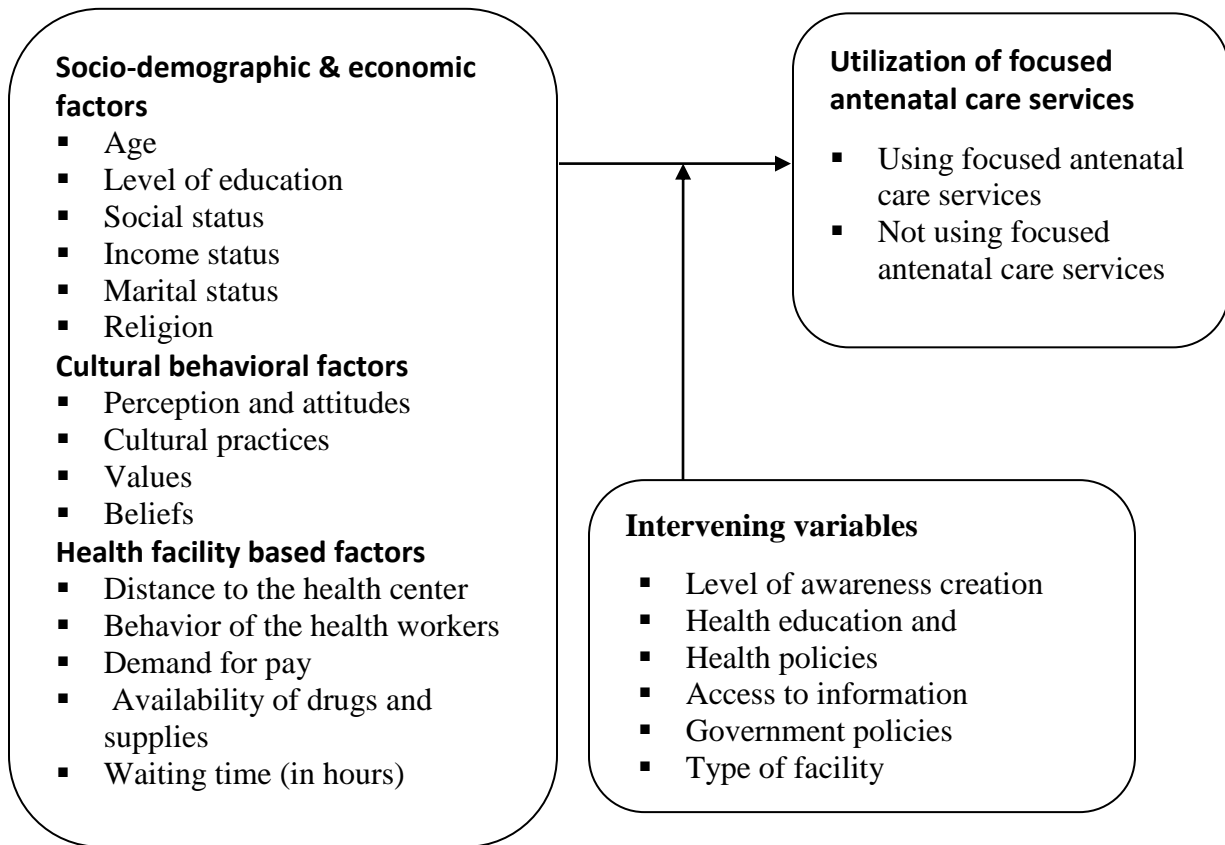


Figure 1: A conceptual framework describing the utilization of focused antenatal health services and their associated factors.

The above framework explains the connection between independent and dependent variables. In the process of the functioning of the independent variable, an intervening variable is necessary to achieve the dependent variable. Ultimately, socio-demographic, cultural, and health facility

factors affecting the utilization of antenatal health care services and their connection with the outcome variable are provided.

Utilization of antenatal health care services is hinged on different socio-demographic and cultural factors like age, level of education, social status, income status, marital status, cultural beliefs and practices, perception and attitude, religion, distance to the health center, behavior and attitude of the health workers, demand for pay, availability of drugs and supplies as well as waiting time at the health facility. All these factors determine the uptake and use of antenatal health care services. Proper use of antenatal health care services following the recommended procedures reduces maternal and infant mortality. However, for mothers to fully utilize antenatal health care services, they require health education and awareness, government support, and well-defined health policies.

Chapter Two

Literature Review

2.0 Introduction

This chapter presents literature from different scholars on the factors affecting the utilization of focused antenatal care services. The chapter presents literature reviews and describes relevant concepts that guided the assumptions of the research project. Literature was reviewed as; socio-demographic, cultural, and health facility-based factors affecting the utilization of focused antenatal care services.

2.1 Socio-Demographic Factors Affecting Utilization of Focused Antenatal Care Services

Maternal age: Maternal age plays a key role in influencing the utilization of focused antenatal care services for instance results from Boerleider et al., (2013) shows an association between age and utilization of ANC services therefore, age of the pregnant woman is considered a predisposing determinant for utilization of ANC services. Contrary to the above, increased age cannot be underrated in the utilization of focused ANC services for instance, a study from Central Ethiopia found that the odds of attending ANC are 1.2 times higher (OR=1.168) for women in the age group of 20-34 as compared to those in the age group 15–19 women. Similarly, a study conducted in Vietnam found that older women (more than 25 years old) were more likely to utilize ANC. Likewise, a study conducted in China also found that women between the ages of 25 and 30 and women older than 30 were more likely to have adequately utilized antenatal care than the younger pregnant women.

Marital status; marital status is one of the influential factors that affect health-seeking behaviors (Bauserman et al., 2015). For instance, single pregnant women do not use ANC services frequently, mainly because they lack resources and social support from their families or partners (Kisuule et al., 2013). Similarly, married women also may lack power and the independence to take decisions on their own in issues related to ANC services utilization (Cabieses & Bird, 2014). WHO, (2016) found that in Ethiopia married women were 40% more likely than unmarried women to utilize ANC services during their pregnancy. In the systematic review carried out by Berhan & Berhan, (2014) and others on literature review from the developing countries, it was found out that married women were capable of using ANC than unmarried

women. For example, in Kenya women who were not married and those who had started their childbearing earlier, below 20 years of age reported less utilization of ANC services than married women (WHO, 2015).

Age at first marriage and cohabitation; women at a younger age in developing countries are more at risk of having complications during their pregnancy (Ononokpono & Odimegwu, 2014). Younger mothers are less likely to continue their education, and moreover, they are less likely to be aware of the complications related to pregnancy as indicated by Rutaremwa et al., (2015). A study by Gupta et al., (2014) from Malawi and Zambia discovered that, women aged below 25 had a lower rate of utilization of antenatal care compared to older women. Furthermore, Farah & Karim, (2016) study from Nepal showed that a considerable number of women were married before they were 15 and out of that only 7% of young women attended ANC compared to 20% of women aged 18 years and older. This was caused by the high illiteracy rates and lack of maternal knowledge on maternal health programs.

Women's education; Women education also influences the utilization of focused ANC services. This is because education among the women creates awareness on the existence of ANC services and the benefits of using those services (Pandey & Karki, 2014). It is argued that educated women were more aware of health problems, know more about the availability of health care services, and utilize the information more effectively than non-educated women. Moreover, higher levels of education tend to positively affect health-seeking behaviors, and education may increase a woman's control over her pregnancy. In addition, education may help to expose women to more health education messages and campaigns, enabling them to recognize danger signs and complications and take appropriate action. These women might have greater opportunities to receive health information and pay more attention to maternal healthcare. Studies have shown that women with lower education usually have less knowledge about ANC services and more difficulties to get access to ANC services. A study conducted in Central Ethiopia established that women with some education were more than two times likely to attend ANC services compared to those with no education and similar findings were revealed from North Ethiopia, Nigeria and China studies.

Socio-economic status; financial viability is one of the most important determinant variables in the utilization of ANC services (Meshram et al., 2014). Financial challenges acts as a barrier to

utilization of antenatal care for women. There are available studies showing a significant relationship between social economic status and ANC utilization. For instance, Ethiopia study shows that women with higher incomes tend to start ANC early and the likelihood of utilizing ANC decreased, as the family income gets lower. Similarly, a study from china shows that that woman who had higher household income were more likely to have adequately utilized ANC services. The positive contribution of better wealth status for all maternity service indicators and its significant contribution to postnatal care are also observed in other studies.

Knowledge on FANC/ANC; knowledge on FANC and ANC is critical in determining pregnant women's use of antenatal services (Ayanda, 2014). Studies have shown that one's' contact to mass media especially television and radio significantly influences FANC utilization. Belayneh & Andargie, (2014) in studies done in India and Nepal, respectively, found that pregnant women who were watching television every week were more likely to use FANC. Moreover, studies have shown that adequate knowledge of ANC has a positive and statistically significant effect on FANC use (Efendi et al., 2016). In the study conducted by Finlayson & Downe (2013) in rural area of Uganda indicated that pregnant women with inadequate knowledge of Maternal and child health were likely not to utilize ANC. A similar study was conducted in Nigeria by Abdul et al., (2012), the findings indicated that health care provider and pregnant women ignorance about FANC was one of the factors affecting utilization of FANC.

Parity; parity in this context is defined as a number of times a woman had given birth to a child, irrespective of being born alive or stillbirth. Previous pregnancies of a woman influence the degree of risk in her current pregnancy (Chorongo et al., 2016). Studies have suggested that parity influences initiation of ANC, as parity increases, the experience of timely initiation of ANC decreases. High parity women are more likely to use their experiences from previous pregnancies and shun antenatal care. With a greater level of experience from previous pregnancies, some women feel more confident during pregnancy and value less ANC services.

History of reproductive loss and previous pregnancy complications; a history of reproductive loss has proved to be a strong predictor of early ANC initiation (Alemayeh & Adama, 2014). Therefore, women who had previously experienced miscarriages or any other pregnancy complications are more likely to utilize ANC services as compared to their counterparts.

Supportive spouse or partner; supportive spouse influences utilization of the ANC services of the pregnancy women. For instance (Pell et al., 2013) findings shows that having a supportive spouse is associated with early initiation of ANC while not supportive spouse was associated with late initiation of ANC among pregnant the women. In of the studies, the researchers concluded that women who had no support from their spouses or partners utilized ANC services almost three weeks later than those who were given support (Pell et al., 2013). Similarly, the utilization of ANC was almost nine times more likely for women reported their husbands to approve ANC than women with those whose husbands did not approve ANC service (OR=8.99).

Women's knowledge of antenatal care is an important factor. It enables women to be aware of their rights and health status in order to seek appropriate health services (Ononokpono & Odimegwu, 2014). Therefore, sufficient knowledge on the benefits of ANC and of the complications associated with pregnancy plays an important role in the utilization of ANC services. In a study conducted by Rosliza and Muhamad, no significant relationship ($p=0.279$) was found between knowledge of ANC and early antenatal booking. It was noted that level of knowledge for pregnant women attached to ANC importance, screening tests, and complications of diabetes and hypertension during pregnancy was poor.

Religion; studies indicate that religion is negatively associated with the use of some MHCS but shows no significant difference for others. A study in Bangladesh (Srivastava et al., 2014) found that utilization of SBA was relatively higher among non-Muslim women than among Muslims, but failed to find a significant association for the use of ANC and institutional delivery. Similarly, a lower propensity for the use of SBA and PNC was found in women in northern Nigeria, who are predominantly Muslim, compared to those in the southern part of the country who are mostly of the Christian faith. No significant difference was found in the use of ANC (Kisuule et al., 2013). Studies in Ethiopia and Ghana also revealed similar results (WHO, 2016).

Lack of awareness is an important factor underlying maternal healthcare utilization. This is because women and their families lack understanding of the danger signs or gravity of the condition, or because they do not know where to go to seek help. Lack of information affects women's capabilities to make their own decisions about seeking healthcare and constrains their ability to exercise their reproductive rights as well. Gupta et al., (2014) argued that informed

consent (i.e. the process by which a fully informed woman can participate in decisions about her healthcare) is mandatory (Farah & Karim, 2016).

Place of residence in most of the developing countries plays a major role in the utilization of ANC since those resident in urban areas are more likely to be closer to health care services than those who reside in the rural areas (Finlayson & Downe, 2013). This concurs with Sharma (2002) Nepal findings which discovered that that woman in urban areas made four times more adequate visits to ANC than women in the rural areas. Different studies conducted in the states of Andhra Pradesh, Karnataka and Tamil Nadu of India during 1992-1993 indicated that utilization of the antenatal health care among residents of the state vary from rural to urban areas (Cabieses & Bird, 2014).

2.2 Cultural behavioral Factors Effecting the Utilization of Focused Antenatal Care Services

Cultural beliefs are important and it influence utilization of FANC services. For instance a study carried out by Beeckman et al., (2013) in Nepal found that mother in-laws negatively influenced utilization of FANC by their daughter in-laws. In this study Beeckman et al., (2013) found that mother in-laws tend to persuade their daughter in laws to fulfil household duties instead of visiting ANC care. Alemayeh & Adama, (2014) in a study conducted in Taiwan also found that mother in-laws and spouse, heavily influence decision about where and whether to go for antenatal care. Engaging men as partners is a critical component of FANC, but their involvement has been low and there's hence a need to encourage male participation to promote the uptake of FANC by pregnant women. The influence of male involvement on utilization of FANC would then be established from qualitative studies which may be designed to investigate the direction of the influence (Finlayson & Downe 2013). Furthermore, in Zimbabwe Pell et al., (2013), found that the early period of pregnancy was the most vulnerable to Witchcraft associated fears, which was the reason for pregnant women not attending FANC in first trimester.

Some cultural norms are attached to restrictions that prohibit women from seeking health care outside the home for themselves and their children. This is further worsened when men often provide services for instance this has been offered as one reason why Asian women living in Western countries often make little use of health services. Another example of culture as a

barrier to using health services is the perception and unacceptability of modern contraception among men in parts of many rural areas of Uganda including Kisoro (Rutarema et al., 2015).

Shaffer in his study suggested that cultural issues relating to language and staff insensitivity are important and deter some women from accessing antenatal care early and regularly (Ononokpono & Odimegwu, 2014). For example a study on Islamic women living in Australia (Finlayson & Downe, 2013) found that, the prospect of being given an ultrasound by a male doctor, rather than a female, caused them to cancel antenatal appointments. Hispanic women living in the US failed to return for antenatal appointments because they felt staffs were too harsh or simply unwilling to answer their questions (Finlayson & Downe, 2013). These kinds of cultural oversights may be viewed as disrespectful by women from various ethnic groups and generate feelings of frustration and further marginalization.

Whether cultural insensitivity by Ugandan health professionals particularly in Kisoro acts as a barrier to antenatal access is debatable. Few recent studies have explored this area and given the cultural homogeneity of Kisoro would seem unlikely that a handful of studies could lead to any uniform conclusions. However, recent research exploring the cultural awareness of some health professionals would seem to suggest that there are issues (Kisuule et al., 2013).

2.3 Health Facility Based Factors that Affect Utilization of Focused Antenatal Care Services

In Uganda lack of resources and skilled staff to improve quality and delivery of maternity services, despite good policies and concerted efforts, have hindered the increase in the utilization of those services by women or a reduction in the high ratio of maternal deaths (Kisuule et al., 2013). Yet there has not been an increase in the utilization by women of emergency obstetric services at health facilities nor a corresponding significant reduction in maternal deaths. The proportion of women delivering in health units remains low and there is a gap between the numbers attending antenatal services and those delivering in health services (Farah & Karim, 2016).

ANC provides a chance to promote the use of professional staff at delivery and healthy behaviors such like breastfeeding, early postnatal care, and postpartum family planning for limiting or spacing births. However, studies have shown that there are many missed opportunities for care,

both because of client- and health system-related factors. Mothers and children may face risks because of limited or late-term ANC visits, low-quality care during visits due to poor provider training, infrastructure and administrative weakness at facilities (Finlayson & Downe, 2013). Thus, the beginning of ANC in sub-Saharan Africa and particularly in Uganda increases demands on the already stressed health system.

Health care workers perspective; health care workers conformity, awareness and approach play a critical towards the utilization of FANC. For instance, Kisuule et al., (2013) explain that poor attitude of health care givers towards pregnant women in Zimbabwe resulted into low utilization of FANC services. Kisuule advanced that many of these mothers preferred to deliver with unskilled birth attendants in rural areas villages. Finlayson & Downe, (2013) authenticate this finding in a multi-centre study conducted in Tanzania, Uganda and Burkina Faso where it was noted that health care workers did not comply with the procedures stipulated in FANC guidelines and this had a tremendous effect on the utilization of FANC. Conversely, Cabieses & Bird, (2014) refuted the claim that health workers (nurses) perception affects implementation and utilization of FANC in Tanzania. She proposes that health care workers perceive FANC as beneficial to both pregnant mothers and the unborn but rather shortage of human and material resources prohibit successful implementation of FANC.

Quality of the care is important and greatly influences the uptake and utilization of FANC services; this is because some women who initiate to FANC late owed it to bad quality of the services at the health facility (Chi et al., 2015). The main reasons were among others included but not limited to lack of services citing reasons like being sent home without receiving services due to insufficient staff, having to privately purchase the prescribed drugs, card or diagnostics tests, yet services were meant to be free. Another important facility based factor was skilled maternal care utilization at health facilities (Farah & Karim, 2016). The presence of all the six signal functions in the nearby basic essential obstetric care facility (health center) positively contributes to the utilization of all indicators of skilled maternal services. Functioning obstetric facility means performing the essential services for normal situations and complications and these services should be available 24 hours a day and 7 days a week. The presence of all signal functions reflects better performance (quality) of a health facility.

Distance to a healthcare facility; there is a strong association between distance and attendance of FANC (Rutaremwya et al., 2015). Therefore, distance to the health facility is an important barrier to the utilization of FANC services more especially in rural setting. The studies shows that general health care utilization for every kind of service is affected by distance from those services, the bigger the distance, the lower the utilization and the shorter the distance the higher the utilization of FANC services which is worsened by lack of proper transport means particularly in developing countries. Studies from Pakistan discovered that access to obstetric care depends upon the transportation system and physical distance between the villages and the centers. Moreover, with huge expenditures and passage of twenty-two years, only 33% of the rural Pakistani population is living within access of 5 kilometers (km). This distance at the same time is an obstacle to seeking care especially in the case of women who lacks autonomy and needs somebody to accompany her. As a result, the factor of distance gets strongly adhered to other factors such as the availability of transport, the total cost of travel and women's restricted mobility (Worku, 2013).

Likewise, other studies have also found that an increase in distance to the nearest health facility led to fewer antenatal visits. A strong association between distance to the health facility and utilization of FANC services was reported by another study. Thus, distance to the antenatal clinics has proved to be a problem that tends to limit access to the antenatal service. In trying to explain the association, the researchers argue that many pregnant women find it distressing to walk long distances or take two or more taxis to a health facility; therefore, they tend to utilize ANC services less regularly than those who live close by.

Access and availability are key concerns in antenatal care utilization. Transportation to distant healthcare facilities may discourage women because of both the time taken and costs involved. Abdul et al., (2012), pointed that, distance to healthcare facilities is important even in developed countries, women living farther away from antenatal clinics are less likely to use antenatal care services. Alemayeh & Assefa, (2014) held that, distance was significantly associated with antenatal care visit. An increase in distance or travel time to the nearest healthcare facilities was associated with fewer antenatal visits and lower uptake of antenatal care services. A qualitative study also showed that the distance to services or physical access were barriers to antenatal care utilization. Other qualitative studies found that uncomfortable transport, poor road conditions and difficulties in crossing big rivers were also barriers.

Poor quality of health services is a major problem in many, but not all, developing countries (Kisuule et al., 2013). However, facilities open and close irregularly; absenteeism rates of doctors and nurses can be very high; staff can be hostile, even violent to patients; misdiagnosis is not uncommon, medicines are all too often unavailable, sometimes due to staff pilfering for use in private practice; and there is inappropriate prescribing and treatment. Deficiencies in quality have direct implications for access to effective health care. Further, one expects that demand will diminish in response to the poor quality of the care offered. This confirmed by the example of Ghana where a decline in quality of public health care was associated with 40% fall in utilization within only five years (Abdul et al., 2012).

Chapter Three

Research Methodology

3.0 Introduction

This chapter describes the research methodology that was used in the research study. This included the study design, area of study, target population, sample size, sampling techniques, data collection methods, research instruments, research procedure, data quality control, analysis of data and limitations of the study.

3.1 Study Design

The study was cross sectional in nature applying both qualitative and quantitative approaches to capture information from women attending ANC and other key informants (health workers, VHT's). A cross-sectional design offers information about a population at a given point in time (Bless & Higson-smith, 2000). The design was deemed appropriate because the study intended to gain immediate knowledge and information on the subject matter and didn't require participant follow up. This research design therefore helped in exploring all the necessary information in regard to the study objectives stated. Qualitative methods were used to draw ideas and perceptions from the key respondents while quantitative methods were used to capture quantifiable information from mothers.

3.2 Area of Study

The study was conducted at Mbaare Health Centre III, Isingiro district. Mbaare Health Centre III is among the current functional Government Health Center threes' in the district. The facility offers different services ranging from maternity services, HIV testing and counseling, circumcision, and obstetrics care. It serves an estimated 15,000 people annually who seek for different medical services (Mbaare Health Centre III records, 2019). Like any other rural areas of Uganda, access to antenatal health care services in the study area has remained a serious challenge to pregnant women. This is largely been attributed to high poverty levels, lack of antenatal knowledge and other socio – demographic and cultural hindrances. Perinatal mortality rate in the area stands at 22/1000 (Mbaare Health Centre III records, 2019).

3.3 Study Population

The study population comprised of women attending ANC at mbaare Health Centre and other key informants like Health workers, VHT's and TBA's.

3.4 Sample Size Determination

The sample size was determined by Kish and Leslie (1965) at 95% level of confidence and 5% tolerable error. Kish and Leslie (1965) formula was used because it was the best formula for choosing a target proportion of respondents from a large community. The formula was used as below;

$$n = Z_{\alpha/2}^2 pq / e^2$$

Where: n = sample size

p = proportion of women of women attending ANC at mbaare HC III = 37% = 0.37

q = proportion of women not attending ANC (1-p) = 63% = 0.63

e = Degree of accuracy = 5% = 0.05

Z = 1.96 standard normal deviation

α = Level of significance (0.05)

Substituting the values into the formula:

$$\begin{aligned} n &= 1.96^2 \times 0.37 \times 0.63 / 0.05^2 \\ &= 3.8416 \times 0.37 \times 0.63 / 0.0025 \\ &= 0.8955 / 0.0025 \\ &= \mathbf{359 \text{ respondents}} \end{aligned}$$

Therefore 359 participants were considered to participate in the study.

Table 3.1: Sample categories

Category	Target sample	Sampling procedure
Women attending ANC	359	Simple random selection
Health workers	10	Purposive selection
VHT's	06	Purposive selection
TBA's	04	Purposive selection

3.5 Sampling Procedure

The study adopted both simple random and purposive sampling techniques in the selection of respondents. Simple random is a type of probability sampling method in which sample members have equal chances of being selected. In this case, the researcher assigned numbers to mothers attending ANC as they arrived and registered at the health facility, these numbers were then written on small pieces of paper and rolled them and then placed in a box. The researcher picked at random one paper at a time without replacement while shaking the box to ensure thorough mixing. This was repeated on each ANC clinic day until 359 mothers were reached and interviewed. 25 respondents were selected and interviewed on each ANC clinic day for 14 days and on the 15th ANC clinic day, only 9 respondents were selected to make a total of 359 women respondents. Key informants such as health workers, VHT's and TBA's were selected on purpose because of their position and supplementary information they had on the subject matter.

3.6 Data Collection Methods

Questionnaire survey and interviews were employed to collect data from the different respondent categories.

3.6.1 Interview Method

The major method of data collection from key informants was interviewing using an interview guide that was administered to the health workers and VHT's. This involved oral or vocal questioning where the research was the interviewer and the respondent's interviewees. Interviews were preferred because key informants were busy with their work schedules by the time of data collection. The research achieved the interviewing process on busy respondents by applying quick oral questioning as informants continue with their work.

3.6.2 Questionnaire Survey

Questionnaire surveys are a proficient data collection mechanism when the researcher understands precisely what is necessary and how to determine the variables of importance. Questionnaires can be categorized as structured, semi-structured or unstructured. A structured interviewee administered questionnaire was used to elicit responses from the study participants. The questions were designed in English and later translated into local languages for respondents to read and respond in the languages they understand. The questionnaire consisted of both open

ended and closed ended questions that explored information on the demographic characteristics of the participants, socio-demographic, cultural and health facility based factors that affected utilization of focused antenatal care services. This was administered to women of reproductive age for the purposes of eliminating bias.

3.6.3 Study Variables

This section presents the variables and their level of measurement as presented in the study below;

Table 3.2: Study variables

Variables	Value labels	Type of variable
Utilization of focused antenatal care services (outcome)	1- Using focused antenatal care services 0- Not using focused antenatal care services	Binary/dichotomous
1. Socio-demographic & economic factors	Independent variables	
Family size	Members in household	Scale (discrete)
Age bracket	1- 18 – 29 2- 30 – 40 3- 41 and above	Categorical
Level of education	1- none 2- primary 3- secondary 4- diploma 5- degree	Categorical
Husbands' education status	1- educated 2- never-educated	Categorical
Marital status	1- married 2- never married	Categorical

Religion	1- Catholic 2- Protestant 3- Muslim	Categorical
Employment status	1- employed 2- never employed	Categorical
Income status	1- low 2- high	Categorical
HIV status	1- negative 2- positive	Categorical
Spouse involvement	1- yes 2- no	Categorical
Number of deliveries	1- none 2- 1 - 2 3- 3 - 4 4- above 5	Categorical
2. Cultural behavioral factors		
Negative perception and attitudes	1 – Attending ANC necessary 2 - Attending ANC is not necessary	Categorical
Deep rooted cultural values	1 – Decision to attend ANC made by family members 2 – Father in-law responsible for accompanying pregnant woman for ANC 3 – Newly married women not supposed to go out in public including ANC attendance	Nominal
Traditional beliefs	1- Yes 0- No	Binary/dichotomous

Tribe	1- Mukiga 0- Other tribes	Binary/dichotomous
Myths and misconceptions	1- Yes 0- No	Binary/dichotomous
3. Health facility based factors		
Distance to the health center	Kilometers	Scale (continuous)
Behavior of the health workers	1 – Good 2 – Bad	Categorical
Demand for pay	1- Yes 0- No	Binary/dichotomous
Limited drugs and supplies	1- Yes 0- No	Binary/dichotomous
Long waiting time at the facility	1- Yes 0- No	Scale (continuous)
Shortage of staff	1- Yes 0- No	Scale (continuous)
Un-flexible clinical hours	1- Yes 0- No	Scale (continuous)

3.7 Data Quality Control

3.7.1 Measure of Content Validity

Validity as a term refers to how well an instrument or a measurement procedure measures what it purports to measure. To ensure validity of the instruments, the researcher consulted two experienced senior researchers and found out whether they could give the information that sought to answer questions of the study. Content Validity Index (CVI) was computed to establish validity of the instruments.

3.7.2 Reliability

Reliability refers to the ability of a test to be used repeatedly (Timmreck, 2012). It is the degree of the information obtained when the measurement is repeated on the same subject or the same group. For the case of this particular study, reliability of the questionnaire was ensured through pre-testing. Questionnaires were pre-tested from a sample outside the sub-county but with similar or close demographic and physical features to those of the study area. Reliability of the questionnaire in relation to the consistency of the respondents' answers was computed using the Cronbach's Alpha Coefficient.

3.8 Data Management and Analysis

3.8.1 Data Management

After data collection, data was edited and entered in EpiData3.1 software. Before data entry, inconsistencies in answers were cleaned. Some cases of unanswered questions were detected and corrected before. After data entry, data was cleaned before analysis to eliminate typing errors, logical errors, check for missing entries as well as removing mistakes that occurred during data entry and editing.

3.8.2 Data Analysis

Data analysis was done using STATA version 16 statistical software for data analysis to process and analyze the data collected through questionnaire. Both descriptive (such as; proportions and frequencies) and inferential statistics (such as correlations and logistic regression) were analyzed.

Quantitative data

Data was entered in Epi-Data 3.1 and after exported into STATA version 16 for further data management and analysis. This involved processing of data which was done at three levels, that is Univariate, bivariate and Multivariate.

At Univariate analysis, frequencies and proportions were calculated for categorical variables. Summary statistics such as means, variance and standard deviation were computed for data measured at metric scale. Data was presented in tabular and graph format.

With bivariate analysis, Pearson correlations were used to test for significant relationships for continuous variables whereas cross tabulations using Pearson chi-square test were used to test for

significant relationships categorical variables and this was determined at ($p \leq 0.05$) level of significance. Any significant variables at bivariate analysis were considered for further analysis in a multivariate model. The Pearson chi-square test statistic (χ^2) used and its formula;

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^c \left(\frac{O_{ij} - E_{ij}}{E_{ij}} \right)^2 \dots \dots \dots 3.1$$

Where χ^2 = Chi-square

O_{ij} = the observed frequency is the i^{th} rows and j^{th} column.

E_{ij} = The expected frequency in the i^{th} rows and j^{th} column.

$i = 1 \dots \dots \dots r$

$J = 1 \dots \dots \dots c$

Multivariate analysis was used to establish the factors associated with utilization of focused antenatal care services at Mbaare Health Centre III more than others. Since the dependent variable was binary dichotomous (1= if a woman used focused antenatal care services, 0 = if a woman did not use focused antenatal care services, the model used to analyze this type of model was binary logistic regression model.

$$\log_e \left(\frac{p}{1-p} \right) = a + b_1x_1 + b_2x_2 + b_3x_3 + \dots \dots \dots + b_nx_n$$

$$\log_e(\text{Odds}) = a + b_1x_1 + b_2x_2 + b_3x_3 + \dots \dots \dots + b_nx_n$$

- Where; p = is the probability of success
- α = is the coefficient on the constant term
- b_i = is the coefficient(s) on the independent variable(s)
- x_i = is the independent variable(s)
- e = is the error term

Qualitative Data Analysis

Data from interviews was analyzed through thematic content analysis. The recorded information was transcribed verbatim and translated from local languages into English. Observational field notes were incorporated into the data for analysis. The transcripts were read repeatedly and

words with similar meanings grouped into categories. Similar categories were grouped into themes and sub-themes which were presented as results. The results contained direct quotes from participants and the narrations were reported as were spoken by participants without editing the grammar to avoid losing meaning.

3.9 Limitations of the Study and some Solutions

The researcher was challenged with getting adequate information to cover all the objectives since during data collection, respondents were busy handling their socio-economic activities.

The weather in the area was quite hot and it affected the movement of the researcher as the whole process was very tiresome.

The study was limited by the low literacy levels of the respondents.

3.10 Ethical Considerations

Permission to carry out the study was sought from the directorate of graduate studies, research grants and publications of Bishop Stuart University which was presented to the administrators of Mbaare Health Centre III requesting for permission to carry out research at the facility. Before administering questionnaires and preparing interview schedules respondents were informed the purpose of the study.

Ethical approval from TASO REC (The AIDS Support Organization Research Ethics Committee) was also granted to carry out study on human subjects in the study area.

After the permission was granted, the researcher carried out a pilot study to test the quality (validity and reliability) of the instruments. The researcher then moved on with data collection. A written consent was obtained from each of the respondents before conducting any interview. Participants who consented to participate were assured of anonymity; confidentiality and was also assured of their ability to withdraw from the study at any time. No names or person identification numbers were reflected on the questionnaires except the numbering for questionnaires, which was done for purposes of identification of data during data editing. The researcher intended not to give any immediate incentive to the participants. There was no risk for any participant who chose to participate or not to participate in the study. Principles of autonomy and respect for persons were upheld.

Chapter four

Presentation, Analysis and Interpretation of Results

4.0 Introduction

This chapter presents the study findings that were in line with the objectives. Quantitative methods of analysis were used to generate descriptive and inferential statistics that aided in the interpretation of the study findings. The findings are presented in form of socio-demographic characteristics, socio-demographic, cultural and health facility based factors that affect utilization of focused antenatal care services. All the 359 respondents targeted for the study were accessed and questionnaires recovered giving a response rate 100%.

4.1 Respondents socio-demographic and socio-economic characteristics.

The most important demographic characteristics for the study included; age, educational background, marital status, religion, family size, and employment status. Findings demographic characteristics were presented as below;

Table 4.1: Percentage distribution of respondents by socio-demographic and economic characteristics (n=359)

Variable	Category	Frequency	Percent
Age bracket	18 - 29	171	47.6
	30 - 40	138	38.4
	41 and above	50	13.9
Education level	None	25	7.0
	Primary	95	26.5
	Secondary	113	31.5
	Diploma	73	20.3
	Degree	53	14.8
Marital status	Never married	85	24
	Married	273	76
Religion	Christian	214	59.6
	Pentecostal	102	28.4
	Muslim	43	12.0
Employment status	Employed	190	52.9
	Un-employed	168	47.1

Age of the respondents

Results in table 4.1 indicate that 47.6% of the respondents interviewed were aged 18 - 29 years, 38.4% were aged 30 - 40 while 13.9% were above 41 years

Level of education

Results in table 4.1 revealed that majority (31.5%) of the respondents had secondary education, 26.5% primary education, 20.3% diploma, 14.8% university degrees and 7% had never attended school.

Marital status

Results show that the study was dominated by married respondents at 76%, while the never married accounted for 24%.

Religion

Regarding religious affiliation, more than a half (59.6%) of the respondents were Christians, 28.4% Pentecostal and 12% Muslims.

Employment status

Results indicate that majority (52.9%) of the respondents had employment in both formal and none formal ventures whereas 47.1% were un-employed.

4.2 Socio-demographic factors associated with utilization of focused antenatal care services

This section of the study addresses research objective one which sought to determine the socio-demographic factors associated with the utilization of focused antenatal care services. The association between different factors captured and utilization of focused antenatal care services was analyzed using logistic regression at bivariate and multivariate levels as presented in table 4.2

Table 4.2: Results of the logistic regression model of utilization of focused antenatal care services in relation to socio-demographic factors

Variable	Value	COR(95%CI)	p-value	AOR(95%CI)	p-value
Level of education					
	None	1		1	
	Primary	1.06(0.44-2.56)	0.896	1.058(0.427-2.621)	0.902
	Secondary	2.41(1.01-5.82)	0.05	2.624(1.056-6.516)	0.038
	Diploma	1.74(0.70-4.35)	0.235	1.707(0.664-4.39)	0.267
	Degree	1.13(0.43-2.91)	0.808	1.120(0.420-2.984)	0.821
Religious affiliation					
	Catholic	1		1	
	Muslim	0.79(0.49-1.263)	0.319	0.727(0.442-1.196)	0.209
	Protestant	1.45(0.72-2.895)	0.297	1.663(0.811-3.410)	0.165
Marital status					
	Never married	1		1	
	Married	0.521(1.02-2.38)	0.014	0.470(0.275-0.804)	0.006
Employment status					
	Unemployed	1		1	
	Employed	1.56(1.02-2.38)	0.04	1.58(1.014-2.46)	0.043
HIV status					
	Positive	1		1	
	Negative	0.58(0.308-1.11)	0.1	0.516(0.312-1.14)	0.101

Dependent variable: utilization of focused antenatal care services (1-using, 0- not using)

- COR → Crude Odds Ratio
- AOR → Adjusted Odds Ratio
- CI → Confidence Interval

Results in Table 4.2 showed the relationship between socio-demographic factors and utilization of focused antenatal care services and the relationship was measured at 5% level of probability. At bivariate level, level of education secondary (COR = 2.41; 95% CI, 1.01-5.82) p=0.05), marital status married (COR= 0.52; 95% CI, 0.31-0.874), p= 0.014, employment status, employed (COR = 1.56; 95%CI, 1.02-2.38), p= 0.04 shows that education level secondary, marital status married and employment status employed have statistical significance on utilization of focused antenatal care. Other factors like HIV status, and religious affiliation show no statistical significance on utilization of antenatal care services.

At multivariate level, secondary level of education (COR= 2.624; 95% CI, 1.056-6.516), p = 0.038, marital status married (COR = 0.47; 95% CI, 0.275-0.804), p = 0.006 and employment status, employed (COR = 1.58; 95% CI, 1.014-2.46), p = 0.043 show that these three factors remained statistically significant on utilization of focused antenatal care and religious affiliation and HIV status showed had no association with utilization of focused antenatal care at multivariate level.

There was however no observed difference in the utilization of focused antenatal care services for those with none formal education, primary and diploma. In this case the earlier stated null hypothesis that there was no association between education level and focused antenatal care utilization was rejected. In an interview with one of the TBA's in the area, she had this to say;

“.....in this village, we do not have a lot of women that finished education up to university. Most of them stopped in secondary so it's no doubt that with secondary education would utilize focused antenatal care services than any other group because they are the majority”.

Religious affiliation had no significant probability of affecting utilizing focused antenatal care and there was no difference in the utilization of services between Christians and Muslims. Therefore earlier stated null hypothesis that there was no association between religion and focused antenatal care utilization was in this case rejected. In an interview with one of the health workers, he stated;

“.....Muslims are much strong in faith and it is easy for them to adopt any practice as long as it saves lives health of the followers. On other hand, Pentecostal and Christianity teachings are at times against health practices.

Therefore Muslims stand more chances of utilizing health services than Christians”.

Marital status increased the probability of utilizing focused antenatal care services whereby women who are married were 4 times more likely to utilize focused antenatal care services compared to those that were never married [AOR = 0.47; (95% CI: 0.275-0.804); p = .006]. This because being married increases marital experience and hence increasing the probability of utilizing focused antenatal care services to avoid the likely negative outcomes. The earlier stated null hypothesis that there was no association between marital status and use of focused antenatal care utilization was rejected. In an interview with one of the respondents, she stated;

“.....it is very obvious that married women use focused antenatal care services than the unmarried. Married have a lot of marital experience and wouldn't want to experience negative outcomes by just missing antenatal care services”.

Employment status decreased the log odds of the probability of utilizing focused antenatal care services by 1.58. Women with formal employment were 1.58 times less likely to utilize focused antenatal care services than the non-employed [AOR = 1.58; (95% CI: 1.014 – 2.46); p = 0.043]. The earlier stated null hypothesis that there was no association between employment status and utilization of focused antenatal care utilization was rejected. In an interview with one of the VHT's, she stated;

“.....employed women are always busy with their jobs and so may not get time to go for focused antenatal care unlike the unemployed women who always have plenty time to do anything. Actually we usually receive large numbers of unemployed women for antenatal care services compared to the employed”.

4.3 Cultural behavioral factors associated with the utilization of focused antenatal care services

This section addresses research objective two which sought to identify the cultural factors effecting the utilization of focused antenatal care services. The relationship between cultural factors highlighted and utilization of focused antenatal care services was determined using logistic regression as presented in table 4.4.

Table 4.3: Results of the logistic regression model of utilization of focused antenatal care services in relation to cultural behavioral factors

Variable	value	COR(95%CI)	p-value	AOR(95%CI)	p-value
Negative perception					
and attitudes	No	1		1	
	Yes	1.012(0.66-1.55)	0.956	0.98(0.63-1.52)	0.928
Deep rooted values					
Deep rooted values	No	1		1	
	Yes	0.995(0.654-1.513)	0.98	1.04(0.67-1.622)	0.85
Traditional beliefs					
Traditional beliefs	No	1		1	
	Yes	1.16(0.761-1.763)	0.492	1.31(0.84-2.06)	0.237
Tribe (Mukiga)					
Tribe (Mukiga)	No	1		1	
	Other tribes	Yes	1.61(1.05-2.46)	0.027	1.71(1.11-2.641)
Myths and					
misconceptions	No	1		1	
	Yes	0.754(0.482-1.181)	0.218	0.73(0.46-1.164)	0.19

Dependent variable: utilization of focused antenatal care services (1-using, 0- not using)

- COR → Crude Odds Ratio
- AOR → Adjusted Odds Ratio
- CI → Confidence Interval

Results of the logistic regression model of utilization of focused antenatal care services in relation to cultural factors were presented in table 4.3. Five cultural behavioral factors were hypothesized and only one variable (tribe) remained statistically significant at multivariate level of analysis.

Being Mukiga decreased the chances of using focused antenatal care services than being from other tribes in the area [AOR = 1.71; (95% CI: 1.11 – 2.641); p = 0.016]. Therefore, the earlier stated null hypothesis that there was no association between tribe and use of focused antenatal care utilization was rejected. In an interview with one of the respondents, she stated;

“.....Bakiga are known for their energy and therefore prefer to waste their energy on productive activities like farming and business than coming for Antenatal Care. Therefore there is no doubt that a Mukiga would take less interest in focused antenatal care services”.

4.4 Health facility based factors associated with utilization of focused antenatal care services

This section of the study addressed research objective three which sought to find out health facility based factors that affect utilization of focused antenatal care services. The relationship between the Health facility based factors identified and utilization of focused antenatal care services was determined using logistic regression. Results of the analysis were presented in table 4.4.

Table 4.4: Results of the logistic regression model of utilization of focused antenatal care services in relation to health facility based factors

Variable	Value	COR(95%CI)	p-value	AOR(95%CI)	p-value
Distance to the health					
center (kms)	No	1		1	
	Yes	1.032(0.912-1.134)	0.498	1.03(0.94-1.14)	0.532
Behavior of the health					
workers	No	1		1	
	Yes	0.59(0.36-0.96)	0.034	0.51(0.302-0.851)	0.01
Demand for pay					
	No	1		1	
	Yes	1.25(0.68-2.3)	0.48	1.34(0.71-2.54)	0.366
Limited drugs and					
supplies	No	1		1	
	Yes	0.71(0.451-1.103)	0.126	0.744(0.47-1.19)	0.214
Long waiting time at					
the facility	No	1		1	
	Yes	2.04(1.16-3.61)	0.014	2.013(1.12-3.63)	0.019
Shortage of staff					
	No	1		1	
	Yes	0.84(0.5-1.408)	0.507	0.85(0.492-1.45)	0.544
Un-flexible clinical					
hours	No	1		1	
	Yes	2.5(1.427-4.35)	0.001	2.72(1.52-4.851)	0.001

Dependent variable: utilization of focused antenatal care services (1-using, 0- not using)

- COR → Crude Odds Ratio
- AOR → Adjusted Odds Ratio
- CI → Confidence Interval

Results of the logistic regression model of utilization of focused antenatal care services in relation to health facility based factors were presented in table 4.7. The log odds explain the changes in the probabilities of the outcome as a result of a unit change in the explanatory variables. Seven variables were hypothesized and only three (3) variable remained statistically significant at multivariate level including behavior of the health workers [AOR = 0.51 95% CI: 0.302 – 0.851; p = 0.01], long waiting time at the facility [AOR = 2.013; 95% CI: 1.12 – 3.62; p = 0.019] and un-flexible clinical hours [AOR = 2.72; 95% CI: 1.52 – 4.851; p = 0.001].

Behavior of the health workers increased probability of using focused antenatal care services by 0.51 and this was statistically significant at p = (0.01). Mothers who had an encounter with friendly health workers in the previous visit(s) were 5 times more likely to show up for the services next time. In this case the earlier stated null hypothesis that there was no association between health worker behavior and use of focused antenatal care utilization was rejected. In an interview with one of the respondents, she stated;

“.....i like nurses and doctors who are friendly because they motivate us women to show up for the services next time. However I have had a bad encounter with a nurse and I almost lost my temper”.

Secondly, long waiting time at the facility presented a significant effect on the utilization of focused antenatal care services. The more the waiting time at the facility, decreased the probability of utilizing focused antenatal care services by 2.013. Therefore women who stayed long at the health facility were 2 times less likely to use focused antenatal care services next time [AOR = 2.013; 95% CI: 1.12 – 3.62; p = 0.019]. Therefore the earlier stated null hypothesis for this case was rejected. In an interview with one of the respondents, she stated;

“.....the reason I don't like going Antenatal Care is partly because of the long time we women stay there waiting for the services. Those long hours waiting irritate me a lot”.

Lastly, un-flexible clinical hours decreased the probability of using focused antenatal care services by 2.72 and was statistically significant at ($p = 0.001$). The more clinical hours were un-flexible, reduced the probability of women using focused antenatal care services [AOR = 2.72; 95% CI: 1.52 – 4.851; $p = 0.001$]. The earlier stated null hypothesis that there was no relationship between clinical hours and use of focused antenatal care utilization was rejected.

Chapter Five

Discussion, Conclusions and Recommendations

5.0 Introduction

The study was making an assessment of the factors affecting utilization of focused antenatal care at Mbaare Health Centre III Isingiro District. This chapter discusses the major findings, conclusions and recommendations in relation to the objectives of the study. This chapter further suggests the areas for further research.

5.2 Discussion of Results

5.2.1 Socio-demographic factors affecting utilization of focused antenatal care services

The study identified different socio-demographic factors affecting utilization of focused antenatal care services at Mbaare Health Centre III Isingiro district. Of the eleven socio-demographic factors hypothesized, five (5) were statistically significant including level of education, religion, marital status, employment status and HIV status.

Education level increased the log of the probability of utilization of focused antenatal care services where by those with secondary education used focused antenatal care services than those with other educational levels. Education level is one of the major boosters of knowledge and capacity to make informed decisions regarding marital affairs. Better-educated women are more willing to engage in innovative behavior than are less educated women. Therefore there was doubt that those partially education would welcome and participate in ANC related services. This study finding concurs with Boerleider et al., (2013) who reported that women who had 8 or more years of education were 2 times more likely to get involved in maternal health care than those with less education. This is because uneducated men tend to hold on traditional beliefs which greatly impair inter spousal communication leading to low involvement in reproductive health.

Marital status increased the log odds of probability of utilizing focused antenatal care services. Those that were never married were 4 times less likely to utilize focused antenatal care services compared to the married status. This because being married increases marital experience and hence increasing the probability of utilizing focused antenatal care services to avoid the likely negative outcomes. This study finding contradicts with findings by Cabieses & Bird, (2014) who

revealed that none married women are more likely to go for FANC services than the married. This was because married women may lack power and the independence to take decisions on their own in issues related to ANC services utilization. However findings were in support with WHO, (2016) which found that married women were 40% more likely than unmarried women to utilize ANC services during their pregnancy in Ethiopia.

Employment status decreased the chances of utilizing focused antenatal care services. Those with formal employment were 5 times less likely to utilize focused antenatal care services than the non-employed. This is because women who are employed are always busy with their work schedules and hence may not get time to access FANC services. This finding contradicts findings by Ononokpono & Odimegwu, (2014) who reported that due to social economic difficulties, men did not have time to attend to maternal health services for they struggle to look for money to provide for their families.

Religious affiliation presented association with the utilization of focused antenatal care services. Muslims were 2 times more likely to use focused antenatal care services than Christians. However there was no difference in the utilization of services between Catholics and Protestants. This could be because Muslims religion is represented by a smaller group of but strong in faith and therefore could welcome any health practice saves the health of the Muslim believers. Another factor could be because Christianity is against some of FANC services like use of artificial contraception which perhaps explains why Muslims have welcomed focused antenatal care services than any other religion in the area. This finding is in agreement with a study by Farah & Karim, (2016) which found a positive association between religion and ANC utilization. Christians were found to have low levels of ITN utilization compared to the Muslims.

5.2.2 Cultural behavioral factors effecting the utilization of focused antenatal care services

The study came out with the cultural behavioral factors affecting utilization of focused antenatal care services at Mbaare Health Centre III Isingiro district. Among all five cultural factors hypothesized and only tribe showed a positive significant association with utilization focused antenatal care services. Being Mukiga decreased the chances of using focused antenatal care services compared to being from other tribes in the area. This is because Bakiga are known for their energy and sharp decision making capacity and hence gives them an opportunity to focus more on farming and businesses for earn a living than wasting time on Antenatal health Care.

Therefore there is no doubt a Mukiga would make slow decisions regarding ANC than other tribe. This finding concurs with Pandey & Karki, (2014) who revealed that most communities around the world still rely on their culture to dictate their health choices, especially on pregnancy and child birth. Tribe, cultural norms and restrictions prevent women from seeking health care outside the home for themselves and their children. This barrier is often raised still further when men provide services, and has been offered as one reason why Asian women living in Western countries often make little use of health services.

5.2.3 Health facility based factors that affect utilization of focused antenatal care services

The study came out with different significant health facility based factors affecting utilization of focused antenatal care services at Mbaare Health Centre III Isingiro district. Seven variables were hypothesized and three remained statistically significant at multivariate level. For example, Poor behavior of the health workers presented a significant effect on use to focused antenatal care services in the area. Mothers who had an encounter with friendly health workers in the previous visit(s) were 2 times more likely to show up for the services next time compared to those who were abused. A big fraction of participants quoted harassment by health workers as a big challenge to using FANC services. Respondents revealed that women who are ignored or subjected to unfriendly attitude and abusive language by health workers do not turn up for the next FANC visit. This poor attitude of health workers and fear of being harassed are some of the reasons some other women fear showing up for ANC services. The study finding is consistent with a study conducted by MOH, (2010) reported that harsh and critical language directed at Ugandan women from skilled health professionals was a barrier to male participation. Harsh treatment of men by health providers discouraged them from returning or participating in prevention of mother-to-child transmission (PMTCT) of HIV activities.

Secondly, long waiting time at the facility presented a significant effect on the utilization of focused antenatal care services. An increment in waiting time at the facility, decreased the probability of utilizing focused antenatal care services by 2.013. Mother who stayed long at the health facility were 2 times less likely to utilize focused antenatal care services next time. Due to a big gap in patient to health ration, women had to wait for a long time before receiving ANC services because of burdensome administrative procedures which result in poor patient/client through-put in health facilities. Women who are in the paid workforce (employed) are often not

in a position to spend virtually the entire day participating in FANC services. Hence face challenges in accessing ANC. The finding of this study is in agreement with the findings from several studies that have reported long waiting time at the health facility as being one of the reasons for low participation in maternal health services (Farah and Karim, 2016).

Un-flexible clinical hours decreased the log of the probability of using focused antenatal care services. The more clinical hours were un-flexible, reduced the probability of clients using focused antenatal care services. This finding is comparable to findings by Pandey & Karki, (2014) who urged that if waiting time at the health facility was reduced and set clearly, it will result in increased use of FANC services. This is because many women have long working hours and long waiting time makes it difficult to find off time to attend maternal health services.

5.3 Conclusions

In conclusion, the results of this study confirmed that the utilization rate of FANC services at Mbaare Health Centre III Isingiro District is relatively low due to different factors. The main socio-demographic factors influencing the utilization of FANC services included level of education, religion, marital status, employment and HIV status. In addition, tribe was the main cultural obstacles to FANC service utilization at the Health Centre. The study further confirmed that poor behavior of the health workers, long waiting time at the facility and un-flexible clinical hours are the main health facility based factors that affecting the utilization of focused antenatal care services.

5.4 Recommendations

Based on these findings, it is recommended that health education programs should be undertaken to improve women's awareness of FANC, MOH should provide FANC services such as mobile health care and home care visits for remote villages or those difficult to reach. MOH should give priority to TBAs/VHTs training in order to extend the scope of FANC services and enhance the ability of pregnant women to reach them. At the same time, FANC services should be provided free of charge, especially for pregnant women who are poor.

Behavior change strategy through behavior change campaigns at the community level should be used to provide a platform for both the health care workers to learn about the perceptions of

women in order to get to know them better and also to use that opportunity to educate women the benefits of FANC services.

The Ministry of Health should increase regular community sensitization campaigns to ensure greater awareness of the importance of ANC services among the vulnerable groups. A study to assess the impact of utilization of FANC services with regard to health benefits should be undertaken.

To improve women access and utilization of FANC services in this rural setting, there is need to establish or strengthen national policies and locally adapted guidelines to protect the rights of all women, regardless of their socioeconomic status or place of residence. There is a need for evidence-based guidelines at the national level detailing the essential minimum components of ANC, in line with the country epidemiological profile and country priorities and based on WHO guidelines and recommendations.

The study also recommends the need to strengthen the quality of ANC services by promoting evidence based guidelines and standards for focused ANC. This is because quality improvement approaches and tools help identify and overcome local constraints to providing client-orientated, effective ANC and ensure that women return after their first ANC visit.

Continuous community based health education and facility-based education, peer group discussions in the community and group education among pregnant women and mothers and at the same time raise the issue and discuss ANC and its advantages will help to create a sense of belongingness, build their consciousness to seeking health services.

Government should reduce on hospital/clinic charges, but also provide pregnant women with social and financial support, as well as transportation to health facilities. The need for women themselves to generate and save income for transport and delivery costs was also highlighted. Women should have their own income generating activities to enable them have control over finances and to save money to help them in case of an emergency.

The study recommends an improvement in health care systems at all levels and improving maternal survival and well-being, through improving physical infrastructure, essential drugs supplies, equipment to improve the extremely difficult working conditions for staff and enable providers to offer quality care.

5.5 Areas for further research

The researcher recommends the following areas for further research.

- It is suggested that a further research be conducted on; knowledge, attitude and perception and their influence on the use of FANC services.

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1. None () 2. One () 3. Two () 4. Three ()

5. All ()

16. What type of health facility found at your area?

1. Public () 2. Private ()

17. How near is the facility from your home.....

18. Has it got focused antenatal care services?

1. Yes () 2. No ()

19. If yes, specify the services?

1. Health education ()

2. Antenatal care ()

3. Child delivery ()

4. Postnatal services ()

5. Others

20. How many times did you visit the health facility for each of the service?

Service	Number of times				
	Once	Twice	Thrice	Four times	Over four times
Health education					
Antenatal care					
Child delivery					
Postnatal services					
Others					

21. How long did you stay at the health facility?

1. Less than 1 hour () 2. 1 – 2 hours () 3. 3 – 4 hours ()

4. Over 5 hours ()

22. Do you pay for any maternity services?

(1. Yes () 2. No ()

23. If yes, what specific services is the payment for?

1. Gloves () 2. Consultation fee () 3. Medicine ()
 4. Staff allowance () 5. Others

24. Could there be any factors affecting utilization of focused antenatal care services at Mbaare Health Centre III?

1. Yes () 2. No ()

25. If yes, give your opinion on the following categories of factors?

1. Social – demographic factors

	Yes	No
Age		
Level of education		
Social status		
Marital status		
Low levels of income		
Limited transportation options		
Lack of spouse involvement		
Others		

2. Cultural behavioral factors

	Yes	No
Negative perception and attitudes		
Religion		
Deep rooted cultural values		
Traditional beliefs		
Ethnicity		
Others		

3. Facility based factors

	Yes	No
Long distance to the health center		
Behavior of the health workers		
Demand for service pay		
Limited drugs and supplies		
Long waiting time (in hours)		
Shortage of staff		
Un-flexible clinic schedules		
Others		

26. Are there any measures in place to improve the utilization of focused antenatal care services?

- 1. Yes ()
- 2. No ()

27. If yes, mention these measures?

.....
.....
.....

28. What measures has government put in place to address the factors?

.....
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29. Any last remarks?

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Thank you for your participation

Appendix II: Interview Guide for key informants

General information

1. Name
2. Position.....
3. What is your age?
4. What is your level of education?
5. What type of health facility do you for?
6. How many deliveries do you handle in a month?
7. How accessible is the facility to the community?
8. Does the facility offer focused antenatal care services? If yes, what specific services
9. How many times on average do women visit the health facility for focused antenatal care services?
10. How long do they stay health facility?
11. Do they pay for focused antenatal care services? If yes, what specific services do they pay for?
12. What are the social – demographic factors affecting utilization of focused antenatal care services?
13. What are the cultural factors affecting utilization of focused antenatal care services?
14. What are the facility factors affecting utilization of focused antenatal care services?
15. What are the available measures in place to improve the utilization of focused antenatal care services in the area?

Thank you for your participation