FACTORS INFLUENCING THE UTILISATION OF LATE ANTENATAL CARE SERVICES IN RURAL AREAS: A CASE STUDY OF KISORO DISTRICT.

BY

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A RESEARCH DISSERTATION SUBMITTED IN PARTIAL FULFILMENT FOR THE COMPLETION OF THE MASTERS OF SOCIAL SECTOR PLANNING AND MANAGEMENT, DEPARTMENT OF SOCIAL WORK AND SOCIAL ADMINISTRATION OF MAKERERE UNIVERSITY.

JUNE 2010
DECLARATION

I Centenary Gloria, declare that this dissertation is the result of my own effort, my original work and has never been submitted for a degree or any award in any University.

CENTENARY GLORIA

Signature ..............................................................

Date ...................................................................................

SUPERVISOR DAVID KAAWA MAFIGIRI, BSWSA, MPH, MA, PhD.

Signature ..............................................................

DATE ...................................................................................
DEDICATION

I dedicate this piece of work to my parents Mr. and Mrs. Bakanya Chris; they have been source of inspiration, engine of courage and secret of my achievements since my childhood. I also dedicate it to my sisters and brothers for all the support.
ACKNOWLEDGEMENT

Compiling this work has not been an easy task; it has been a result of combined efforts and assistance from a number of individuals and institutions. I express my sincere gratitude to all for the support and encouragement.

Special thanks to my Supervisor Dr. David Kaawa Mafirigi whose intellectual and academic guidance enabled me to organize sense out of this study. Your experience and expertise has made this dissertation possible.

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ABSTRACT

Kisoro is one of the remote districts of Uganda with high population growth rate. The district is located in the south western part of the country. The main objectives of the study were to determine ANC alternatives being undertaken in Kisoro, to determine factors influencing late attendance for ANC services and to establish the knowledge of mothers about the benefits of seeking ANC early.

Data was collected using a combination of quantitative and qualitative methodologies. The tools that were used for data collection were questionnaire, in-depth interviews and FGDs. Data was collected from ANC clients, ANC providers and women who were in their first to fourth trimester.

The study established pregnant women and mothers were using ANC alternatives such as TBAs, traditional healers and herbs. As regards ANC late attendance, the study observed that demographic, social -cultural and behavioral barriers like female literacy; poverty, age of women, cultural beliefs, quality of care, availability of ANC alternatives and myths and misconceptions influenced the timing and utilization of ANC services. Characteristics of mothers in the area of study affect the decision to utilize antenatal care.

The conclusions of the study was that; the intervention measures in place to improve women access and utilization of ANC services mainly address the supply side and ignore the demand side which makes the whole process fail to improve the situation on ground.

The study recommended that, to improve the level of ANC utilization in Kisoro, there is need to train health workers on service delivery, community sensitization on the values of ANC, reduction on hospital/clinic charges, equipping and stocking of enough drugs.
ACRONYMS

ANC: Antenatal Care

DRC: Democratic Republic of Congo

FDG: Focused Group Discussion

HBM: Health Belief Model

HSSP: Health Sector Strategic Plan

IBP: Individual Birth Plan

IMR: Infant Mortality Rate

IPTp: Intermittent Preventive Treatment for Malaria during pregnancy

KII: Key Informants

MDGs: Millennium Development Goals.

MSM: Safe Motherhood programme

NMHP: National Minimum Health Package

NRM: National Resistance Movement

PEAP: Poverty Eradication Action Plan

PMTCT: Prevention of Mother to Child Transmission

STDS: Sexually Transmitted Diseases

STIs: Sexually Transmitted Infections

TBAs: Traditional Birth Attendants

TFR: Total Fertility Rate

UDHS: Uganda Demographic Healthy Survey
CHAPTER ONE
INTRODUCTION

1.0 Background to the Study

Antenatal care refers to the interventions to curb maternal and infant mortality. It is a planned programme of medical management of pregnant women directed towards; making pregnancy and labor a safe and satisfying experience (MOH 2006:41). Antenatal care is concerned mainly with prevention, early diagnosis and treatment of general medical and pregnancy associated disorders.

Antenatal care evolved over a period of about a century, with the trend changing gradually from in-patient to out-patient form of care that takes place today. The provision of special care for women during pregnancy through the public health services was a relatively late development in modern obstetrics (WHO & UNICEF, 2001).

This form of care for pregnant women has become an important pillar in the safe motherhood programme, as the aim is to improve the outcome of pregnancy for both the mother and the fetus. The Health Sector Strategic Plan phase II (HSSP II) also recognizes the importance of strengthening the health system at each level. This includes increasing demand at the community level implementing outreach antenatal and postnatal packages and providing sophisticated clinical care at higher level health facilities.

Antenatal care provides an important opportunity for discussion between a pregnant woman and a health care provider about health behavior during pregnancy about recognizing complications that may arise, and about delivery plan that will meet the needs of the individual woman. Antenatal care is concerned mainly with prevention, early diagnosis and treatment of general medical and pregnancy associated disorders. Antenatal care in pregnant women has been shown by various authors to improve maternal health, thereby reducing maternal and infant morbidity and mortality.

Antenatal consultations is said to provide opportunities for health education, health promotion and social support at both the individual and community level (Sugathan K.S et al 2007). 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 illness that can arise during pregnancy, such as sexually transmitted diseases (STDS), malaria and helminthes infections. Promoting healthy behaviors and increasing knowledge about pregnancy and pregnancy related complications among women, families and communities are essential to the health and well being of pregnant women (Nuwaha F, et al 2000).

The immediate cause of pregnancy-related complications, ill-health and death are inadequate care of mother during pregnancy and delivery. More detailed factors include women’s subordinate status, poor health and inadequate nutrition. The health of pregnant women through effective antenatal care increases a mother’s chances of giving birth to a healthy baby. While any woman can develop complications during pregnancy and delivery, many such complications can be prevented or treated before becoming life-threatening emergencies and all can be managed by appropriately trained and equipped health care providers that are sometimes not available in rural areas like Kisoro.

Although every mother looks forward to holding her baby in her arms after nine long months, this is not usually the case for women in rural areas. Rural women do not seriously consider antenatal care yet it is a prerequisite for safe motherhood. Rural women book late for ANC.

In order to understand why many pregnant women in rural areas book late for ANC requires having a clear understanding of alternatives to ANC being undertaken in early phases of pregnancy. This will help health implementers make informed decisions about reducing MMR, emergency obstetric care, adequate postpartum care for mothers and babies, family planning and STI/HIV/AIDS services.

1.1 Problem Statement

Household and community practices during pregnancy involve demand for antenatal care services and planning for a health birth, including emergency preparedness, prevention of malaria, HIV testing and nutrition.
In most developing countries, access to and utilization of ANC services in rural areas is more limited than in urban areas. In Uganda, the government has put in place health centre IVs equipped with a medical doctor, trained nurse and a midwife in every county. These are to serve as the district referral hospitals. This issue is of particular importance to Uganda because 88 percent of its population lives in rural areas. Maternal health is a priority service area that the Uganda government through ministry of health has invested its resources purposely to reduce the barriers faced by women in seeking ANC services.

In addition to the above, the ministry of health has adopted a goal oriented, focused ANC model for the implementation of ANC services. Focussed ANC involves attending at least four visits starting early in the first trimester and receiving all necessary interventions for ANC package. According to the UDHS 2006, only 47 percent of mothers attended ANC four times; only 17 percent made their first visit during the first three months while 41 percent of pregnant women had their first visit during the fourth or fifth months of pregnancy and 37 percent attended ANC late in their sixth month or later.

Stemming from the above maternal mortality has remained high in Uganda despite the high economic growth the country has achieved over the past 20 years. The Uganda Demographic Health Survey of 2006 found that the maternal mortality rate declined by just 14% in the past 10 years, from 506/100,000 to 435/100,000, compared to a 28% decline in the previous 7 years (UBOS, 2007). The total fertility rate (TFR) in rural (7.1 children per woman) higher than the urban TFR (4.4 children per woman) and the contraceptive prevalence rate (CPR) is 23%. Teenage pregnancy is at 25%, out of every six children born one dies. The report reveals that the proportion of women delivering in health units remains low at 41%, although the percentage that attends antenatal care is about twice as high.

Irrespective of efforts by the Uganda government, late ANC attendance has continued to prevail exposing mothers and infants to the highest risk of deaths. In a survey carried out in Africa, Uganda received a rating of 49 for health service access, with an average of 46 for rural and 68 for urban. Rural access scores ranged from 38 to 72—suggesting an urgent need to utilize early alternatives to promote early and frequent appropriate ANC alternatives in Health Units/Hospitals.
In Kisoro; Antenatal care is still more a question of ritual than of effective interventions. Studies have revealed that, many women in rural Kisoro do not attend antenatal care as recommended. Health care delivery is faced with a lot of problems; the study was carried out to evaluate the utilization of available antenatal care services paying close attention to alternatives to ANC being undertaken in early phases of pregnancy in Kisoro district.

Studies have revealed that, a lot of women attending antenatal care in rural areas like Kisoro book late and many times do not deliver in hospital; the study was carried out to evaluate the utilization of available antenatal services paying close attention to factors influencing effective utilization of antenatal care delivery. The purpose of the study therefore, was to establish alternatives to ANC being undertaken during early phases of pregnancy in rural areas specifically in Kisoro District.

1.2. Objectives of the Study
General objective: To examine ANC utilization in early phases of pregnancy in Kisoro District.

Specific objectives

1. To determine alternatives to ANC being undertaken during early pregnancy
2. To determine factors influencing late attendance for antenatal care services.
3. To establish the knowledge of mothers about the benefits of seeking ANC early.

1.3. Significance of the study

Today more than three decades after colonialism Uganda is still experiencing health related problems including maternal and child deaths, even though a number of strategies are said to have been enacted by the current NRM government. HIV/AIDS scourge is said to be prevalent among pregnant women worsened by levels of poverty. The study therefore can help planners and policy makers in identifying the necessary areas of intervention in a bid to help rural women access antenatal care services.
The study was carried out at a time Ugandan government is struggling to ensure a healthy rural population and ensuring the safety of pregnant women and children. Service delivery for mothers, new borns and children is best provided within a continuum of care. The continuum of care is a framework that underpins health service delivery, ensuring linkages throughout the life cycle, as well as connections between households to health facilities by improving home based practices mobilizing families to seek care, and increasing access to quality care at health facilities. The study was such important it helped in establishing why there is late ANC attendance in rural areas.

The study illustrates the social, cultural, economic, and medical complexities of mothers in Kisoro. The findings are based on the experiences and views of pregnant women and mothers, community members, health workers, and traditional birth attendants. Their perspectives provide vital information for policymakers, health workers, donors and communities on how to prevent maternal mortality and morbidity generally, and how to support girls and women affected by obstetric complications. The study too exposed challenges that rural women experience in the search for proper antenatal care services.
1.4. Figure 1: Health Belief Model

Factors influencing utilization of antenatal services

<table>
<thead>
<tr>
<th>Individual Perceptions</th>
<th>Modifying Factors</th>
<th>Likelihood of Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived susceptibility/perceived severity.</td>
<td>Age, sex, ethnicity, Personality, socio-economic</td>
<td>Perceived benefits minus perceived barriers.</td>
</tr>
<tr>
<td>Perceived threat</td>
<td></td>
<td>Likelihood of behavior</td>
</tr>
<tr>
<td></td>
<td>Cues to action</td>
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The Health Belief Model is a conceptual framework used to understand health behavior and possible reasons for non-compliance with recommended health action. According to the above conceptual framework, there are several factors that influence utilization of antenatal services of which all are interrelated.

The framework addresses major components for compliance with recommended health action; perceived barriers of recommended health action, perceived benefits, perceived susceptibility, perceived severity and cues to action.

According to the HBM women are most likely to make decision to seek ANC services when they perceive complication with the pregnancy and are less to seek ANC if they believe that the
complication is minor. This is closely linked to the inability to appreciate danger signs of pregnancy, delivery and postpartum due to inadequate knowledge.

The model further illustrates the inability of pregnant women with labor complications to access available health facilities when need arises. This is due to lack of inadequate community support, timely means of transport or resources to pay for it, long distances poor roads and communication while poverty at household level also limits decision making to seek health care.

The model indicates that initial access / personal factors, awareness and acceptance of pregnancy can affect utilization of ANC thus the ability of rural women to first identify and then accept their pregnancy. Young women are likely to delay ANC until late in second trimester because they are not aware of the typically indicators of pregnancy.

The recognition of unplanned pregnancy can be devastating, fears relating to parental and partner disapproval and concerns about being stigmatized by peer group members can lead to delaying accessing ANC.

Perception that ANC offers no clear benefits. Even in instances where pregnancy is recognized accepted and wanted there may still be reluctance to seek ANC services if there is no belief that it might be beneficial.

In addition, some cultural practices restrict women from seeking health care, reliance on traditional and cultural beliefs among some women who seek advice and support from community elders than health professionals.

Initial and sustaining access may lead to delayed and failure to seek ANC services. Social factors personal costs incurred by travelling to and from the health facility may put a strain on the limited resources of women from rural areas. This may diminish the potential of women to access ANC early and regularly.

Need to value women’s time. Some women find themselves frustrated by the time they spend at the health facilities waiting for consultation. In many cases this has detrimental effects on future visits.
Sustaining access, provision of care in care giving, routine nature of ANC appointments may leave many women feeling unrespected. When health professionals become more focused on the task other than interacting with women in their care, the inclination to return for future appointments may diminish.

Need for staff credibility and excellent communication/interpersonal skills. Some rural women may find it difficult to accept ANC advice of midwives who have never experienced a pregnancy. Rudeness, harshness, insensitivity, impoliteness expressed by some staff members may discourage ANC attendance during current pregnancy and more importantly curtail any further involvement in ANC services during subsequent pregnancies.

The HBM has the likelihood of seeking care, psychosocial and social demographic modifiers, and perceived benefits, minus perceived barriers, perceived susceptibility, perceived severity, perceived need and cues to action.
CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction
Antenatal care is observed to be a necessity for every woman and the newborn baby. The purpose of this section is to review relevant literature related to the research topic. This information was obtained from several publications including textbooks, Reports, Journals, and the Internet sources.

2.1 Antenatal care
Pregnancy is a crucial time to promote health behaviors, prevent still births and avoid some of the major causes of illness among new borns. Essential interventions during the pregnancy period are provided through the ANC package, including, TT immunization, identification and management of STIs, including HIV and syphilis, malaria prevention through IPTp,ITN and treatment, identification and management of pregnancy complications such as anemia, nutrition, counseling, preparedness and counseling on maternal and new born danger signs.

The usual recommendation nowadays is for booking (first antenatal visit) to take place in early pregnancy, prior to 14 weeks. The World Health Organization (WHO) recommends that pregnant women in developing countries should seek ANC within the first 4 months of pregnancy. A WHO Technical working Group recommended a minimum of four antenatal visits for a woman with a normal pregnancy (lancet, 2001). Minimum of 4 visits should be made as follows,

- First visit- early (0-16 weeks) in first trimester after missed two periods.
- Second visit- >28 weeks;
- Third visit- between 28>36 weeks;
- Fourth visit- after 36 weeks.

However, some women require more than four visits especially those who develop complications (lancet, 2001). Although progress has been made globally in terms of increasing access and use
of one antenatal visit, the proportion of women who are obtaining the recommended minimum of four visits is too low.

Countries implementing ANC will need to cost and assess the effect of the ANC service package in terms of its content, coverage, affordability, and sustainability of services over time. The challenge to most sub-Saharan African countries is to formulate application of the WHO ANC model within country needs and resources and identify the best approaches to deliver effective and sustainable ANC. This requires countries to respond to certain key questions: How to re-organize services to ensure delivery of a comprehensive, integrated package and assessing the contribution of the package to improve quality of care and components required in strengthening over time.

The person best able to offer ANC services is the person with midwifery skills who is part of and lives in the community she or he serves. However, in developing countries like Uganda which have a shortage of well-trained health care personnel, ANC care is often provided by less qualified staff such as auxiliary nurse/midwives, village midwives, health visitors and Traditional birth attendants (TBAs) whose background may be conditioned by strong cultural and traditional norms which may impede the effectiveness of their services. These persons have at least frequently provided the backbone of maternity services at the periphery. For the fulfillment of complete set of tasks required to manage normal pregnancies and births, their skills need to be improved through education, training and supervision by well-trained midwives.

In industrialized countries and in many urban areas in the developing world, skilled care at delivery is usually provided in a health facility. In most developing countries and particularly in rural areas, many women prefer to deliver in the familiar home environment or in the home of the parents, parents-in-law or in the setting provided by the TBA (WHO: 2007). Home delivery may be appropriate for normal deliveries, provided the person attending the delivery is suitably trained and equipped and referral to a higher level of care is an option.

The available literature shows that there has been less attention to the role and content of antenatal care in Uganda. Indicators for monitoring progress in ANC can be measured at country level; the presence of skilled personnel during child birth, antenatal and postpartum care coverage, and deliveries at health facilities. The world health organization estimates that there
are 5.1 million deaths in the new born period; that is before the baby is one month old. Almost 3.4 million of these occur during the first week of life, while 4.3 million fetal deaths are estimated to take place before or during delivery. These 7.6 million prenatal deaths are largely consequences of poorly managed pregnancies and deliveries or the result of inadequate care of neonate during the first critical hours of life.

Every year some 200 million women become pregnant. It is estimated that more than 50 million women each year develop pregnancy-related complications, which require medical attention (Murray C.J.L, 1997). For close to 600000 women pregnancy-related complications are fatal (WHO, 1996). Nearly all maternal deaths occur in developing countries and among the most vulnerable and disadvantaged population groups. The current global estimates show that in the developing world approximately 65% of pregnant women receive at least one antenatal care visit. 40% of deliveries take place in health facilities and slightly more than half of all deliveries are assisted by skilled personnel. This contrasts sharply with developed countries where practically every woman receives regular care during pregnancy, delivery and postpartum period. By the end of 20th century, it was estimated that every year an estimated 45 million pregnant women were still receiving no antenatal care, more than 75 million births take place at home and 60 million women giving birth with only a traditional birth attendant or a family member present; in many cases the mother is alone.

With the above global picture there are however, significant regional and sub-regional differences. In Africa, there has been the lowest rate: 63% delivers in health facilities and just over 40% with skilled attendant at delivery (Villar J.B, 1997). The antenatal care rate in East Africa was reported to be fewer than 40% of deliveries with a skilled care provider present and/or in a health facility.

In less developed countries 35% of pregnant women receive no antenatal care at all during pregnancy (Uganda results from 2002 survey), 70% and 90% of women receiving antenatal care return for a second visit. The proportion of women continuing care for 4 visits or more is, however, markedly lower. Data on the timing of the first antenatal visit reveal care usually starts sometime in the first 5 or 6 months. The greatest disparities between the global assessment and Uganda are found in rural and urban access to services (56 versus 49) and newborn care (72 versus 68). The areas in which Uganda received the lowest ratings were rural and urban access to
services (49) and appointments for postpartum checkups (48). Uganda’s highest ratings are for encouragement for breastfeeding (80) and maternal health policies (70).

According to Uganda’s ministry of health sector strategic plan phase 1, the near universal first attendance at antenatal clinic has continued, but this was not matched by improvement in cases of emergency Obstetric Care (HSSP vol 1, 2009/2010). These achievements were made in spite of severe constraints of under-funding, continued inadequacies in the production, recruitment and deployment of trained personnel, frequent outs of essential medicines, and lack of equipment for operationalising the new health centers. The mismatch between the construction of HC IIs country wide and the speed at which resources are made available for their operationalization severely limits the planned inequity reduction targets.

Over the past decade considerable effort has been made to restore the functional capacity of the health sector, reactive disease control programmes and re-orient services to Primary Health Care. However, patterns in Uganda show that, poor access and poor quality of health care still persist with only 49% of population living within five kilometers or walking distance of a health care facility, and only 42.7% of parishes have some form of health facility (Annual Health Sector Performance report, 2006/2007). The challenges to implementation of minimum health services and the Minimum Health Care Package programme include inequality due to inefficient allocation of available resources within the sector, with more than 63% of the recurrent budget and 54% of the trained staff concentrated in hospitals. Poor distributions of human resources, low staff morale resulting from poor remuneration and over dependence on untrained personnel in primary health facilities, where only 34% of established positions are filled by qualified staff pose major structural problems to the effective implementation of health programmes.

Generally, many factors contribute to less utilization and access to antenatal care services in Uganda (Road map for accelerating Maternal mortality in Uganda, 2007-2015): high rates of teenage pregnancy, low perception of pregnancy related risks, low level of female involvement in reproductive health and rights, harmful and negative culture on reproduction, gender relations, and health seeking behavior as well as poor infrastructure.
2.2 Barriers to utilization of Antenatal care services

A good deal of literature, both in Uganda and internationally has identified a number of barriers faced by women in seeking professional health care, particularly for maternal services (Park Hurst J, country report, 2005). While these barriers have often been identified, both in Uganda and internationally, there is also evidence that they interact in complex ways. The perception of a ‘normal’ versus a complicated delivery, for instance, appears to influence where women will look to deliver, regardless of other barriers at times. Park Hurst and Ssengooba’s study has also identified some of the complex social constructions of pregnancy and childbirth. While the study shows that many women do not seek care because childbirth is seen as woman’s struggle to endure, there is also recognition within communities that pregnancy contains risks beyond a woman’s control, which may indicate some scope to seek care.

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 (Bantebya, 2003). 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 (EQUINET, 2007).

ANC is an opportunity to promote the use of skilled attendance at delivery and healthy behaviors such as 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 (Armar-K, 2006). Thus, the introduction of ANC in sub-Saharan Africa and Uganda in particular makes demands on health systems that are already stressed.

The individual’s use of the health facility is also influenced by the characteristics of the community in which the person lives, indicating a need to look beyond the individual factors
when examining health seeking behaviors (Stephenson R, 2002) First, consumers lack of the human capital—education to promote their own and their families’ health (Tim Ensor, 2004). Education may provide consumers with a basis for evaluating whether they or a dependent require treatment inside or outside the home. Thus, rural areas like Kisoro with high rates of illiteracy have been characterized by less antenatal care visits by pregnant women and mothers.

Education provides the consumer with the basis for evaluating whether they require treatment. While it is sometimes suggested that individuals are unable to assimilate information on treatment options, this assumption is challenged by Leonard’s recent work in Tanzania (Leonard K. L, 2002). These studies suggest that, far from being passive consumers, patients actively seek out not only the best-known provider but the best facility for a particular illness. Thus, Perceptions of quality do, in fact, accord quite well with technical evaluations.

Studies in many countries have also shown that barriers such as distance may be surmountable, as evidenced in cases where individuals bypass local services to reach ones of higher quality or when Distance is given as a reason for non-use, despite health facilities being available. There is much evidence to suggest that distance to facilities imposes a considerable cost on individuals and that this may reduce demand. In studies reviewed for this study, transport as a proportion of total patient costs, a study carried out in Bangladesh suggested that, transport to health facilities was the second most expensive item for patients after medicines (CIET Canada, 2000).

Location and distance costs are often seen to negatively impact ANC service utilization. A study in Vietnam found that distance is a principle determinant of how long patients delay before seeking care (Ensr T, 1996) Another, in Zimbabwe, suggested that up to 50% of maternal deaths from hemorrhage could be attributed to the absence of emergency transport. At the same time, distance is also cited as a reason why women choose to deliver at home rather than at a health facility in many rural areas in central and western Uganda (Nuwaha F, 2000).

In relation to the above, location of health centres and facilities is another important dimension of the cost of care. A study in Burkina Faso, for example, suggested that transport costs accounted for 28% of the total costs of using hospital services (Sauerborn R, 1994). A recent
delivery survey in Bangladesh found travel costs were the second most expensive item (after medicines) in outpatient treatment. According to one review of postnatal deaths in North-East Brazil, in an estimated 25% of cases, mothers reported that delays in transportation may have contributed to the death (Souza A.C.T, 2000). Distance as a barrier is not confined to low- and middle-income countries. A study of patients in Great Britain presenting for colorectal screening found that more than 27% of the total cost of the procedure was accounted for in travel cost. The same study suggested that this cost fell disproportionately on poorer households.

According to the study carried out by Ministry of Health in Uganda, about 49% of the population in rural areas resides within 5Km from a health facility (UMOH, 1996). Many families rely on self-treatment or seek services of traditional healers and traditional midwives. Whereas nearly 90% of pregnant women make an antenatal care visit, over 64% do not benefit from a trained assistant during childbirth (UDHS 1995). As a result, the Health Sector Strategic Plan has encouraged the training of the community level providers like the traditional birth attendants and contraceptive distribution agents to improve on the services provided at the community level.

The impact of location is not confined to low-income countries. One US study found that patients living more than 20 miles away from a hospital are much less likely to visit ambulatory services for after-care following myocardial infarction. In Japan, one study found that access to follow-up treatment after treatment for cerebrovascular disease was considerably influenced by access to suitable transportation (Tamiya K, 1996). Distance may also have a differential impact across income groups. A study in Australia found that the impact of costs fell most heavily on the poor. Qualitative evidence in Vietnam suggests that poorer households usually have access to inferior transport in the event of illness. Such restrictions may also interact with other barriers. One study in India found that distance was a much greater barrier to women than to men with similar incomes. This may be because it is culturally unacceptable for women to leave their homes for long periods, or it could reflect less access to household resources to pay for transport.

Two types of barrier are critical: physical and financial. In poor countries, the density of health infrastructures equipped and staffed with competent, available and committed personnel is low (Koblinsky M, et al, 2006). For women this often means they are ‘too far to walk’ and they
prefer to deliver at home rather than embarking on a long and difficult journey to under-equipped health centres or poorly staffed district hospitals. When women or the family decision-makers decide to attend an appropriate health service, the next obstacle is money. In many settings, patients have to pay out-of-pocket for everything, including a tip for the personnel, and this may result in delay, which can sometimes be fatal, and in catastrophic expenditure for the household (Borghi J, 2008).

The UDHS 2007 findings indicate disparities in utilization of health services, with rich, urban and more educated people more likely to use health services than the poor less educated rural residents. This trend was attributed to better economic and physical access to services among the former but also to attitudes influenced by religion, culture and limited understanding of disease causation among the latter. The reason why the poor do not make more use of public services is driven by both supply and demand factors (Ensor T, 2004).

Cultural and socio-economic factors such as the low status of the female in society, limited decision making powers, social immaturity and financial limitations might contribute to poor utilization of ANC services, resulting in an increased incidence of pregnancy and obstetric complications. Bouwer et al added that religious beliefs in certain societies may pose barriers to the utilization of ANC services. Bouwer et al recommended that health workers should understand variations in family composition, social class, health beliefs and behaviors and be able to bridge the gaps between the beliefs and behaviors. In a number of South Asian societies the mother-in-law dominates decisions on childbirth and care related to pregnancy, particularly in the early stages of marriage. In these circumstances, whether a woman is delivered at home by a family member, by a traditional birth attendant (TBA), or at a health facility, much depends on the beliefs of the mother-in-law. At the community level the TBA is also vital in influencing demand. One study in Rajasthan found that more than 90 percent of women that did not obtain referral care were advised against it by the TBAs (Hitesh J, 1996).

Many cultural, religious, or social factors may impede the demand for health care. In communities where women are not expected to mix freely, particularly with men, utilization of health services from static facilities may be impeded. Cultural conventions about proper
treatment of health issues may also inhibit access. Ndyomugyenyi reports that, the women of the Alur tribe of Uganda may be thought weak if they receive help during delivery. A similar finding is reported for the Bariba tribe in Benin. There is also evidence that women often accept illness with genito-urinary symptoms as part of life and may be embarrassed to seek medical care. A A study, in Bolivia, found that women were put off by well-ventilated delivery rooms when their own understanding required warm conditions for the delivery to progress.

Cultural norms, restrictions, can 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. 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.

Shaffer in his study suggest that cultural issues relating to language and staff insensitivity are important and deter some women from accessing antenatal care early and regularly (Shaffer R.C, 2002). Conventional systems of antenatal care have changed little over the years and tend to be task focused and culturally homogenous. Easily overlooked details, like the gender of the consulting doctor, can make a big difference to women’s perceptions of antenatal services. In a study of Islamic women living in Australia (Tsianakas V, 2002), 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 (Tandon S.D, 2005). 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.
In general most specifications do not include interaction variables between demand-side barriers and income. As a consequence, most literature indicates the specific contribution of economic status on demand for services rather than indicating whether barrier-elasticity differ by economic status. The evidence certainly provides some support for the intuitive hypothesis that barriers are more important for the poor. There is, however, a dearth of evidence that quantifies these barriers. In addition, in some cases lower opportunity costs among low-income groups may sometimes mean that barriers are greater for the non poor.

Financial barriers may also interact with other demand barriers. One study in Kazakhstan, for example, found that the education of the household head or the care-seeker was an important determinant of the willingness to travel long distances to obtain treatment.

A review by WHO found that the direct costs of maternal health care range between one and five percent of total annual household expenditures, rising to between five and 34% if the woman suffers a maternal complication(WHO, 2006). At the national level, the WHO estimates totals of $95 million and $85 million are lost each year by Ethiopia and Uganda respectively due to poor maternal health. Globally, $15 billion is estimated to be lost every year due to reduced productivity related to the death of mothers and neonates. Country estimates range from $1.50 per person per year in Ethiopia to almost $5 in Senegal.

Lack of access to quality care is the main obstacle to reducing maternal mortality in low and middle income countries. The average of skilled attendance at delivery for all developing countries was 42% in 1990, rising to 52% in 2000. However, the average for sub-Saharan Africa was 40% in 1990, rising to just 43% in 2000. Some countries, like Ethiopia, have rates as low as 10%.

In practice, supply and demand side issues are not so easily separated. If the available health care is of poor quality, it is not surprising to find there is little demand for it. There is evidence that demand does react to quality. A detailed survey in a rural region of India found very low use of public health facilities despite these being, in principle, free (Banerjee A 2004). The reason is the very poor quality of care, although the private sector alternatives are also of dubious quality. It is
futile to develop and implement policies that remove constraints on the demand for effective health care if there is little hope of such care being provided. Policy interventions on the demand and supply sides must progress in tandem.

Poor quality of health services is a major problem in many, but not all, developing countries (World Bank Report, 2004). 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 (1979-1983).

A second problem is that the available resources are not allocated to the most effective interventions, are geographically concentrated in large cities, and do not reach the poor. Despite the WHO Alma Ata Declaration, the bulk of public health expenditure continues to be absorbed by hospital based care delivered at some distance from poor rural populations. Shifting the balance of resources further toward primary care would not necessarily have the desired impact on the level and distribution of population health. However, there are major deficiencies in the quality of primary care delivered in many developing countries.

2.3 Intervention measures to the barriers affecting the utilization of Antenatal care services

A large body of evidence confirms that many people in the developing world go without health care from which they could benefit greatly. The poor in developing countries are even less likely than the better off to receive effective health care (O’Donnell Owen, 2007). Concern for the level and distribution of health services in the developing world demands that measures be taken to redress both facts.

In the health sector, there are a number of policies with implications for maternal service provision. To expand the platform for health care services, the private sector is envisaged to play
an important role in the implementation of the national health policy and a public-private partnership policy has been drafted to set the modalities of the collaboration (Freddie SSengoba, 2004). In Uganda, more specific health sector interventions focusing on health education and information campaigns have been formulated. Providing information on the types of diseases that can be self medicated and those that require medical information may raise the demand for care. It is likely and evidenced by the interventions discussed that these will often have to be accompanied by ways of getting patients to health services.

Women's disproportionate poverty, low social status, and reproductive role expose them to high health risks and preventable death. Yet cost-effective interventions exist to stop these unnecessary inequalities. To achieve the greatest health gains at the least cost, national and donor investment strategies have given considerable emphasis to health interventions for women, particularly during their reproductive years. There has been much progress in improving women's health; however, some challenges remain and new ones keep emerging.

Investment in pregnancy and safe delivery programs is a cost-effective way to meet the basic health needs of women in developing countries. Prevention of unwanted or ill-timed pregnancies is also essential to improving women's health and giving them more control over their lives. Safe motherhood interventions can strengthen the performance of the overall health system. The effectiveness of maternal health services is often hampered by organizational and institutional constraints. Improving access to good-quality maternal health care remains a challenge in many countries because it requires a functioning primary health care system in the community and a referral system to a health facility capable of providing emergency obstetric care. Safe motherhood interventions designed to integrate various levels of the health sector can thus bring about improvements that more broadly affect the health system.

Interventions to improve women’s educational attainments are potentially wide reaching and mostly outside the traditional scope of the health sector. Apart from improving the general standard of, and access to, education, targeting schemes for raising female enrolments have been developed to include financial and nonfinancial incentives to families, scholarship schemes, and the promotion of all-girl schools (to overcome cultural constraints that prevent girls from mixing
with boys). Schemes to empower women may be helpful in breaking down historical barriers to seeking care. Services that are sensitive to prevailing cultural conventions, without compromising medical standards, may also have an impact on the demand for services. However, such schemes have favored mainly the urban population with less impact to the rural poor like those in Kisoro.

Most of the interventions incorporating community education appear to show some evidence of an increase in the use of facilities, particularly by women with complicated deliveries. However, some of these studies allege only a general increase in uptake of services but do not attempt to quantify the change or attribute it to the intervention.

Other studies provide “harder” evidence of change in behavior. Education and information campaigns in Nigeria, Sierra Leone, and Ghana all led to significant reported increases in attendance at normal and complicated deliveries as a result of the intervention (Nwokobya B, 1997). The community campaign in Kebbi State, Nigeria was reported to have a significant positive impact on awareness of obstetric complications but no impact on referrals. Similarly, a campaign to target men and women to overcome cultural resistance to referred labor showed little increase in referrals. In the latter case it is argued that inflation and other economic factors began a general decline in facility-based delivery that the intervention halted but did not reverse.

However, in Malawi, health information improved women’s knowledge of the need for antenatal care, complications, and post delivery care and increased the use of services (Gennaro S, 2001). Postpartum care went up from 26 percent to 72 percent while use of clinic or district hospital for delivery went up from a combined 29 percent to 59 percent. Pre- and post-intervention statistics are provided for the community.

Creating more informed consumers of medical care is the objective of the Ministry of Health in Uganda. The Ministry is involved in providing education to patients to make them more aware of illness, when to consult with medical staff and which hospitals to visit. While the direct objective is to reduce unnecessary consultations, freeing up staff time and supply constraints, it may have a
direct demand-side impact in making patients more aware of when and where to obtain services. However, no appraisal of the impact of the scheme is yet available.

A multivariate analysis of 40 low-income countries found that government health expenditure as a percentage of total health expenditure was significantly associated with utilization of skilled birth attendants and caesarean section rates, but not antenatal care, allowing for factors such as per capita health expenditure (Kruk M, 2007). This supports the view that public subsidies of various sorts are likely to be necessary to improve access and skilled attendance.

Promoting health and confronting disease challenges requires action across a range of activities in the health system. This includes improvements in the policymaking and stewardship role of governments, better access to human resources, drugs, medical equipment, and consumables, and a greater engagement of both public and private providers of services. Experience has shown that, without strategic policies and focused spending mechanisms, the poor and other ordinary people are likely to get left out. Extension of this experience to the health sector is more recent and lessons learned are now being successfully applied to developing countries.

At the outset it is important to be aware of the limitations of demand-side strategies. Demand creation is not a substitute for targeted interventions in supply (Bhatia J.C, 2001). If health services are not of adequate quality, no amount of demand stimulation will induce people to access them. It is also important to realize that many potential interventions on the demand side are extremely wide ranging and often stray a long way outside what is traditionally seen as the health sector. In practice many of the interventions may have to be conducted through ministries other than health—a challenge for cross-government collaboration. The development of poverty strategies provide one forum for such “joined up” policymaking and suggest a real opportunity for grounding many of the interventions in genuine collaboration.

Delivery of essential services concentrates on improving the quality of staff skills, protocols of treatment, availability of supplies and environment of health facilities. Yet while these interventions are important, they do not address many of the barriers to accessing services faced by a patient in a low-income country.
CHAPTER THREE
METHODOLOGY

3.0 Introduction
This section gives information about research design, area of study, population of study; sample size, sample selection, methods of data collection, data analysis, procedure, and problems that the researcher encountered during the study.

3.1 Research design
The research was a cross-sectional study. A combination of qualitative and quantitative data collection methods was used. In-depth interviews were conducted to both ANC attendees and providers at the public/private hospitals. The researcher and the interviewee agreed to sit in a private place and conduct the interview. The interview was conducted in Rufumbira the language that was convenient for the interviewees.

Survey questionnaires were administered to ANC attendees on exit after receiving ANC services and ANC providers at the Clinic. Some variables were quantified and others explored in depth, thus generating descriptions.

3.2 Study area
The study was carried out in Kisoro District covering two sub-counties of Nyakabande and Chahi. The study also focused on 3 hospitals/clinic (one government and two private). The researcher wanted to get a clear picture of ANC utilization in the area of study. The study was carried out in Nyakabande and Chahi Sub counties of Kisoro district. Kisoro District is located in the south-west of Uganda, bordering the Democratic Republic of Congo (DRC) in the west and Rwanda in the south. Internally, it borders the districts of Kabale in the east and Rukungiri in the north. It covers an area of approximately 729.7 square kilometers. The district is mountainous and hilly and raises an average of 1,980 meters above sea level. The total population of the area is 237,700 (Kisoro district population office 2010 estimates).

The district has one county- Bufumbira county, fourteen sub-counties including Kisoro Town, thirty-six parishes and 374 villages. The study was carried out in Nyakabande and Chahi sub counties.
The major economic activity in Kisoro is peasant agriculture. According to the 1998 Population and Housing Census, 90% of the households in Kisoro District reported subsistence farming as the major source of livelihood. The crops grown are sorghum, Irish and sweet potatoes, beans, maize, cassava and bananas. Other sources of livelihood are crafts, trade and professional jobs. Due to the depletion of soil fertility, cassava and yams have recently been added on the list of crops grown. Other activities include cross border trade and tourism. The district is disadvantaged by lack of the traditional and nontraditional cash crops. This keeps the average household incomes at very low levels.

3.3 Methods of data collection and procedures

The study utilized three main data collection methods namely: Survey, Focus Group Discussions and Key Informants.

3.3.1 Survey

A survey was carried out in Nyakabande and Chahi sub counties to determine the alternatives to ANC being undertaken in the early phases of pregnancy. It was used to develop recommendations of whether alternatives to ANC can be utilized to promote early and appropriate ANC in hospitals.

3.3.1.1 Target population

The study population comprised of mothers and pregnant women in the reproductive age group (15–49 years) seeking antenatal care services in Kisoro, Mutolele and Kalorero public/private hospitals in Nyakabande and Chahi sub counties. These sub counties were selected because they have referral health centers and hospitals that offer ANC services.

A published table (appendix 1) of sample sizes determined using formula that takes into account combinations of precision, confidence levels and variability was used to determine sample size (Israel, 1992). Given that the population of women of child bearing age in Kisoro district is 52,106 (UBOS, 2007), a precision level of plus or minus ten percent statistical level of confidence of 90%, the study considered a sample of 100 respondents. The respondents were drawn from Nyakabande and Chahi sub counties aiming at fifty percent representation per Sub County.
3.3.1.2. Sampling procedure
Participants were purposively approached for selection from Kisoro hospital, Kalorero Maternity in Chahi and Mutolere hospital in Nyakabande Sub County. At hospitals potential participants were selected systematically. Every third participant was approached for interview each working day of the week. A list of antenatal care attendees on a clinic day was prepared and a number assigned for each attendee. Attendees were picked at every third interval that is 3, 6, 9 until the required number of participants was reached. The same sampling procedure was used to come up with respondents for in depth interviews. A sample of 74 women from the ANC hospitals/clinic was selected (17 first trimesters and 57 late trimesters).

A semi-structured questionnaire focusing on demographic characteristics, socio economic indicators, knowledge of ANC, drugs administered to women and alternatives to ANC being undertaken in early phases of pregnancy was administered to the participants.

3.4. Key informant interviews
Twenty key informants’ interviews were conducted with participants selected purposively based on their knowledge of the community and women’s access to antenatal care services personally or professionally; factors of health service providers associated with use and non-use of antenatal care services. These included nine senior midwives, two senior nursing officers, three In-charges of Kalorero Maternity, Mutolere, and Kisoro hospitals; the district health officer, District Medical Officer and four TBAs.

3.5. Focus group discussions (FGD)
Four Focus group discussions were conducted in Chahi and Nyakabande sub counties; to seek opinions and knowledge on ANC practices in relation to new born health at the community and household levels. Participants included mothers, fathers and other community based caregivers. The FGDs were conducted as follows: one was composed of only men and three of only mothers. Women and fathers who participated in the focus group discussions were conveniently selected; that is women who had been pregnant and given birth, and fathers who had had pregnant women. Each focus group consisted of 6-8 participants and discussions lasted for 1-2 hours.
Group discussion were conducted focusing on the places where women go for antenatal care, when they go for antenatal care, alternatives to ANC mothers use in early phases of pregnancy, why they go for antenatal care, antenatal care services provided, medicine given during antenatal care, visits and changes the mothers feel should be done to improve antenatal care services and child management.

3.6: Data analysis
A statistician was hired to carry out data entry and analysis. Quantitative data were entered into computer software and analyzed using the statistical package for social scientists (SPSS) version II. Descriptive statistics (tables, frequency) was used for interpretation of data. The list of indicators that were used included dependent variables such as first trimesters and late trimesters, independent variables included age, marital status, education, literacy among others.

Qualitative data from focus group discussions and key informant interviews were typed, edited, and entered into a computer and summarized. Social demographic characteristics of the sample were reported using descriptive statistics.

To answer objective one (determining alternatives to ANC undertaken during early phases of pregnancy), frequencies of ANC alternatives mentioned by participants were generated from the survey data. These were supplemented by data from the FGDs among women. Responses were interpreted by looking at patterns and formulating ideas which could account for those patterns. Methods used included content analysis, ethnographic summaries, and use of quotes.

To answer objective two (determining factors influencing late attendance for ANC services), reasons for mothers’ delays in ANC were also generated from the survey data using frequencies.

To answer objective three (to establish the knowledge of mothers about the benefits of seeking ANC early), data from the above objectives were analyzed for content and implications drawn. These helped in generating the recommendations.

3.7: Ethical considerations
The researcher obtained all the necessary permission from the university and the district authorities where the research was carried out. But most importantly, the values and norms of the local people were studied well and respected to avoid any misconception. In addition participants
were asked for their consent to participate in focus group discussion (FGD) and fill in structured questionnaire.

3.8: Study Limitations.
It was not a longitudinal study. However, in examining the relationship between variables of interest as they exist in a defined population at one point in time, as well as triangulating FGDs and KII, useful data to answer the research objectives was obtained.
CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.0 Introduction

This chapter presents the study findings as obtained from the field by the researcher. The study was guided by three research objectives; to determine alternatives to ANC being undertaken in early phases of pregnancy, to establish why mothers go for ANC late and to establish the knowledge of mothers about benefits of seeking ANC early.

The study covered a population of 100 respondents. To obtain data from the field the researcher supplied a total of 74 questionnaires, 74 women from the ANC hospitals/clinic was selected (17 first trimesters and 57 late trimesters) but also conducted interviews and Focus Group Discussions (FDG). The four categories of respondents included; District health officials, ANC attendees, health providers, Women and men in villages.

For easy analysis and interpretation of data collected from the field, the researcher captured the different responses and categorized them into different themes and tabulations were calculated as demonstrated in the following sections of this chapter.

4.1 Social demographic characteristics of the respondents

This section focuses on both ANC providers and ANC attendees as the study set out to establish in terms of age, gender, and economic status, level of education, marital status, religion, and gravidity.

Table 1: Socio-Demographic Characteristics of ANC attendees

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<th>Private (n=34)</th>
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<td>mean</td>
<td>median</td>
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<td></td>
<td>26</td>
<td>24</td>
<td>25.5</td>
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(Range); SD (34); 8.2 (34); 7.5 (34); 7.8

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<td>10</td>
<td>(27.4)</td>
<td>21</td>
<td>(28.4)</td>
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<tr>
<td>20-24</td>
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<td>(25)</td>
<td>6</td>
<td>(17.6)</td>
<td>16</td>
<td>(21.6)</td>
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<tr>
<td>25-29</td>
<td>9</td>
<td>(22.5)</td>
<td>8</td>
<td>(23.5)</td>
<td>17</td>
<td>(22.9)</td>
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<td>6</td>
<td>(17.6)</td>
<td>10</td>
<td>(13.5)</td>
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<td>(2.9)</td>
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**Marital Status**

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**Occupation**

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**Education**

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<td>12</td>
<td>(40)</td>
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<td>(40.5)</td>
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**Religion**

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<td>(45.8)</td>
<td>72</td>
<td>(97.3)</td>
</tr>
<tr>
<td>Muslims</td>
<td>1</td>
<td>(50)</td>
<td>1</td>
<td>(50)</td>
<td>2</td>
<td>(2.7)</td>
</tr>
</tbody>
</table>

**Income**
Table 1 above demonstrates the socio-economic characteristics of ANC attendees in government (kisoro) hospital and private (Mutolere and Kalorero maternity) hospital/clinic. In terms of age, the mean age in both government and private hospitals/clinic was 26. The majority of ANC clients were in the age bracket of 15-29 years (73%). The median age of ANC attendees was 25 years.

Comparison of age groups (15-29 and 30-49) in both government and private health facilities in relation to the timing of ANC; showed that there is no significant difference in the time of starting antenatal care.

The field results show that majority of the women 60.8% were farmers (mainly practicing subsistence farming) and their level of income was low. Level of income at a household was defined on the basis of one member having permanent job, engaged in small scale business and subsistence farming. Households with a reasonable source of income were categorized as having fairly high income. Low –income level households were those that depended on subsistence farming for their living. The overall level of income of the ANC attendees was low (87.8%). This means that there are high poverty levels among women in the area of study which in one way or the other affects their ability to access and utilize ANC facilities that are in most cases located kilometers away from their area of residence.

As regards religious beliefs, majority of the respondents were Christians comprising of 97.3% Comparison of Christian and Islam religions on the utilization of ANC services revealed no significant difference. Religious affiliation does not influence the timing of the ANC or use of other ANC alternatives in the area of study.
In regard to gravidity, the majority of ANC clients were of gravidity 1-2 (48.6%). There were fewer respondents in the gravida bracket 3-4 (20.3%). The distribution of respondents by gravidity revealed that mothers with less gravida (1-2) pregnancies start ANC early in pregnancy than those who have experienced more pregnancies.

On levels of education, majority (51.3%) of respondents indicated that they had attended primary school while 40.5% of them had never attended school. There was significant difference in proportion of the ANC attendees in the timing for antenatal care and use of other ANC alternatives in relation to literacy levels. The study findings revealed that, the low levels of education had significantly influenced the timing and utilization of ANC at health facilities.

The findings in table 1 further portrays that, majority of the respondents (94.6%) were married, the study revealed that marital status plays a significant role in determining women’s utilization of ANC service. It was discovered that most married women go for antenatal care early than single, widowed and divorced mothers.

A critical analysis of the field results in table 1 indicates that, most of the mothers were young, and had not attended school. All these contribute to limited ability to utilize ANC and therefore poor antenatal care seeking behavior. Education of the mother and that of members of the household were found to be significantly associated with the levels of utilization of ANC services.

Respondents reported having first attended an antenatal clinic during the second trimester of pregnancy, and had attended at least once before the third trimester. Some respondents whose first ANC visit was later than the second trimester, the reasons given for late attendance were: having had no problems during pregnancy and therefore no need to visit the clinic; a long distance to travel from home to the clinic, avoiding making many trips to the health facilities, and thinking they were earlier on in gestation than actually was.

**4.2. Characteristics of ANC providers**

Seventeen ANC providers were contacted during this study. These included the District medical officer, district health inspector, senior nursing officers from the three hospitals and nurses and midwives offering ANC services from these hospitals/clinics.
Table 2: Social–demographic characteristics of ANC providers

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>2</td>
<td>11.8</td>
</tr>
<tr>
<td>Female</td>
<td>15</td>
<td>88.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td><strong>100.0</strong></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-22</td>
<td>2</td>
<td>11.8</td>
</tr>
<tr>
<td>23-28</td>
<td>8</td>
<td>47.1</td>
</tr>
<tr>
<td>29-33</td>
<td>4</td>
<td>23.5</td>
</tr>
<tr>
<td>34-38</td>
<td>1</td>
<td>5.9</td>
</tr>
<tr>
<td>39-43</td>
<td>1</td>
<td>5.9</td>
</tr>
<tr>
<td>44+</td>
<td>1</td>
<td>5.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td><strong>100.0</strong></td>
</tr>
<tr>
<td>Cadre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registered midwife</td>
<td>4</td>
<td>23.5</td>
</tr>
<tr>
<td>Registered nurse</td>
<td>1</td>
<td>5.9</td>
</tr>
<tr>
<td>Public health nurse</td>
<td>9</td>
<td>52.9</td>
</tr>
<tr>
<td>Others</td>
<td>3</td>
<td>17.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td><strong>100.0</strong></td>
</tr>
<tr>
<td>Time in service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-5</td>
<td>8</td>
<td>47.1</td>
</tr>
<tr>
<td>6-10</td>
<td>7</td>
<td>41.2</td>
</tr>
<tr>
<td>10+</td>
<td>2</td>
<td>11.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

According to the study findings, majority of the ANC providers were females (88.2%) in the age group of 23-28 years. Majority was enrolled nurses comprising 94.1% and had been in service for the period of 0-5 years (47.1%). ANC providers had a positive perception towards antenatal care and were helping ANC seekers obtain the necessary services. However, ANC providers identified challenges of shortage of facilities and equipments necessary for ANC services.

4.3. Factors influencing Antenatal care late attendance

One of the objectives of the study was to determine reasons for ANC late attendance by pregnant women in Kisoro. To investigate the timeliness of ANC attendance, a categorization of 'early first attendance' was defined as a first visit to ANC at or before 4 months gestation, compared to the national average of 19.6 weeks and prior to the scheduled delivery of the first IPTp dose of
20–24 weeks while those who made their visit after four months were categorized as late starters/beginners.

Through exit interviews with ANC attendees, participants from each group (early and late starters) were asked to mention one or more dangers/disadvantages a woman might come across when ANC is sought late during pregnancy. Responses from each group were summarized in tables 3 (a) and (b).

**Table 3 (a) responses from early starters**

<table>
<thead>
<tr>
<th>Disadvantages of starting ANC late in pregnancy</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>The woman does not access the services that go together with ANC such as iron supplement and TT injection</td>
<td>9</td>
</tr>
<tr>
<td>If one comes late for ANC, will be abused by nurses and might not be well received by the ANC providers.</td>
<td>13</td>
</tr>
<tr>
<td>If there is any complication it cannot be detected early thus can lead to death</td>
<td>10</td>
</tr>
<tr>
<td>The uterus may rupture</td>
<td>2</td>
</tr>
<tr>
<td>There might be spontaneous miscarriages</td>
<td>7</td>
</tr>
<tr>
<td>The woman may have ill health and pass it to the baby</td>
<td>3</td>
</tr>
<tr>
<td>The woman cannot know how the pregnancy is progressing</td>
<td>2</td>
</tr>
</tbody>
</table>

**Table 3(b) responses from the late starters**

<table>
<thead>
<tr>
<th>Disadvantages of starting ANC late in pregnancy</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>The woman does not receive medical assistance early if there are any medical conditions that need attention</td>
<td>31</td>
</tr>
<tr>
<td>The woman might be ignored by ANC providers</td>
<td>19</td>
</tr>
<tr>
<td>The woman misses a lot of information pertaining to various aspects of pregnancy</td>
<td>6</td>
</tr>
<tr>
<td>There might be spontaneous miscarriage</td>
<td>5</td>
</tr>
<tr>
<td>The woman may not deliver at a health facility</td>
<td>1</td>
</tr>
<tr>
<td>The pregnancy does not progress well</td>
<td>3</td>
</tr>
<tr>
<td>The woman may have ill health</td>
<td>16</td>
</tr>
<tr>
<td>The woman can die from pregnancy complications</td>
<td>5</td>
</tr>
</tbody>
</table>

The responses from both groups of ANC clients indicated that the two groups of respondents had knowledge about the dangers/disadvantages of starting ANC late in pregnancy. Responses from tables above fell within the premises of the dangers a woman might come across when ANC is initialed late in pregnancy. Therefore their knowledge levels on the dangers of starting ANC late were similar.
The study intended to establish why women sought ANC late. ANC providers and attendees gave the following views as the reasons why mothers seek ANC late:

**Table 4: Reasons for late attendance**

<table>
<thead>
<tr>
<th>Reasons mentioned by ANC providers and attendees for late attendance</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor Quality</td>
<td>12</td>
</tr>
<tr>
<td>Myths and misconceptions</td>
<td>2</td>
</tr>
<tr>
<td>Traditional beliefs</td>
<td>1</td>
</tr>
<tr>
<td>Financial difficulties</td>
<td>57</td>
</tr>
<tr>
<td>Alternatives to ANC</td>
<td>9</td>
</tr>
<tr>
<td>Ignorance</td>
<td>8</td>
</tr>
<tr>
<td>Age</td>
<td>3</td>
</tr>
</tbody>
</table>

4.3.1 Poor Quality of Care

Poor quality care at the health facility was mentioned by the respondents. The type and quality of antenatal care services that the women reported receiving were inconsistent and inadequate, and differed greatly from Ministry of Health. Fewer than half received any type of immunization services, and no hemoglobin tests, urine analysis, syphilis screening, or voluntary counseling and testing for HIV. Moreover, no counseling on risk factors and warning signs and symptoms during pregnancy were reported, and no adequate information related to delivery was given to women. In this regard one woman mentioned that, the reputation of nurses and midwives regarding care for delivering women was not good and as a result many women were scared of their bad behavior. A second woman echoed “nurses are particularly strict on clothing, gloves, cotton wool, and panties for mothers and their babies, and because most men cannot buy these things, women prefer to postpone their visits to health facilities for ANC services and even sometimes deliver at home.”

Another significant finding from the study in relation to poor quality care was mistreatment by ANC providers. FGDs in Chahi sub county mentioned poor care by ANC providers especially in government hospitals. One respondent stressed that sometimes mothers deliver from corridors in hospitals while the nurses are not bothered.
With respect to delivery care, nearly most of the women were not satisfied with the care they received at their final place of delivery, because they reported health providers were rude and not treated well or were not treated in a timely manner. One mother from a private hospital said” a nurse abused me that I was looking like an ant hill from a distant journey’. Mothers who were satisfied reported that the facility had saved their life and/or their baby’s life or because staff identified the problem they were experiencing. In addition, nearly all of the women believed that the causes of maternal deaths at health facilities were providers’ mistakes or hospital procedures.

The above findings contravene the fact that; every woman has the right to access high quality maternal health services that in turn must be accessible, affordable, effective, appropriate and acceptable to them in order to avoid preventable morbidity and mortality. Many complications of pregnancy and child birth that lead to mortality can be prevented by providing quality care that involves early detection of problems and appropriate timely interventions. Within the scope of this study, the researcher did not attempt to examine the quality aspect of ANC services for several reasons.

This again represents a significant discrepancy from UMOH guidelines as providers are expected to develop delivery plans with the women during their first visit, and to review these plans in the third and fourth visits. The reasons offered by providers for these assessments included ; some women sought ANC services in the last days of their pregnancy which could not allow health workers draw delivery plans for them and even this made the risks higher.

4.3.2 Myths and misconceptions
The knowledge, perceptions and attitudes of ANC attendees were assessed. The study established that pregnant women and mothers had myths and misconceptions about seeking ANC early and in health units. The main reasons cited for failure to attend ANC early were based on the woman’s own beliefs that the facilities would provide quality care, or on the advice given by family members.
Beliefs and attitude of mothers were yet another factor advanced by the respondents regarding ANC late attendance. As observed through the interviews, focused group discussions complimented by structured questionnaires, attitudes influence decisions on where and when to
attend ANC. On the reasons why some mothers did not attend antenatal care services in health units reasons such as smooth experience with previous pregnancies were given. This means that if nothing is changed, a perceived negative attitude of health workers and poor quality of care would remain barriers to attending ANC early.

All of the ANC attendees and other women in the villages pointed out that the government facility health care providers are not polite in handling patients. They do not explain when doing procedures; misplace records and reject referrals sent by TBAs. This sometimes demoralizes some women. However, as reported by some women and ANC providers, such are misconceptions for there was no way a trained health provider would do such a thing.

However, this calls for supportive supervision to monitor service delivery standards and to ensure that abusive health workers are held accountable for mistreatment of clients. The study is not able to confirm independently the reports of negligence leading to abuse of patients at any point in the service delivery cycle. However, the negative experiences of women regarding the care they received and the belief among many participants that late attendance was caused by providers requires a thorough investigation into the quality of maternity services.

4.3.3 Traditional Beliefs and Practices

The study demonstrates that many women in Kisoro are still engulfed in the traditional past. The respondents’ views revealed that many women seek ANC services late. ANC attendees and women in the villages reported that community norms were significant constraints in planning for early ANC and Facility-based delivery. They commented that:

*Our culture discourages us from planning for a baby who is not yet born. Prior planning is believed to bring bad luck. Some women are discouraged by relatives not to mention their pregnancy early as it would bring bad luck...*

Another woman elaborated on this point, “The fact that many women go to traditional healers and deliver from home also had influence on other women’s decisions to seek ANC early. A nursing aid in Chahi also described that women in general are reluctant to go for health services
unless they suspect a problem with their labor or delivery. She elaborated that “the influence of culture is deeply rooted in society, which makes utilization of health services generally low among women. Others even have the false belief that medical officials harass them.” In addition, late attendance was attributed to fear of walking long distances yet pregnant women were told not to walk long distances because they may get a miscarriage.

The researcher established that the status of women in the area of study was still low and they cannot make independent decisions about their health even when they have money and are aware of the advantages of attending ANC early. One respondent added that, heavy work load makes it impossible for pregnant women to start ANC before 5 months. It is a common practice that women go to the health facility if they have a problem that requires medical attention.

The researcher also observed that, some primitive men also refuse their wives to go for ANC because to them pregnancy is not sickness, that instead a pregnant woman who over complains is a sign of laziness/cowardice. The cultural resistance to ANC early attendance and health facility deliveries also needs to be addressed through a variety of channels, some of which need to include men who give permission and the money to their wives for these visits.

It was also reported that, some pregnant women feel shy and do not want anybody else to look at their private parts. They will deliver outside a health facility since they have heard or experienced the fact that health workers look at and touch their private parts when they go to deliver. In the focus group discussions it was found out that there are very few times when women’s genitals are looked at either by herself or by other people during her life time as such even those that would wish to use health services take their time thinking about that.

4.3.4 Financial Difficulties

As established by the study, the level of income of the respondents based on their economic activities was so low. As a result their utilization of ANC facilities/services was reported to be minimal. It was established that, perceived expense of the ANC hinder early attendance, the respondents stressed that transport costs, physical inability to travel long distances make many women utilize the available ANC alternatives and visit health units late.
The fact that predisposing characteristics and enabling resources accounted more for the variation in pregnancy duration at entry to ANC than needs implied that inequality existed between women. Younger women, especially teenagers, are more likely to have unplanned pregnancies and lack information and the resources to access ANC services.

Early entry to antenatal care (ANC) is important for early detection and treatment of adverse pregnancy related outcomes. The World Health Organization (WHO) recommends that pregnant women in developing countries should seek ANC within the first 4 months of pregnancy. However, due to financial constraints women in Kisoro tend to seek ANC in the seventh or even the ninth month of pregnancy.

In this study, majority of women complained of poverty and sometimes their finances being in the hands of their husbands while the widowed lacked control of property left to them. This reflects the real situation in the area of study.

4.3.5. Alternatives to ANC

The ANC providers indicated that some mothers undertake other alternatives in early phases of pregnancy. Some mothers use Traditional birth attendants and come for ANC in the seventh month. As a result substantial proportions of women do not receive services offered by the ANCs such as breastfeeding and newborn counseling, malaria prevention and counseling on complications. Yet the ANC through the health care system remains the primary source of information about pregnancy and newborn care.

This survey provides missed opportunities on pregnancy programming and planning. It is clear that maternal mortality from within and without the health care system is not well addressed. The low ANC rate found in this survey is inconsistent even though many strategies have been laid by the government as well as District authorities. The research survey indicates the need to target outreach about the importance of ANC to those most at risk for not being aware of or able to access appropriate care. There is also need to focus on women with no formal education and particularly those who have already had lost a newborn or young infant.

Late ANC attendance does not provide women with a chance of benefiting fully from preventive strategies, such as iron and folic acid supplementation, and intermittent preventive malaria
treatment in pregnancy among others. To encourage earlier ANC attendance, service delivery must be improved and messages that aim at removing barriers to ANC utilization should be increased.

4.3.6. Ignorance

The study established that, the majority of the respondents had less education levels which was also a reflection of the entire community. In this regard some ANC providers revealed that most of the women access antenatal late because of ignorance. Many mothers do not want to make many visits to the hospital/clinics. Thus they start ANC late to make fewer visits.

Because of the high illiteracy levels among women interviewed in the survey and generally among ANC attendees, there is need for outreach efforts by employing community engagement strategies, and counseling and educational materials used during ANC also need to be audio-visual, interactive and pictorial. This will enable the health providers to reach the uneducated women most at risk for not attending ANC or learning the details about assessing their own risk if they do not attend ANC early.

There have been many studies on factors relating to late entry to ANC in the world. The related factors include education. Due to the fact that many women are illiterate, they also have limited information on the dangers related to late entry to ANC. It was observed that there was also poor knowledge about ANC in the communities and the benefits are not easily appreciated. The main purposes of antenatal care are to prevent certain complications, such as anemia and identify women with established pregnancy complications for treatment or transfer. Antenatal consultations is said to provide opportunities for health education, health promotion and social support at both the individual and community level. Late attendance was reported to be as a result of ignorance about the values of ANC which demonstrates the weakness of government policy in promoting health and safe motherhood in the country.

4.3.7 Age

The results of the study indicate that ANC late attendance was associated with age. In Kisoro many girls tend to marry at a young age of 14 and 15 yet the recommended age at marriage is 18 years according to GOU. The frequency distribution of ANC attendees by gravida illustrated
majority of the respondents were young mothers. 14 mothers of the age group 15-19 years were in 1-2 gravidity a likelihood of early marriages. Young mothers tend to go for antenatal care late for fear of being identified that they are young mothers by ANC providers and even in the community which puts their life at a risk. As reported by one nurse, many hospital deaths among pregnant mothers were due to age and mostly common in young mothers. However, a midwife in Mutolere hospital revealed that, women with more previous pregnancies may be more confident because of their experience. However, they may also find it harder to attend ANC because of difficulties with child care.

Generally, a large number of women entered ANC later than international and national recommendations and inequality existed between groups of women. For effective use of ANC, efforts to increase early entry to ANC should focus on the identified high risk groups of women, especially the groups with large number of interventions should be tested before large scale application. Thus there is need to include other potential explanatory factors and expand to other aspects of ANC such as number of ANC visits, services provided during ANC visits and satisfaction of women and providers.

4.4. Knowledge of mothers about benefits of attending ANC early

The study was carried out in one of the remote areas of Uganda characterized by high population densities as well as high levels of illiteracy. To set a ground for the study, the researcher had to establish the level of ANC awareness among women. Data collected show high level of knowledge among ANC attendees. When prompted with a series of questions; of why mothers go for ANC, problems a mother may encounter when does not seek ANC early, services offered when seeking ANC.

Through the study, the researcher established ANC attendees’ knowledge levels by asking mothers and pregnant women to mention likely consequences of attending ANC late. The responses indicated that the respondents had knowledge about dangers a mother might come across when attended ANC late in pregnancy. Responses on the dangers were summarized in the tables below.
Through exit interviews with ANC attendees, participants from each group were asked to mention one or more perceived benefits a woman might get when ANC is sought early during pregnancy. Responses from each group on the benefits were summarized in tables 5(a) and (b) below.

**Table 5(a): Responses on the perceived benefits of starting ANC early by starters.**

<table>
<thead>
<tr>
<th>Perceived benefits for starting early to woman</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>A woman starts getting drugs and immunization early thus ensuring the delivery of a healthy baby and sustaining the health of the mother as well.</td>
<td>19</td>
</tr>
<tr>
<td>A woman gets information on various aspects of pregnancy thus she is able to take care of herself during pregnancy.</td>
<td>6</td>
</tr>
<tr>
<td>The progress of the pregnancy is closely monitored, thus any pregnancy complication can be detected and appropriate measures taken.</td>
<td>2</td>
</tr>
<tr>
<td>If the woman has a medical condition that needs attention it is detected early before it is too late.</td>
<td>7</td>
</tr>
<tr>
<td>The status or condition of the fetus is known to both the mother and health workers,</td>
<td>1</td>
</tr>
<tr>
<td>A woman does not experience difficulties when delivering.</td>
<td>3</td>
</tr>
<tr>
<td>A woman is confirmed whether she is pregnant or not (pregnancy confirmation)</td>
<td>4</td>
</tr>
</tbody>
</table>

**Table 5 (b) responses on the benefits of starting ANC early in pregnancy from the late starters.**

<table>
<thead>
<tr>
<th>Responses from late trimester beginners</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>The woman starts receiving services which go together with ANC early such as iron supplementation, ant malarial drugs among others.</td>
<td>55</td>
</tr>
<tr>
<td>The woman gets IEC on various aspects of pregnancy such as hygiene, nutrition, importance of rest, how take care of herself during pregnancy and after delivery</td>
<td>2</td>
</tr>
<tr>
<td>The progress of the pregnancy is closely monitored such that any pregnancy complications/can be detected and corrective measures can be taken before it is too late.</td>
<td>15</td>
</tr>
</tbody>
</table>

It is evident from the responses from both groups of ANC clients that their knowledge levels of the perceived benefits of starting ANC early are the same. The responses from the two groups were almost the same and they fell within the premises of the benefits/importance of starting...
ANC early. Therefore both the early and the late starters had similar knowledge on the benefits of starting ANC early in pregnancy.

4.5. Alternatives to ANC undertaken in early phases of pregnancy.

The study set out to establish whether there were alternatives used by pregnant women in the area of study. According to the respondents’ responses, many pregnant women reported that indeed there were alternatives being undertaken by mothers and pregnant women in Nyakabande and Chahi sub-counties. ANC providers were asked to give their views about alternatives mothers try out in the early phases of pregnancy; their responses showed that mothers were trying out other alternatives before accessing antenatal care. Table below shows the respondents’ responses on the ANC alternatives.

Table 6: Alternatives used apart from ANC services

<table>
<thead>
<tr>
<th>Alternatives</th>
<th>Frequencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herbs</td>
<td>14</td>
</tr>
<tr>
<td>TBAs</td>
<td>32</td>
</tr>
<tr>
<td>Traditional healers</td>
<td>10</td>
</tr>
</tbody>
</table>

The study findings show that many mothers and pregnant women in the area of study use a number of alternatives during pregnancy. Respondents indicated use of TBAs and the use of herbs. The table indicates, some of the respondents were trying out ANC alternatives in the early phases of pregnancy.

4.5.1 Traditional Birth Attendants

The study established that TBAs are widely used by pregnant women and mothers in the study area. The study revealed that TBAs are appreciated in the community as they adhere to the norm of deliveries, always being an emergency in the community and that they act quickly and are always available.

The respondents mentioned visiting TBAs because they are nearer/closer to the mothers than ANC facility. The commonly cited reason for use of TBA’s was the difficulty in transport that left mothers with no alternative but to use TBAs. The respondents added that TBA’s were more
accessible, and flexible enough to carry out a delivery in one’s home than health units. However, some respondents raised concern that TBA’s were incompetent and not well trained. TBA’s also were known for not referring clients who failed to deliver and therefore contributing to high levels of deaths in the area of study.

The use of TBAs in the study area is very high and suggests that they are the backbone of maternity services in rural Kisoro. While recognizing the importance of facilitating access to health facilities for deliveries, efforts need to be expanded to train a cadre of skilled birth attendants who can work within the villages to assist home based deliveries where the risk of complications is so high. Such skilled TBAs also can provide advice to pregnant women and assist in assessing complications, so that women with potentially dangerous pregnancies are encouraged to go to the health facility for care before they begin the labor and delivery process.

The researcher observed that TBAs were also giving local herbs to their clients and they were not aware of most diseases common to mothers. This therefore identifies the need for TBAs to be informed about how certain diseases that are common among pregnant women and mothers occur and how they can be prevented and treated, since they demonstrated a high level of ignorance as regards dangers associated with failure to attend ANC early. Additionally, TBAs need to be informed about when and where to refer women in case of prolonged obstructed labor and other emergencies.

In spite of the continued occurrences of home deliveries, some mothers do acknowledge the dangers associated with seeking primitive ANC alternatives. They seemed not to be aware of labour complications could not be adequately managed at home and the mother would be at risk of getting tetanus and over bleeding.

4.5.2 Use of herbs
The use of herbs is a common phenomenon among traditional African women. The study findings indicated use of local herbs (strawberry leaves) by most women in the area of study as an alternative to seeking ANC from health facilities. It was reported that, the majority of women and mothers take traditional medicine during pregnancy, labor, or delivery. These were taken orally and bath tonics. Some mothers bathe their children with herbs for the first two years.
According to a nurse in a public hospital, nearly all women took herbs during pregnancy to prevent diseases or bad luck. Other reasons cited for taking herbal preparations included cleaning the baby in the womb, soothing body pains, treating malaria and preparing the mother for delivery by giving her strength and softening her pelvic bones. One woman in a private clinic reported that using traditional medicine such as local herbs helps in making one deliver normally. Other reasons as cited for their use of herbs included stimulating/intensifying contractions; quicken healing and readjusting the baby’s breech position.

There was a general feeling in the focus group discussions that women should use local herbs to help with minor problems during early pregnancy. However, it was observed that this prevents them from attending antenatal care during that period. To emphasize the reasons why women use herbs, another respondent stressed these herbs treat syphilis which is greatly feared by all communities because it is known that it affects both the mother and the baby. They felt that none of the drugs given to them in the health facility give them strength. Such feeling has greatly influenced ANC attendance.

Although some traditional practices and beliefs are fading away, most women in Kisoro believe in the use of traditional herbs which are given to them by the mothers-in-law, TBAs and older women in the community. The women and men do not see the need for going to ANC early when it is made safe by the herbs.

4.5.3 Traditional healers
The use of traditional healers was reported to be an ANC alternative by a number of women in the area of study. The respondents stated that, the use of traditional healers is imbedded in the beliefs of many women in Kisoro and Nyakabande in particular. Some women reported the use of traditional healers because of the fear for witchcraft by other people in the village. In an FGD session for men it was revealed that some mothers use traditional healers especially if the mother had a miscarriage in the previous pregnancy. To demonstrate the high use of traditional healers in the area of study, one district official stated that, in search for traditional healers, many women go as far as DRC.
While explaining the use of traditional healers by some women, a pregnant woman at Kisoro hospital stated; some women visit traditional healers because of having failed to conceive after a long period of time or having a child with frequent sickness and sometimes having pregnancy related complications that trained health providers cannot address.

The above demonstrates a high level of ignorance among many women in the rural Nyakabande and Chahi. However, this demonstrates the laxity of the health sector in Uganda for the level sensitization to the local communities as regards the benefits of seeking ANC in health units is still low.

**4.6. Distances to ANC health facilities.**

Seeking and utilization of ANC services by pregnant women and mothers is determined by a number of factors of which distance and mode of transport is one of them. To establish what influences women to seek ANC alternatives and attend late, the researcher took the task of knowing how far the ANC attendees had traveled to the clinic/hospitals. The study findings on the availability and distances of antenatal care clinics revealed that women cover long distances to the health facility where antenatal care services are provided. This was expressed by respondents during questionnaire interviews, in depth interviews and focus group discussions.

From the questionnaire interviews with ANC attendees it was noted that the majority of women live at a distance of 0.5km from the nearest health centre where antenatal care services are available. On the overall, less than 50% of the ANC attendees indicated that they live between 0-5km from the health facility where they could get antenatal care. The other half of the women lives beyond a distance of 5km.

On comparison between the two groups of ANC attendees, it was revealed that 17.6% of the early starters lived between 0-5km from ANC health facility. More than a half of the first trimesters /early starters live beyond a distance of 5km from the ANC clinic. On the other hand, 15.7% of the late trimesters/starters indicated that they lived between 0-5km from the health facility while 73.6 % of them lived beyond a distance of 5km. the figure below illustrates distance from Health facility.
Table 7: Distribution of ANC attendees by distance to health facility

<table>
<thead>
<tr>
<th>Distance</th>
<th>Group of ANC clients</th>
<th>Early starters</th>
<th>Late starters</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO</td>
<td>%</td>
<td>NO</td>
<td>%</td>
</tr>
<tr>
<td>0-5</td>
<td>3</td>
<td>17.6</td>
<td>9</td>
<td>15.7</td>
</tr>
<tr>
<td>6-10</td>
<td>11</td>
<td>64.7</td>
<td>42</td>
<td>73.6</td>
</tr>
<tr>
<td>11-15</td>
<td>2</td>
<td>11.7</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>&gt;15</td>
<td>1</td>
<td>5.8</td>
<td>2</td>
<td>3.5</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>100</td>
<td>57</td>
<td>100</td>
</tr>
</tbody>
</table>

4.7. The mode and means of transport used by ANC attendees

The majority of respondents indicated that they walk to antenatal care health facilities when they want antenatal care services. In the in depth interviews with ANC attendees it was stated that “most women who came to the antenatal care health facility did so on foot”. Some commented ‘I had to walk from my village to get here to the hospital’. One of the respondents mentioned that “most of the women you see here have come on foot”. There is no alternative transport means or they cannot afford to hire a bicycle.”

One participant indicated in the focus group discussion “When women want to get to antenatal care at hospitals they walk from here to there,” Another woman said, very few women go to the health centers by bicycles or motorcycles. Most of them do not own bicycles or cannot afford to hire one which is usually 1,000 ug shs from here to the health facility. (FGD woman in Chahi)

Exit interviews with ANC attendees revealed that a bigger proportion of respondents had to walk to antenatal care hospital/facility. In depth interviews with ANC attendees, many mothers reaffirmed that they walk from their homes to hospital for ANC services. One woman pointed out that;

“Most of the women you see here have come on foot; either no alternative transport means or they cannot afford even hiring bicycle”
On the overall, 51.4% of the respondents indicated that they walked to the health facility, followed by 32.4% who had used bicycles. Only 10.8% of them had used motorcycles while 5.4% of the attendees used motor vehicle to get to the health facility.

Similar pattern was shown when the two groups of ANC attendees were compared. The majority from both groups gets to the health facility on foot; 58.8% for the early and 49% for late starters respectively. 29.4% of the early starters had come by bicycles as compared to 33.3% for the late starters. There were 5.8% among the early starters who had used a motor vehicle while 5.3% of the late starters had come by a motor vehicle as illustrated by the figure below.

Table 8: Percent distribution of ANC attendees by travel means

<table>
<thead>
<tr>
<th>Travel means</th>
<th>Group of ANC clients</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Early starters</td>
<td>Late starters</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------</td>
<td>-------------</td>
<td>--------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>%</td>
<td>NO</td>
<td>%</td>
<td>NO</td>
<td>%</td>
</tr>
<tr>
<td>Walking</td>
<td>10</td>
<td>28</td>
<td>38</td>
<td>51.4</td>
<td></td>
</tr>
<tr>
<td>Bicycle</td>
<td>5</td>
<td>19</td>
<td>24</td>
<td>32.4</td>
<td></td>
</tr>
<tr>
<td>Motorcycle</td>
<td>1</td>
<td>7</td>
<td>8</td>
<td>10.8</td>
<td></td>
</tr>
<tr>
<td>Motor vehicle</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5.4</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td><strong>57</strong></td>
<td><strong>74</strong></td>
<td><strong>100</strong></td>
<td></td>
</tr>
</tbody>
</table>

The above results portray that; most of the interventions in Uganda to ensure adequate health service delivery have focused on addressing the supply side barriers, with very few attempts at addressing the demand side. The Health Systems in rural areas like Kisoro need to develop an intervention that attempts to reduce demand side barriers such as access to transport, and the cost of seeking services as well as supply side factors such as lack of adequate supplies and equipment and poor attitudes of health workers.
CHAPTER FIVE

RESEARCH DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the discussion of the research findings, conclusions and recommendations in relation to the research objectives. The results are discussed in line with the research findings as presented in chapter four.

5.1 Alternatives to ANC in Kisoro District

The research findings show that; majority of the ANC attendees had other alternatives to ANC they were undertaking in their early phases of pregnancy. These included use of local herbs, traditional birth attendants and traditional healers. This implies that, cultural beliefs are still a determining factor to women’s decision in seeking ANC services.

The study established ill treatment of ANC attendees by ANC providers. Some ANC providers are rude; abuse mothers and sometimes beat them especially at that critical time when a mother is having labor pains. This demonstrated less ethical values among health providers. In addition research findings obtained, there was an observation some mothers seek ANC alternatives because the husbands were refusing to accompany or even block them from attending antenatal care. This was because some husbands are afraid of testing for HIV/AIDS and yet it is a requirement in all ANC facilities in Uganda.

5.2 Antenatal Care late attendance

The study findings also illustrate that almost all of the respondents accessed ANC late in their fifth and sixth month contrary to the recommended 0-16 weeks by the government of Uganda.

There is evidence to suggest that mothers seek ANC late because of poverty. The study findings show that many of the respondents’ income is low, so mothers fail to raise money for transport, lunch while on ANC visit and lack what to put on like maternity dresses and knickers. Thus some mothers seek ANC late because the husbands cannot raise money for the wife to use going to Hospital/clinic.
The data obtained from the study show that distances from health units and hospitals contribute to mothers seeking ANC late. Many of the ANC health facilities are within a distance of over 5km to 10km. From data analyzed the biggest percentage of ANC attendees traveled longer distances to the hospital/health facility. Moreover Kisoro is very mountainous, with very bad terrain when it is rainy season some roads are impassable. This suggests lack of adequate means of transport in some parts of the area of study was a hindrance to accessing ANC services.

The findings indicated that women in the area of study are engaged in both in-home and tedious out-door farming activities for which they allocate little time for seeking medical care in general. Related to this; a study in Ethiopia, established that heavy workload, lack of access to health services, poverty, traditional practices, poor social status and decision-making power, and lack of access to education are among the highly prevalent socio-cultural factors that potentially affect the health of women (Marina and Mugoni:2005).

A number of respondents attended ANC at least once before the third trimester of pregnancy and approximately half made their first visit early-during or before the fourth month of gestation, which is consistent with other reports of ANC attendance. However, no evidence was found of an association between early ANC attendance and uptake of intermittent preventive treatment (IPTp), a key malaria preventive strategy. This suggests that efforts to encourage timely ANC attendance alone are unlikely to improve the uptake of this intervention.

According to the National Policy Guidelines and Service Standards for Sexual Reproductive Health and Rights issued by the Uganda Ministry of Health (UMOH: 2006:49), women should have at least four ANC visits during pregnancy. However, the type and quality of ANC services that the women reported receiving were inconsistent and inadequate. Fewer than half received any type of immunization services, and a minority of women reported that the health worker listened for the fetal heartbeat. A few women had their blood pressure checked, were advised to eat a balanced diet, or were weighed. No hemoglobin tests, urine analysis, syphilis screening, voluntary counseling and testing for HIV, or counseling on risk factors and warning signs and symptoms during pregnancy were reported.
The findings also suggest that other factors, aside from service availability, may drive service utilization differentials between and among rural women. These factors include disparities in economic and cognitive access, perceived quality of ANC services, and differences in individual knowledge and attitudes towards ANC services. A comprehensive conceptual framework of how different dimensions of access to and quality of health services affect service utilization in Kisoro. Such a framework should also take into account the emergence of non-public sectors that are increasingly involved in the provision of health services. A more comprehensive understanding of the service environment, consisting of all sectors and how different dimensions of service provision may affect utilization, will guide efforts to improve service utilization.

The study established that, late attendance was attributed to women seeking alternatives to ANC. This is a clear marker of how health and social systems threaten the capacity of women to deliver safely. While not attending ANC services as presented by the respondents, its true causes are grounded in women’s acute socio-economic vulnerability which denies them access to timely and appropriate care. The severe shortage of qualified health workers, unavailability of transport to facilitate emergency referrals, searing poverty that denies people to afford health care; lack of education regarding basic reproductive health and the complications of childbirth. More tragically, however, lack of adequate ANC services has contributed to the continuing and unabated acceptance that women naturally die in childbirth, or are left with devastating disabilities.

Age was identified as a factor in ANC late attendance, slightly more than half of the women in the study whose age was reported were less than 30, and the majority of respondents were on their third pregnancy. The findings indicate the potentially serious health effects of early pregnancy. It also highlights the need for girls and young women to possess the fundamental rights to determine freely when they will marry and when they will begin having children. While it remains vital to recognize the severe impact of ANC late attendance on young girls, the findings expand on the widely held assumption that ignorance on seeking proper and adequate ANC services predominantly affects very young women on their first pregnancy.
The findings of the study highlighted that those women who are slightly educated have maximally availed delivery care services when compared to less educated and illiterate women. Significant differences have been observed according to women’s education in consulting a health professional. Women with only primary and middle school education are less likely to see a professional in connection with their pregnancy and delivery. Attainment of education has a major influence on utilization of maternal health care services.

In terms of delivery assistance, antenatal checkup and place of delivery, there appears to be a big gap according to the women’s standards of living. Women from poorer sections of the population are less likely to avail of maternal health care services than rich women. The reason might be that the cost of delivery care at private or public medical facilities is high. Poor families do not find themselves in a position to be able to bear the cost of delivery care service. Even if they wish to avail the public sector medical facilities, they have to bear the cost of medicines and are expected to give gift in kind or cash to the attending doctors and other paramedical staff.

A quick review of research findings shows that some pregnant women received antenatal care from health units. Paradoxically, when it comes to delivery time, a glaring smaller proportion of these women give birth in these units, instead they deliver elsewhere. The enthusiasm to establish why some women attend antenatal care in health units and fail to deliver in these same health units has not been carried out by Kisoro District health authorities. This calls for detailed study on what encourages mothers to go for antenatal care and not deliver from hospitals.

5.3 Respondents recommendations on how to improve ANC utilization in Kisoro

The study identified that it was significant to provide women with education and counseling on pregnancy, labor, and delivery. In particular, the danger signs of pregnancy and labor and the need for skilled delivery assistance should be emphasized. This means that Women in Nyakabande, Chahi and Kisoro in general should be encouraged strongly to deliver in a health facility so they can receive emergency care promptly when needed.

Public education and programs to prevent women from seeking dangerous ANC alternatives must therefore, target all women of reproductive age. In particular, maternal health services
should provide accurate and timely counseling to women as well as key decision makers, such as husbands, mothers-in-law and parents on the importance of utilizing ANC in early days of pregnancy and delivery, and encourage women and their families to have a birth plan in place as well as provisions for handling emergencies.

Training for health workers on clinical skills, as well as on client-provider interaction, was suggested as critical to ensure high quality, professional ANC and delivery services. Supplies and equipment must be available to health workers, and supportive supervision instituted to monitor service delivery standards. Health workers, in turn, need to be supported through training and supervision to provide essential, adequate, services to ANC attendees.

The Government should pursue its efforts to improve the availability of ANC services at existing and/or new health facilities, particularly those that are offering ANC services. Any interventions that aim to increase maternal health service utilization should include efforts to target women of lower health status and educational achievements, as well as areas where women in general do not have high educational achievements.

TBAs also need to be informed about how pregnancy complications occurs and how it can be prevented and treated, since there were many misconceptions about them by hospital and clinic workers. Additionally, TBAs need to be informed about when and where to refer women in case of prolonged obstructed labor and other emergencies.

Broad-based educational and advocacy programs are needed to dispel negative myths about seeking ANC at health units as well as to encourage social support for girls and women living with HIV to always visit health facilities. Consistent and reliable information on where and when services are available also needs to be disseminated to assist women to access treatment quickly. Radio programmes and outreach through faith-based institutions may represent effective communication channels to reach women in rural Kisoro.

To successfully manage and promote safe motherhood there is need for comprehensive strategies not just for antenatal care, but also intrapartum and post-partum care by skilled health
professionals, midwives, nurse-midwives or doctors backed up by hospital care and expand access to these services to all child-bearing women. This is because effective and efficient strategies are known to dramatically reduce maternal mortality and morbidity. By safeguarding maternal health and well-being the health, economic and societal benefits will be enormous, far outweighing any investments made. However, this requires strong political will and commitment.

From the findings, it is clear that ANC programmes in Kisoro must address the reduction of maternal mortality from within and without the health care system. The low ANC rate found in the survey is an indication that, there is need for community outreaches about the importance of ANC to those most at risk for not being aware of or able to access appropriate care. In Kisoro efforts need to be intensified. There is also need to focus on women with no formal education and particularly those who have already had lost a newborn or young infant. Although the perceived expense of the ANC may hinder attendance, it is uncertain that free ANC would increase coverage substantially because transport costs, physical inability to travel long distances, and a perceived negative attitude of health workers and poor quality of care would remain barriers.

5.4 Conclusions
The health and survival of newborns in Uganda has gone unnoticed for too long. However both immediate and long term opportunities exist to improve the situation at all levels. Uganda has many policies in place but the utilization of ANC services illustrates a critical policy gap, especially in regard to the early starting antenatal care visits.

Existing policies and guidelines have not been fully disseminated, integrated or implemented by service providers, leading to poor and inconsistent utilization of ANC services especially in rural areas like Kisoro. Existing policy implementation is poor partly due to limited funding of the overall health sector and services delivery at the district level. There is an opportunity for policy makers to take a leading role to improve utilization of ANC from the highest level in both public and private facilities. This can be achieved through making and disseminating appropriate
policies, improving staffing and supervision in facilities and creating an enabling environment for community level care.

5.5 Recommendations

The study findings unveiled a number of gaps in the provision of ANC services and midwifery educational programmes; gaps in information dissemination systems to pregnant women and structural and organizational barriers relating to accessibility of ANC services. Thus in order to change the habit of women seeking alternatives and attending ANC late, the study recommended;

5.5.1. Health workers should be encouraged to take opportunity of the numbers of mothers that attend ANC services and educate them on the unpredictability of complications of pregnancy and delivery. This opportunity should also be used to impress upon the mothers, their spouses and community the importance of having a planned pregnancy and hospital/clinic deliveries.

5.5.2. Having realized the weaknesses in the health service in Kisoro District, there is need for training health workers providers in the concept of focused ANC, with specific emphasis on scheduling of visits, continuity of provider for each client, incorporating PMTCT and developing an Individual Birth Plan (IBP) to respond to existing knowledge gaps.

5.5.3. To improve women access and utilization of ANC services in rural areas, 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.

5.5.4. 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.
5.5.5. Considering the study findings that are not unique to Kisoro but also a true reflection of other parts of rural Uganda, the study suggests that strategies should be developed for empowering communities to overcome obstacles to reach ANC. These may include using community channels to identify pregnant women, targeting those more likely to be nonusers, such as adolescents and women who are poor and single, and making the services more responsive to the needs of women.

5.5.6. Quality and performance improvement to mitigate factors affecting performance of ANC providers were identified as a way of ensuring quality of ANC. This interdisciplinary approach should include key stakeholders, including district and regional health management teams, to identify service gaps. Based on the gaps identified, priority interventions should be implemented focusing on a range of performance factors such as supervision, knowledge and skills; development, and availability of key resources, supplies and equipment to ensure sustainability and long-term results.

5.5.7. The study established that many of the medical personnel handle their clients in an inhuman manner a sign of poor client handling. Training for health workers on clinical skills, as well as on client-provider interaction, is critical to ensure high quality, professional ANC and delivery services.

5.5.8. 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.

5.5.9. 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. One woman explained: “They 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”.

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5.6.0. 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.
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Determining Sample Size

Glenn D. Israel

Perhaps the most frequently asked question concerning sampling is, "What size sample do I need?" The answer to this question is influenced by a number of factors, including the purpose of the study, population size, the risk of selecting a "bad" sample, and the allowable sampling error. Interested readers may obtain a more detailed discussion of the purpose of the study and population size in Sampling The Evidence Of Extension Program Impact, PEOD-5 (Israel, 1992). This paper reviews criteria for specifying a sample size and presents several strategies for determining the sample size.

SAMPLE SIZE CRITERIA

In addition to the purpose of the study and population size, three criteria usually will need to be specified to determine the appropriate sample size: the level of precision, the level of confidence or risk, and the degree of variability in the attributes being measured (Miaoulis and Michener, 1976). Each of these is reviewed below.

The Level Of Precision

The level of precision, sometimes called sampling error, is the range in which the true value of the population is estimated to be. This range is often expressed in percentage points, (e.g., ±5 percent), in the same way that results for political campaign polls are reported by the media. Thus, if a researcher finds that 60% of farmers in the sample have adopted a recommended practice with a precision rate of ±5%, then he or she can conclude that between 55% and 65% of farmers in the population have adopted the practice.

The Confidence Level

The confidence or risk level is based on ideas encompassed under the Central Limit Theorem. The key idea encompassed in the Central Limit Theorem is that when a population is repeatedly sampled, the average value of the attribute obtained by those samples is equal to the true population value. Furthermore, the values obtained by those samples are distributed normally about the true value, with some samples having a higher value and some obtaining a lower score than the true population value. In a normal distribution, approximately 95% of the sample values are within two standard deviations of the true population value (e.g., mean).

In other words, this means that, if a 95% confidence level is selected, 95 out of 100 samples will have the true population value within the range of precision specified earlier (Figure 1). There is always a chance that the sample you obtain does not represent the true population value. Such samples with extreme values are represented by the shaded areas in Figure 1. This risk is reduced for 99% confidence levels and increased for 90% (or lower) confidence levels.
Using A Sample Size Of A Similar Study

Another approach is to use the same sample size as those of studies similar to the one you plan. Without reviewing the procedures employed in these studies you may run the risk of repeating errors that were made in determining the sample size for another study. However, a review of the literature in your discipline can provide guidance about "typical" sample sizes which are used.

Using Published Tables

A third way to determine sample size is to rely on published tables which provide the sample size for a given set of criteria. Table 1 and Table 2 present sample sizes that would be necessary for given combinations of precision, confidence levels, and variability. Please note two things. First, these sample sizes reflect the number of obtained responses, and not necessarily the number of surveys mailed or interviews planned (this number is often increased to compensate for nonresponse). Second, the sample sizes in Table 2 presume that the attributes being measured are distributed normally or nearly so. If this assumption cannot be met, then the entire population may need to be surveyed.

Using Formulas To Calculate A Sample Size

Although tables can provide a useful guide for determining the sample size, you may need to calculate the necessary sample size for a different combination of levels of precision, confidence, and variability. The fourth approach to determining sample size is the application of one of several formulas (Equation 5 was used to calculate the sample sizes in Table 1 and Table 2).
Table 1. Sample size for ±3%, ±5%, ±7% and ±10% Precision Levels Where Confidence Level is 95% and p=0.5.

<table>
<thead>
<tr>
<th>Size of Population</th>
<th>Sample Size (n) for Precision (e) of:</th>
</tr>
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<tbody>
<tr>
<td>500</td>
<td>222 145 83</td>
</tr>
<tr>
<td>600</td>
<td>240 152 86</td>
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<td>1,099 204 100</td>
</tr>
<tr>
<td>&gt;100,000</td>
<td>1,111 204 100</td>
</tr>
</tbody>
</table>

* = Assumption of normal population is poor (Yamane, 1967). The entire population should be sampled.

Table 2. Sample size for ±5%, ±7% and ±10% Precision Levels Where Confidence Level is 95% and p=0.5.

<table>
<thead>
<tr>
<th>Size of Population</th>
<th>Sample Size (n) for Precision (e) of:</th>
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<tbody>
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<td>125</td>
<td>96 78 56</td>
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<td>150</td>
<td>110 86 61</td>
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<td>175</td>
<td>122 94 64</td>
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<td>200</td>
<td>134 101 67</td>
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<tr>
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<td>212 140 82</td>
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To illustrate, suppose we wish to evaluate a statewide Extension program in which farmers were encouraged to adopt a new practice. Assume there is a large population but that we do not know the variability in the proportion that will adopt the practice; therefore, assume p=0.5 (maximum variability). Furthermore, suppose we desire a 95% confidence level and ±5% precision. The resulting sample size is demonstrated in Equation 2.

\[ n_0 = \frac{Z^2pq}{e^2} = \frac{(1.96)^2(0.5)(0.5)}{(0.05)^2} = 385 \text{ farmers} \]

Finite Population Correction For Proportions

If the population is small then the sample size can be reduced slightly. This is because a given sample size provides proportionately more information for a small population than for a large population. The sample size \( (n_0) \) can be adjusted using Equation 3.

\[ n = \frac{n_0}{1 + (n_0 - 1)/N} \]

Where \( n \) is the sample size and \( N \) is the population size.
Suppose our evaluation of farmers' adoption of the new practice only affected 2,000 farmers. The sample size that would now be necessary is shown in Equation 4.

\[ n = \frac{n_0}{1 + \left( \frac{n_0 - 1}{N} \right)} = \frac{385}{1 + \left( \frac{385 - 1}{2000} \right)} = 323 \text{ farmers} \]

As you can see, this adjustment (called the finite population correction) can substantially reduce the necessary sample size for small populations.

A Simplified Formula For Proportions

Yamane (1967:886) provides a simplified formula to calculate sample sizes. This formula was used to calculate the sample sizes in Tables 2 and 3 and is shown below. A 95% confidence level and \( P = .5 \) are assumed for Equation 5.

\[ n = \frac{N}{1 + N(e)^2} \]

Where \( n \) is the sample size, \( N \) is the population size, and \( e \) is the level of precision. When this formula is applied to the above sample, we get Equation 6.

\[ n = \frac{N}{1 + N(e)^2} = \frac{2000}{1 + 2000(0.05)^2} = 333 \text{ farmers} \]

Formula For Sample Size For The Mean

The use of tables and formulas to determine sample size in the above discussion employed proportions that assume a dichotomous response for the attributes being measured. There are two methods to determine sample size for variables that are polytomous or continuous. One method is to combine responses into two categories and then use a sample size based on proportion (Smith, 1983). The second method is to use the formula for the sample size for the mean. The formula of the sample size for the mean is similar to that of the proportion, except for the measure of variability. The formula for the mean employs \( \sigma^2 \) instead of \( (p \times q) \), as shown in Equation 7.

\[ n_0 = \frac{Z^2 \sigma^2}{e^2} \]

Where \( n_0 \) is the sample size, \( Z \) is the abscissa of the normal curve that cuts off an area \( \alpha \) at the tails, \( e \) is the desired level of precision (in the same unit of measure as the variance), and \( \sigma^2 \) is the variance of an attribute in the population.

The disadvantage of the sample size based on the mean is that a "good" estimate of the population variance is necessary. Often, an estimate is not available. Furthermore, the sample size can vary widely from one attribute to another because each is likely to have a different variance. Because of these problems, the sample size for the proportion is frequently preferred.

OTHER CONSIDERATIONS

In completing this discussion of determining sample size, there are three additional issues. First, the above approaches to determining sample size have assumed that a simple random sample is the sampling design. More complex designs, e.g., stratified random samples, must take into account the variances of subpopulations, strata, or clusters before an estimate of the variability in the population as a whole can be made.

Another consideration with sample size is the number needed for the date analysis. If descriptive statistics are to be used, e.g., mean, frequencies, then nearly any sample size will suffice. On the other hand, a good size sample, e.g., 200-500, is needed for multiple regression, analysis of covariance, or log-linear analysis, which might be performed for more rigorous state impact evaluations. The sample size should be appropriate for the analysis that is planned.

In addition, an adjustment in the sample size may be needed to accommodate a comparative analysis of subgroups (e.g., such as an evaluation of program participants with nonparticipants). Sudman (1976) suggests that a minimum of 100 elements is needed for each major group or subgroup in the sample and for each minor subgroup, a sample of 20 to 50 elements is necessary. Similarly, Kish (1965) says that 30 to 200 elements are sufficient when the attribute is present 20 to 80 percent of the time (i.e., the distribution approaches normality). On the other hand, skewed distributions can result in serious departures from normality even for moderate size samples (Kish, 1965:17). Then a larger sample or a census is required.

Finally, the sample size formulas provide the number of responses that need to be obtained. Many researchers commonly add 10% to the sample size to compensate for persons that the researcher is unable
to contact. The sample size also is often increased by 30% to compensate for nonresponse. Thus, the number of mailed surveys or planned interviews can be substantially larger than the number required for a desired level of confidence and precision.

ENDNOTES

1. The area $\alpha$ corresponds to the shaded areas in the sampling distribution shown in Figure 1.

2. The use of the level of maximum variability ($P=.5$) in the calculation of the sample size for the proportion generally will produce a more conservative sample size (i.e., a larger one) than will be calculated by the sample size of the mean.

REFERENCES


APPENDIX II: QUESTIONNAIRE FOR ANC CLIENTS

Dear respondent, you have been selected to participate in this Post Graduate Research Study, entitled “Factors influencing utilization of antenatal care services in rural areas: case study of Kisoro District” by a Master of Social Sector Planning and Management Student from Makerere University.

You are requested to answer the questions as best as you can and your answers will be treated with utmost confidentiality.

1. Name of the respondent

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

2. Area of residence

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

3. Sex

Male ☐ female ☐

4. Age


5. Occupation

House wife ☐ farmer ☐ Business ☐ Civil servant ☐

Others, specify ........................................................................................................................................................

6. Marital status

Married ☐ Single ☐ Divorced ☐ Widowed ☐

7. Religion

Christian ☐ Muslim ☐ Traditionalist ☐

8. Level of education

Primary level ☐ Secondary ☐ Tertiary institution ☐ none ☐

9. Level of income

Fairly high ☐ Low ☐ High ☐
10. a) Number of pregnancies you have had
   1-2 [ ] 3-4 [ ] More than 4 [ ]
b). Number of children born to you
   1-2 [ ] 3-4 [ ] None [ ]
11. How old is your pregnancy?
   1-2 months [ ] 3-4 months [ ] 5-6 months [ ] 7-8 months [ ] 9 months [ ]
12. Have you been using ANC services?
   Yes [ ] No [ ]
   If no, what other alternatives have you been using?
   …………………………………………………………………………………………………………
13. a) How far is it from your home to this Health Facility?
   0-5 km [ ] 6-10km [ ] more than 10 kms [ ]
b). What mode of transport have you used to this health facility?
   …………………………………………………………………………………………………………
14. a) What are the opening days for ANC at this facility?
   Daily [ ] Weekly [ ] Twice a week [ ] don’t know [ ] Monthly [ ]
b). Are the opening days convenient for you?
   Yes [ ] No [ ]
   Give reasons for your answer above
   …………………………………………………………………………………………………………
15. State the number of times you visit a health facility for antenatal care services
   …………………………………………………………………………………………………………
16. a) Do you know why a pregnant woman should go for antenatal care early in pregnancy?
   Yes [ ] No [ ]
   Give reasons why you go for antenatal care
   …………………………………………………………………………………………………………
b). State the problems a pregnant woman may face when she starts ANC late in pregnancy

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

17. Mention the antenatal care services that are offered to pregnant women at this health facility

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

18. In your view, state the factors that influence women’s access to antenatal care services in your area

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

19. State the challenges faced by pregnant women in relation to accessing antenatal care services in Kisoro

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

20. In your view, state how women’s access to antenatal care can be improved in your area

........................................................................................................................................................................................................................................
APPENDIX III: QUESTIONNAIRE FOR ANC PROVIDERS

Dear respondent, you have been selected to participate in this Post Graduate Research Study, entitled “Factors influencing utilization of antenatal care services in rural areas: case study of Kisoro District.” By a Master of Social Sector planning and management student from Makerere University

You are requested to answer the questions as best as you can and your answers will be treated with utmost confidentiality.

<table>
<thead>
<tr>
<th>Facility name</th>
<th>Facility code</th>
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1. Sex of the respondent
Male □       Female □

2. Age
18-22 □ 23-28 □ 29-33 □ 34-38 □ 39-43 □ 44-48 □

3. What is your cadre?
Registered midwife □   Registered nurse □   Public Health nurse □   Clinical officer □
Medical Assistant □

4. What is your Professional qualification?
Certificate in nursing □   Certificate in Nursing/Midwife □   Degree Nursing/Midwife □
Certificate in Clinical Medicine □
Others, Specify………………………………………………………………………………………………………………

5. How long have you served?
0-5 years □ 6-10 years □ more than 10 years □

6. Have you ever trained in Reproductive Health with ANC?
   Yes □ No □

7. How many health workers provide ANC services at this health facility?
   One □ Two □ more than two, specify □

8. How is the level of stuffing at this facility?
   Adequate □ Fairly adequate □ Not adequate □

9. Are ANC services integrated with other RH services at this facility?
   Yes □ No □

10. How many ANC clients do you see in a…………………
    Per clinic day □ per week □ Per month □

11. When do pregnant women come for ANC?
    1-2 months □ 3-4 months □ 5-6 months □ 7-8 months □ 9 months □

12. Are there ANC alternatives that women use in Kisoro?
    Yes □ No □
    If yes, what alternatives do pregnant women use before coming for ANC

13. Are you able to manage all your ANC clients in time?
    Yes □ No □

14. What are the opening days for the ANC?
    Daily □ Twice a week □ weekly □ Monthly □

15. What are the operational hours for ANC clinic at this health facility?
    Morning hours only □ Afternoon only □ The entire day □
    Others, specify……………………………………………………………………………………………………

16. Are the ANC opening days/hours convenient for you?
    Yes □ No □
Give reasons for your response for the above question

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

17. According to you, are these ANC opening days convenient to the clients?
Yes ___ No ___
Give reasons for your response

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

18. What do you examine when conducting ANC?
Laboratory ___ Physical examination ___ both ___
Others, specify ............................................................................................................................

19. Is VCT offered to ANC clients at this facility?
Yes ___ No ___

20. Is ARVs given to HIV positive mothers?
Yes ___ No ___

21. State other services rendered to ANC clients at this facility?
........................................................................................................................................

22. What do you educate and communicate to your clients during ANC clinics?
........................................................................................................................................

23. Have you ever referred an ANC client to the next level of service delivery/hospital for assistance?
Yes ___ No ___
Give reasons why the referral was made
........................................................................................................................................

24. Is there a copy of the Reproductive Health policy and guidelines at this facility?
Yes ___ No ___
If yes, how are these guidelines useful to you?
25. Why do you think pregnant women start ANC late in pregnancy?

……………………………………………………………………………………………………………………………………………………………………………..

26. What do you tell pregnant women who start ANC late in pregnancy?

27. Are there any barriers to women’s utilization of ANC services in Kisoro?

Yes □ No □

If yes, state them

……………………………………………………………………………………………………………………………………………………………………………..

28. Are there any interventions in place to improve women’s utilization of ANC services in Kisoro?

Yes □ No □

If yes, state them

……………………………………………………………………………………………………………………………………………………………………………..

29. State what the government has done to ensure that pregnant women effectively access antenatal care services in your district

……………………………………………………………………………………………………………………………………………………………………………..

Thank you for your cooperation.
APPENDIX IV: FOCUSED GROUP DISCUSSION GUIDE FOR WOMEN IN THE VILLAGE

1. Do you know of the ANC services in your area?
   . Mention the available facilities
   . Services offered

2. What is the right time for pregnant women to start seeking ANC services?
   . How many times do you go for ANC services as a pregnant woman?
     In which month of pregnancy?
     .why did you go for ANC in that month?

3. How and where do women get information about ANC in your area?

4. Are women aware of dangers associated with starting ANC late in pregnancy? What these dangers?

5. Are there any traditional practices done by pregnant women in your area? What are these practices?

6. Comment on ANC services in your area in line with opening days/hours, are they convenient?

7. Do pregnant women consult TBAs in your area and why?

8. What is the attitude of men to their wives who seek ANC?

9. What are the barriers to women’s utilization of ANC services in your area?

10. What measures if any are in place to improve women’s utilization of ANC services?

11. What in your opinion should be improved?

Thank you for your cooperation.
APPENDIX V: INDEPTH INTERVIEWS FOR ANC PROVIDERS

1. What is the attitude of pregnant women toward ANC services in your area?
   - Do women seek antenatal care services in your area/District? If Yes or No, give reasons
   - How early do women go for Antenatal care? Why do they go at that time? (In which month of pregnancy? Why earlier or later?
   - How often do pregnant women go for antenatal care? Why do they go at that time?
   - Do women think Antenatal care helps their pregnancy?
   - How important do women seem to think Antenatal care is?
   - If women do not go for Antenatal care what are their reasons?
   - Are all mothers abiding to their clinic dates?

2. What do you do to encourage women to always seek ANC services early in pregnancy?

3. Are women and their husbands aware of the advantages of starting ANC early and the disadvantages of starting ANC late in pregnancy?

4. Are the ANC services adequately available to all pregnant women in Kisoro?
   - Do women travel long distances for ANC?
   - Are the facilities enough for women?

5. What do you think are the barriers to women’s utilization of ANC services in Kisoro District?

6. What solutions are in place to improve women’s access and utilization of ANC services in Kisoro?

7. Do traditional beliefs influence women’s utilization of ANC services in Kisoro?

8. What are the opening days for ANC in this facility? Are these days convenient for ANC clients?

Thank you for your cooperation.
APPENDIX VI: FOCUSED GROUP DISCUSSION GUIDE FOR MEN IN THE VILLAGE

1. Do you know of the ANC services in your area? 
   Mention the available facilities and services offered

2. What is the right time for pregnant women to start seeking ANC services?

3. How and where do women get information about ANC in your area?

4. What kind of services do they receive in Antenatal care?

5. Are you aware of dangers associated with starting ANC late in pregnancy? What are these dangers?

6. Are there any traditional practices done by pregnant women in your area? What are these practices?

7. Comment on ANC services in your area in line with opening days/hours, are they convenient?

8. Do pregnant women consult TBAs in your area and why?

9. What is your view as regards women’s utilization of ANC services?

10. What are the barriers to women’s utilization of ANC services in your area?

11. What measures if any are in place to improve women’s utilization of ANC services?

Thank you for your cooperation.
APPENDIX VII: INTERVIEW QUESTIONNAIRE FOR TBAs

Dear respondent, you have been selected to participate in this Post Graduate Research Study, entitled “Factors influencing utilization of antenatal care services in rural areas: case study of Kisoro District.” By a Master of Social Sector planning and management student from Makerere University.

You are requested to answer the questions as best as you can and your answers will be treated with utmost confidentiality.

1. Sex of the respondent
   Male ☐     Female ☐

2. Age
   18-22 ☐  23-28 ☐  29-33 ☐  34-38 ☐  39-43 ☐  44-48 ☐

3. How long have you served?
   0-5 years ☐  6-10 years ☐  more than 10 years ☐

4. Have you ever trained in Reproductive Health with ANC?
   Yes ☐  No ☐

5. How many health workers provide ANC services with you?
   One ☐  Two ☐  more than two, specify ☐

6. How many ANC clients do you see …………………
   Clinic day ☐ per week ☐ per month ☐

7. Are you able to manage all your ANC clients in time?
   Yes ☐  No ☐

8. What are the opening days for the ANC?
   Daily ☐  Twice a week ☐ weekly ☐  Monthly ☐

9. Why do women come to you instead of other clinics in the area?
   ………………………………………………………………………………………………………………………………

10. What do you examine when conducting ANC?
Laboratory □  Physical examination □  both □

Others, specify…………………………………………………………………………………………………………………..

11. State other services that you render to ANC clients?
………………………………………………………………………………………………………………………………………..

12. What do you educate and communicate to your clients during ANC visits?
………………………………………………………………………………………………………………………………………..

13. Have you ever referred an ANC client to the next level of service delivery/hospital for assistance?
Yes □  No □

Give reasons why the referral was made
………………………………………………………………………………………………………………………………………..

14. Do you know of the Reproductive Health policy and guidelines?
Yes □  No □

If yes, how are these guidelines useful to you?
………………………………………………………………………………………………………………………………………..

15. Why do you think pregnant women start ANC late in pregnancy?
………………………………………………………………………………………………………………………………………..

16. What do you tell pregnant women who start ANC late in pregnancy?
………………………………………………………………………………………………………………………………………..

17. Are there any barriers to women’s utilization of ANC services in Kisoro?
Yes □  No □

If yes, state them
………………………………………………………………………………………………………………………………………..

18. Are there any interventions in place to improve women’s utilization of ANC services in Kisoro?
Yes □  No □
If yes, state them

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19. State what the government has done to ensure that pregnant women effectively access antenatal care services in your district

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20. What challenges do you face as an ANC provider in this area?

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

Thank you for your cooperation.
APPENDIX VIII: Researcher with ANC Attendees at Hospitals/Clinics
INTRODUCTORY LETTER
MAP 1: SHOWING KISORO DISTRICT