FACTORS AFFECTING REGULAR UPTAKE OF ANTENATAL SERVICES AMONG PREGNANT MOTHERS IN THEIR 3rd TRIMESTER AT KISUGU HEALTH CENTER III

KYOMUHENDO PHIONAH

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DECLARATION

I declare that this research on the **Factors affecting regular uptake of antenatal services among pregnant mothers in the 3rd trimester at Kisugu Health Center III,** is my own effort and it has never been presented in any other institution for any academic award.

Signature ……

Date ……

APPROVAL

I acknowledge that this research about the **Factors affecting regular uptake of antenatal services among pregnant mothers in the 3rd trimester at Kisugu Health Center III,** is done under my supervision:

Signature ……..……

DR. ODDA JOHN

SUPERVISOR

Date ……

DEDICATION

I dedicate this piece of work to my husband, my mother Mrs. Asiimwe Laticia and my son Agaba Shammah Marcus. They have been my source of strength, inspiration, engine of courage and above all a source of financial support throughout the course of this research.

ACKNOWLEDGEMENT

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Special thanks to my supervisor Dr. Odda John whose intellectual and academic guidance enabled me to bring out the best of this study. Your guidance and experience has made this research possible.

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May God bless you abundantly.

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ACRONYMS

ANC	ANTENATAL CARE
ANCs	Antenatal care services
ARVs	Antiretrovirals
HIV	Human Immune Virus
IPTp	Intermittent Preventive Treatment for Malaria during pregnancy
ITN	Insecticide treated Net
MOH	Ministry of Health
TBAs	Traditional Birth Attendants
TT	Tetanus Toxoid
UBOS	Uganda Bureau of Statistics
UDHS	Uganda Demographic Healthy Survey
UNICEF	United Nations children's Fund
WHO	World Health Organization

OPERATIONAL DEFINITIONS

Antenatal care (ANC) refers to the interventions to curb maternal and infant mortality through identifying and treating problems and complications during pregnancy. It is a planned programme of medical management of pregnant women directed towards; making pregnancy and labor a safe and satisfying experience

Regular Uptake of ANC: This is when a pregnant woman (mother) makes at least 4 Antenatal visits in the entire time of her pregnancy (9 months) receiving antenatal care from a professional.

Factors affecting ANC regular uptake: These are things / behaviors that lead to either an increase or decrease in regular ANC uptake.

ANC Services: The are the essential interventions offered through the ANC package and include; TT immunization, identifying and managing STIs(HIV and syphilis), malaria prevention through IPTp, ITN and identifying and treating pregnancy related complications such as anemia, malnutrition and preparation for labor and the newborn.

3rd Trimesters: Pregnancy is divided into 3 stages i.e. 1st, 2nd and 3rd. The whole pregnancy lasts between 37 and 40 weeks (9 months) so each trimester lasts between 12 and 14 weeks (3 months). The 3rd trimester is therefore the stage of pregnancy from week 27 until delivery (end of pregnancy)

ABSTRACT

Background

According to WHO, a pregnant mother should have attended antenatal care (ANC) at least four times by their 3rd trimester (WHO, 2015). This implies at least one visit in the 1st trimester, 2nd visit in the second trimester and 2 visits in the 3rd trimester. However, during early 3rd trimester, if a woman has made her 3rd visit, it will still be a regular attendance in this study.

Objective

To assess the factors affecting regular uptake of antenatal services among mothers in their 3rdtrimester at Kisugu Health Center III between March and April 2018.

Materials and methods

The study adopted a cross sectional study design in which quantitative data collection and analysis methods were used to select respondents. The tools that were used for data collection were questionnaires and in-depth interviews. Data was collected from ANC clients in their 3rd trimester and ANC cards.

Results

The findings showed that regular uptake of antenatal care was 53%. According to this study, marital status, husband involvement, knowledge about ANC contents showed a significant association with regular ANC uptake. However, other factors like age of the mother, gravidity, trimester of starting ANC, and health facility related factors did not show any significant association with ANC regular uptake.

Conclusion and Recommendations

The conclusion of the study was that regular uptake of ANC was effective if there is husband involvement and knowledge about ANC components. The study therefore recommended, that improving regular ANC uptake would be through encouraging husband involvement, sensitization about the ANC components, maintaining the privacy of the pregnant mothers, upholding the general cleanliness of Kisugu health center 111 and finally making ANC services accessible and affordable within the community.

CHAPTER ONE: INTRODCUTION

1.0 Introduction

This chapter presents the background, statement of the problem, purpose, specific objectives, research questions, significance and conceptual framework of the study.

1.1 Background

According to WHO, a pregnant mother should have attended antenatal care (ANC) at least four times by their 3rd trimester (WHO, 2015). This implies at least one visit in the 1st trimester, 2nd visit in the second trimester and 2 visits in the 3rd trimester. However, during early 3rd trimester, if a woman has made her 3rd visit, it will still be a regular attendance in this study.

Antenatal care (ANC) 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).

Worldwide, an estimate of 53% of women attended at least four ANC visits (UNICEF, 2015). Despite the fact that, ANC attendance at least once in developing countries increased from an estimated 64% in 1990 to 81% in 2009, only 39% of pregnant women attended four times and more as recommended by World Health Organization (WHO, 2015).

The World Health Organization suggests that all pregnant women begin antenatal care (ANC) in the first three months of pregnancy with the hope that this would enable early detection and management of any health complications (WHO, 2015). Worldwide, around 289,000 women died during pregnancy and child birth in 2013 where Sub Saharan Africa accounted for 85% of the deaths. However, 85% of pregnant women access ANC once and 58% receive the recommended four visits which is low attendance.

Globally there is an estimated 2.6 million stillborn babies and 4 million neonatal deaths (Kawungezi, et al., 2015). However, approximately 303,000 women and adolescent girls died as a result of pregnancy and childbirth-related complications in 2015 (WHO, 2015).

Around 99% of maternal deaths occur in low-resource settings and most can be prevented (WHO, 2014; Blencowe, et al., 2016).

Antenatal care attendance is over 90% in developed countries, mainly in Canada and United States of America, United Kingdom, Germany and some South American countries (UNICEF, 2016). There are 75-89% of antenatal visits in most countries of South America such as Argentina, Brazil and Bolivia among others where they have attended at one antenatal visit (UNICEF, 2016).

Over 80% of women in most developing countries had at least one ANC visit and the coverage reaches 90% in many countries where health sector reforms were affected (WHO, 2015). In Latin America, Caribbean, North Africa, West Asia, Europe most women had the first ANC visits in the first three months of pregnancy. Antenatal care attendance at least once was 69% more than South Asia at 54% (WHO, 2016).

High rates of at least one ANC visit were in Zambia (99%), Guatemala (98%), Kenya (97%), and Argentina (95%) and lowest in Pakistan at 84%) of women with at least one ANC encounter. Other than India (81%), Cambodia (70%), Pakistan (73%), the Philippines (73%) and Vietnam (91%), continuity in maternal health care in other South/Southeast Asian countries (Bangladesh, Indonesia and Nepal) attended adequate ANC visits (WHO, 2016). Other than Indonesia and the Philippines, where over 75% of women received four or more ANC visits, the other countries in South/Southeast Asia performed relatively poorly *(*Kawungezi, et al., 2015).

In Africa ANC attendance is 80% among rich people. Most women in sub-Saharan Africa, make their first ANC visits very late (Gudissa, 2015) which ranges from 53% to 89% (Umubyeyi, Mogren, Ntaganira and Krantz, 2014). Sub Saharan Africa and South Asia regions with the highest maternal mortality and fewer women received at least four antenatal visits (49% and 42%, respectively) (WHO, 2015). However, majority of women start ANC in the second trimester while others start in the third trimester (Kawungezi, et al., 2015). In this region a woman's life time risk of dying during pregnancy and childbirth is 1 in 38 as compared to 1 in 3700 in the developed world. It is however noted that coverage of at least four ANC visits is lower at 44%. Up to 14% or 160,000 more new born lives would be saved with good ANC.

The Ethiopian Demographic and Health Survey conducted in 2011 indicated that only 11% of pregnant women start antenatal care in the first trimester (Gulema and Berhane, 2017). In East Africa, ANC and maternal mortality ratio is 460 per 100,000 live births and annually

around 8500 women died from pregnancy related causes (WHO, 2012) where in Kenya ANC attendance ranges between 18-73% in west Pokot and Nairobi city respectively (Gitonga, 2015). Rwanda however has the highest ANC in East Africa at 94% (National institute of statistics of Rwanda, 2016).

In Uganda most 63% pregnant women register late for ANC; averagely at 5.5 months of pregnancy and do not complete the required four visits (UBOS, 2015). Around 94% of women in rural areas are twice less likely to attend ANC than the urban women and only 8% of rural women receive ANC from a doctor. Regionally, women in southwestern Uganda are more likely to receive skilled care (20%), 3% in the East and only 2% in the Karamoja region (Kawungezi, et al., 2014)

In Uganda, one in every 200 births ends the mother's life where 51% of people do not have any contact with public healthcare facilities (Kisuule *et al.,* 2013). Only 38% of healthcare posts were filled in Uganda. Healthcare staffs who were working, had little incentive to work in poor rural areas (UBOS, 2014). Some 70% of Ugandan doctors and 40% of nurses and midwives were based in urban areas, serving only 12% of the Ugandan population (MOH, 2015). This scenario may lead to irregular attendance to ANC due to unavailability of health care providers to attend to mothers.

According to the Uganda Bureau of Statistics (UBOS) and Uganda Demographic health Survey (UDHS, 2011) 90% of women attend ANC at least once with only 48% of pregnant mothers who make four and more ANC visits during the whole gestation period (UDHS, 2014). On the other hand, 79% of mothers never attend ANC up to four months of pregnancy and maternal mortality ratio is 438 per 100,000 live births (MOH, 2015).

According to Uganda clinical guidelines of 2010, for normal (uncomplicated) pregnancies, four routine antenatal care visits are recommended as follows: the first visit between 10–20 weeks of pregnancy; the second visit between 20–28 weeks of pregnancy (Kisuule *et al.*, 2013). Furthermore, the third antenatal care visit between 28–36 weeks and fourth antenatal care visit after 36 weeks (MOH, 2010).

The guidelines also recommend more frequent visits and early antenatal care visits for mothers with pregnancy complications, or those with identifiable risk factors for such complications, such as complications in a prior pregnancy (MOH, 2016).

During such visits, the Ministry of Health offers free maternal health care services and prophylaxis materials to pregnant mothers who cannot afford high health care costs in private health care facilities (MOH, 2014). Currently there are supposed to be free reproductive healthcare services in all public health care centres, giving free mosquito nets, fansidar for malaria prevention and mama kit among others, recruiting more health workers and necessary drugs (MOH, 2014).

Despite the incentives being effected by MOH, preliminary observation made by the principal investigator on 30 pregnant mothers at Kisugu Health Centre III in their third trimester, showed that only 29% had attended at least 3 visits of ANC. This scenario raises questions as to why they do not attend these important ANC visits as per scheduled. This attracts the researcher to carry out a study on the factors affecting regular uptake of antenatal services among mothers in the 3rd trimester at Kisugu Health Center III.

1.2 Statement of the problem

The World Health Organization suggests that all pregnant women begin antenatal care (ANC) in the first three months of pregnancy. This would enable early detection and management of any health complications (WHO, 2015).

In Uganda, despite the fact that ANC attendance is at 94%, attendance in the first trimester is at only 37% seek ANC in the first trimester and regular attendance to full term is lower than 47% (MOH, 2015). In Kisugu Health Centre III, 46% of pregnant mothers do not seek ANC in the first trimester and less than 42% complete the 4 recommended ANC visits. For instance, out of 437 women who registered for antenatal care between May 2016 and May 2017, 205 (47%) were in their first trimester of their pregnancy. On the other hand, between November 2016 and November 2017 out of only 42% completed the four recommended visit (MOH, 2015).This makes the mother miss the necessary diagnosis and drugs such folic acid supplements, vitamin supplements, pre-eclampsia assessment, anti-malarial drugs among other health care services.

This increases the anaemia cases among mothers, increased morbidities like malaria and pre-eclampsia which subsequently lead to neonatal and maternal death. It led to several health complications that included; abortions, high blood pressure, pre-eclampsia, obstetric fistula, and stillbirths (Kisugu Health Centre Report, 2017).

Pilot studies at Kisugu Health Centre III that investigated 30 pregnant mothers in the 3rd trimester of pregnancy showed that, only 9 (29%) had attended all the recommended four visits yet they are given information during antenatal care. Unfortunately there is hardly any documented evidence on the factors associated with regular uptake of antenatal services among mothers in the 3rd trimester at Kisugu Health Center III. This is the reason that has driven the researcher to carry out this study.

1.3 Objectives of the study

1.3.1 Main objective

To assess the factors affecting regular uptake of antenatal services among mothers in the 3rdtrimester at Kisugu Health Center III between March and April 2018.

1.3.2 Specific objectives

i. To assess the regular uptake of antenatal care services among mothers in the 3rd trimester at Kisugu Health Centre III between March and April 2018.
ii. To assess the social demographic factors affecting regular uptake of antenatal services among mothers in the 3rd trimester at Kisugu Health Centre III between March and April 2018.
iii. To determine the mother related factors affecting regular uptake of antenatal services among mothers in the 3rd trimester at Kisugu Health Centre III between March and April 2018.
iv. To assess the health care factors affecting regular uptake of antenatal services among mothers in the 3rd trimester at Kisugu Health Centre III between March and April 2018.

1.4 Research Questions

i. What is the regular uptake of antenatal care services among mothers in the 3rd trimester at Kisugu Health Centre III between March and April 2018?
ii. What are the social demographic factors affecting regular uptake of antenatal services among mothers in the 3rdtrimester at Kisugu Health Centre III between March and April 2018?
iii. What are the mother related factors affecting regular uptake of antenatal services among mothers in the 3rdtrimester at Kisugu Health Centre III between March and April 2018?
iv. What are the health care factors affecting regular uptake of antenatal services among mothers in the 3rd trimester at Kisugu Health Centre III between March and April 2018?

1.5 Significance of the study

District health officers

The findings of the study may be based on by the District health officers in drawing plans to enhance maternal utilization of reproductive health care services during pregnancy. This may be attained by identifying the level of need of maternal health care services in particular public health care facilities and then draw plans allocate, monitor and evaluate the necessary financial, material and human resources needed. This will attract more mothers to seek maternal care services such as ANC regularly.

Non-Governmental Organizations

This information may help Non-Governmental Organizations in identifying the major challenges faced by pregnant mothers, that impedes them from regularly attending antenatal care. These may be used in relation to other findings while presenting at health conferences to compare various studies regarding factors which influence attendance of antenatal care such that they solicit measures to minimize the tendency of irregular attendance and mobilize funds from different sponsors to facilitate the initiation efforts that would ensure more health care seeking behaviour.

Health workers at Kisugu Health Centre III: The health workers at Kisugu Health Centre III will identify, and the administrators will fill in the gaps that affect regular uptake of ANC by mothers.

This will be the major center of emphasis in sensitization and educating mothers about the importance of ANC, when, how and where to attend it from. This may eventually improve the level of ANC regular attendance.

Pregnant mothers: The findings of the study will enrich mothers' knowledge on information regarding ANC. This will enhance their awareness and thus regularly attend ANC. This is expected to minimize maternal and child health complications because of early management.

Future Researchers: Findings will be used as a source of reference by future researchers who will access it on related topics to this study. The gaps that will be identified will be bridged by the findings and recommendations in this study.

Researcher: The study is a partial fulfillment for the requirements for the award of the bachelor's degree in Nursing Sciences of International Health Sciences University (IHSU).

1.6 Conceptual framework of the study

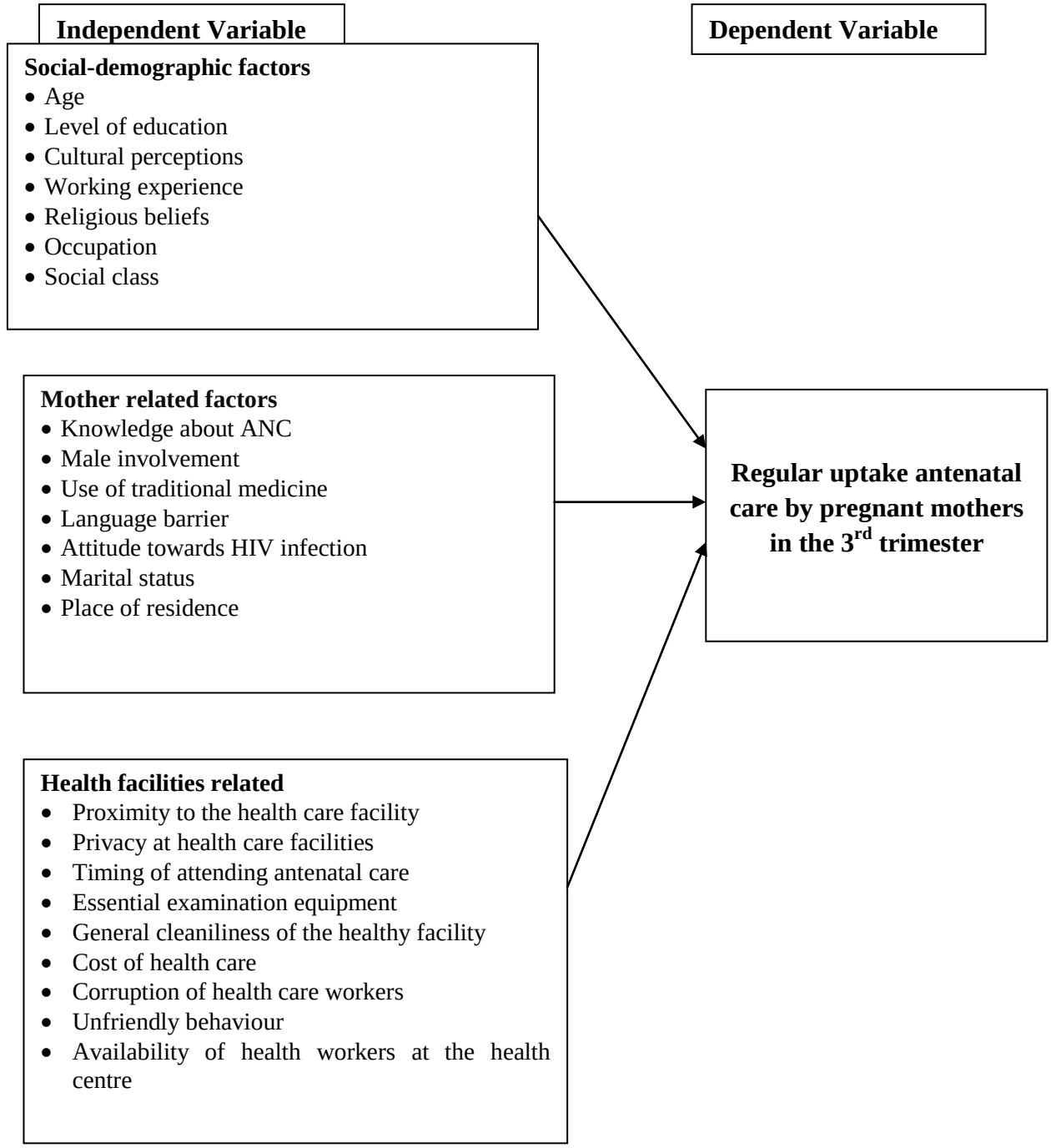


Figure 1: A conceptual framework showing factors affecting regular uptake of antenatal services among mothers in the 3rd trimester at Kisugu Health Center III

The conceptual framework above is about factors affecting regular uptake of antenatal services among mothers in the 3rd trimester at Kisugu Health Center III. The independent variables of the study include; the social demographic, mother related and health care factors associated with uptake of antenatal care while the dependent variable is regular attendance of antenatal care by pregnant mothers in the 3rd trimester of pregnancy.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

Regular uptake of ANC is vital for every pregnant mother and her newborn baby. This chapter contains information found by other researchers all over the globe on Antenatal Care (ANC), proportion of mothers utilizing ANC services, Regular / Focused antenatal care and the factors influencing the uptake of regular antenatal care guided by the study objective.

Antenatal care (ANC) can be defined as the care provided by skilled health-care professionals to pregnant women and adolescent girls in order to ensure the best health conditions for both the mother and baby during pregnancy (WHO, 2016). The major aim of antenatal care is to reduce maternal morbidity and mortality through identifying and treating problems and complications during pregnancy (Nansubuga, 2011)

To achieve the full life-saving potential that ANC promises for women and babies, at least **four visits** providing essential evidence based interventions – a package often called **focused** antenatal care (regular uptake) are required (Ornella *et al.*, 2015).

The essential interventions offered through the ANC package include; TT immunization, identifying and managing STIs(HIV and syphilis), malaria prevention through IPTp, ITN and identifying and treating pregnancy related complications such as anemia, malnutrition and preparation for labor and the newborn.

Table 1: *Focused antenatal care (ANC): The four-visit ANC model outlined in WHO clinical Guidelines* ***(Seipati et al., 2015)***

Activities	**1st Visit (8-12 weeks)**	**2nd visit (24-26 weeks)**	**3rd visit (32weeks)**	**4th visit (36-38weeks)**
History (ask, check records)	Assess significant Symptoms. Take psychosocial, medical and obstetric history. Confirm pregnancy and calculate EDD. Classify all women (in some cases after test results)	Assess significant Symptoms. Check record for previous complications and treatments during the pregnancy. Re-classification if needed	Assess significant symptoms. Check record for previous complications and treatments during the pregnancy. Re-classification if needed	Assess significant symptoms. Check record for previous complications and treatments during the pregnancy. Re-classification if needed
Examination (look, listen, feel)	Complete general, and obstetrical examination, BP	Anaemia, BP, fetal growth, and movements	Anaemia, BP, fetal growth, multiple pregnancy	Anaemia, BP, fetal growth and movements, multiple pregnancy Malpresentation
Screening and tests	Haemoglobin Syphilis HIV Proteinuria Blood/Rh group Bacteriuria	Bacteriuria	Bacteriuria	Bacteriuria
Treatments	Syphilis ARV if eligible Treat bacteriuria if indicated	Antihelminthic ARV if eligible Treat bacteriuria if indicated	ARV if eligible Treat bacteriuria if indicated	ARV if eligible If breech, ECV or referral for ECV Treat bacteriuria if indicated
Preventive measures	Tetanus toxoid Iron and folate+	Tetanus toxoid, Iron and folate IPTp ARVs	Iron and folate IPTp ARVs	Iron and folate IPTp ARVs
Health education, advice, and counselling	Self-care, alcohol and tobacco use, nutrition, safe sex, rest, sleeping under ITN, birth and emergency plan	Birth and emergency plan, reinforcement of previous advice	Birth and emergency plan, infant feeding, postpartum/postnatal care, pregnancy spacing, reinforcement of previous advice	Birth and emergency plan, infant feeding, postpartum/postnatal care, pregnancy spacing, reinforcement of previous advice

Good care during pregnancy is important for the health of the mother and the development of the unborn baby. Pregnancy is a crucial time to promote healthy behaviors and parenting skills. Good ANC links the woman and her family with the formal health system, increases the chance of using a skilled attendant at birth and contributes to good health through the life cycle. Inadequate care during this time breaks a critical link in the continuum of care, and affects both mothers and babies (Ornella *et al.*, 2015)

Globally, while 86 % of pregnant women access antenatal care with skilled personnel at least once, only 3 in five (60%) receive at least four antenatal visits and in regions with the highest rates of maternal mortality, such as sub-Saharan Africa and south Asia, even fewer women receive at least 4 antenatal visits (52% and 46% respectively) (UNICEF, 2018).
It has been estimated that 25 percent of maternal deaths occur during pregnancy, with variability between countries depending on the prevalence of unsafe abortion, violence, and disease in the area (WHO, 2015)

Between a third and a half of maternal deaths are due to causes such as hypertension (Pre-eclampsia and eclampsia) and ante partum hemorrhage, which are directly related to inadequate care during pregnancy (WHO, 2015).
In 2015, an estimated 303,000 women died from pregnancy-related causes, 2.7 million babies died during the 1st 28 days of life and 2.6 million babies were still birth yet quality health care during pregnancy (ANC) can prevent many of these cases (Chukwuma, 2016)

In Africa, provision of universal antenatal care services face difficulties not only expenses involved but inability of facility staff to recognize obstetric emergency emergencies, shortage of skilled attendants at Health care facilities (Tinker et el, 2000)
The coverage for at least two doses of Tetanus Toxoid immunization currently stands at 42%. (UDHS, 20001)

In sub-Saharan Africa, an estimated 900,000 babies die as stillbirths during the last twelve weeks of pregnancy (Ornella, 2015). It is estimated that babies who die before the onset of labor or antepartum stillbirths, account for two-thirds of all stillbirths in countries where the mortality rate is greater than 22 per 1,000 births – nearly all African countries (Seipati *et al.*, 2015).

Antepartum stillbirths have a number of causes, including maternal infections notably syphilis and pregnancy complications, but systematic global estimates for causes of antepartum stillbirths are not available.
Newborns are affected by problems during pregnancy including preterm birth and restricted fetal growth, as well as other factors affecting the baby's development such as congenital infections and fetal alcohol syndrome (Ornella, 2015).

In the light of the above, WHO recently made recommendations as follows;
Antenatal care model with a minimum of eight contacts recommended reducing pernatal mortality and improving women's experience of care
Counseling about healthy eating and keeping physically active during pregnancy
Daily oral iron and folic acid supplementation with 30 mg to 60 mg of elemental iron and 0.4mg folic acid for pregnant women to prevent maternal anemia, puerperal sepsis, low birth weight and pre-term birth (WHO, 2015)

Tetanus toxoid vaccination is recommended for all pregnant women, depending on the previous tetanus vaccination exposure to prevent neonatal mortality from tetanus.
One ultra-sound scan before 24 weeks gestation is recommended to estimate gestational age, improve detection of fetal abnormalities and multiple pregnancies, reduce induction of labor for post-term pregnancy and improve a woman's pregnancy experience (Seipati *et al.*, 2015).

Health-care providers should ask all pregnant women about their use of alcohol and other substances as early as possible in the pregnancy and at every antenatal visit (WHO, 2015)
There are various factors influencing the uptake of antenatal care services among pregnant women. These factors if carefully and critically put into consideration, the utilization of ANC services can be increased with a subsequent reduction in the prevalence of maternal and child mortality attained since there will be early recognition of congenital abnormalities and any other pregnancy-related conditions. For this research, these factors have been grouped into 3 categories i.e. Social demographic, mother related and health care related factors.

2.1 Social demographic factors influencing uptake of antenatal care services among pregnant women

Social demographic factors influencing uptake of antenatal care services among pregnant women are; levels of education, age of the mother, cultural beliefs, influence from community members, religious factors, religion and social class.

2.1.1 Level of education

Education helps men and women claim their rights and realize their potential in economic, political, health and social arenas (Matsumura & Gubhaju, 2001). Education increases female autonomy, decision making power within the household, and builds greater confidence and capacity to make decisions regarding their own health (WHO & UNICEF, 2003).

According to Sharma (2004), empowered women can stand for their rights and can even make sound decisions about their health.

A study carried out in Colombia found out that majority of the mothers with higher levels of education completed the four ANC times or more compared to others who had lower levels of education (Titaley *et al.,* 2010).

According to Hagey *et al.,* (2014) in a study carried out in developed countries, ANC is significantly associated with maternal levels of education. Majority of the mothers with high levels of education were more likely to seek ANC regularly unlike those with low levels of education.

However, the same research revealed that ANC regular attendance never had a proportionately big difference between pregnant mothers with varying levels of education. This can be attributed to high availability of health care services and insurance scheme.

Low levels of education limited mother's knowledge on the use of the available maternal and child care services because most of them were unemployed thus had low incomes to meet the health care facility needs thus low utilization of antenatal care services (Hunter *et al.,* 2010)

A study conducted by Navaneetham and Dharmalingam (2002) in India, revealed that women's education level and living standard, were found to be an important factor in seeking antenatal care. This study found that women with high school education and above were more likely to use antenatal care services when compared to illiterate women. It was also realized that women whose husbands had at least high education were more likely to use antenatal care services compared to women whose husbands had no education at all.

A study in Mwingi District of kenya showed that women with secondary education had regular ANC attendance as compared to those with lower levels of education (Nzioki *et al.,* 2015). This concurs with findings reported by Gitonga *et al.,* (2016) in Kenya who showed that education levels influenced ones choice of the place of delivery where 78% of mothers with high levels of education chose health care facilities as their choice of place of delivery. Mothers with higher levels of education were more likely to deliver from health care facilities. This is because they had knowledge about the importance of delivering with help of skilled health care providers.

A study done in Naguru teenage health centre, Kampala Uganda showed that with lack of education some adolescent expectant mothers are ignorant about the use of attendance to ANC services which limits its utilization (Nansubuga, 2011). Unfortunately there is no information showing that a study on the same has ever been done in Kisugu Health centre 111, therefore a need for this research.

2.1.2 Age of the mother

The average age of onset of menses (menarche) is approximately 12 – 13 years. This age has been decreasing as the standard of living and rates of childhood obesity have increased. Once the girl has started ovulating (release of an ovary / mature egg ready to be fertilized), pregnancy is possible if she is having sex irrespective of her age (American pregnancy association, 2016)

A study on barriers and facilitators in the implementation of lay health worker programmes to improve access to maternal and child care by Glenton, et al., (2013) noted that, regular attendance of ANC is more among mothers of younger age as compared to older mothers in developed countries such as United States of America and United Kingdom. Findings of this study indicate that over 90% of mothers below 22 years were more likely to attended ANC services compared mothers more than 23 years. This is because in developed countries there are many maternal and child programmes that target vulnerable individuals.

On the contrary, in a study carried out in Burkina Faso by Gies et al., (2008) showed that, mothers of older age are more likely to attend antenatal care as compared to mothers with low age. Findings to this study show that older mothers have a relatively higher knowledge towards pregnancy due to their experience with past pregnancy.

Other explanations were; older mothers had better financial capability thus could afford associated costs of ANC such as transport and necessary kits plus unavailable drugs at the health facilities.

A study carried out in Northern Uganda reported similar findings as earlier reported in Burkina Faso where, majority of the mothers of lower age did not start antenatal care in the first trimester of pregnancy and never attended regularly. Reasons given were young mothers were ignorant about pregnancy while others feared stigma at the health facilities. Young mothers reported being harassed by health care providers accusing them of getting pregnant at a young age thus instilled fear in them to attend ANC services. Most of them had become pregnant due to early sexual involvement while others were in forced marriages which may not be much of their blame (Ediau, et al., 2013).

A study on factors affecting the utilization of antenatal care services among adolescent pregnant mothers done at Naguru Teenage Health Center, Kampala Uganda showed that out of the 96 adolescent mothers, 37 (38.5%) were below 17 years of age irrespective of the marriage age as per the Ugandan constitution which is 18 years and above. There was less utilization of ANCs due to little knowledge about pregnancy and the naiveness among this age group (Nansubuga, 2011). Due to limited information about ANC uptake at Kisugu health center III, a research has been undertaken.

2.1.3 Cultural beliefs

Much belief in cultural norms is significantly associated with attendance of antenatal care in a number of studies carried out in developing countries. A study carried out by Wilson *et al.,* (2011) on effectiveness of strategies incorporating training and support of traditional birth attendants(TBAs) on prenatal and mortality showed that in developed countries ANC was more among mothers who never highly cherished ancestral spiritual expertise. High levels of information transfer and education levels minimized mothers' belief and trust in cultural norms thus better attendance of health care facilities

On the contrary, in a study carried out by Montavon et al., (2013) about maternal health care services among health of mobile pastoralists in the Sahel show irregular seeking of ANC among mothers who highly believed in cultural customs. Mothers in Sahel regions that include; Mali, parts of northern Senegal, southern Mauritania, northern Burkina Faso, extreme south of Algeria, Niger, extreme north of Nigeria, central Chad and southern Sudan and South Sudan show high rudimentary cultural beliefs with low and irregular ANC attendance. Cultural beliefs of nomads treasure having many children as a sign of prestige in the community thus less likelihood of seeking health care services during pregnancy.

A study done on determining cultural perceptions and health behaviors related to safe motherhood among village women in Eastern Sudan revealed that, the religion of the mother also determine where she attends antenatal care from. Pegan cultural believers had more belief and trust in TBAs than trained health care workers. Christianity faith believers prefer seeking health care from health care centres than from home because they have a mind-set that use of herbs is belief in ghosts and as regarded as a sin (Seizawa *et al*., 2014). Similar findings were reported in a study done in South Africa by *Ngomane et al., (2012).*

Similar findings were reported by Mrisho et al., (2009) in a study carried out in Tanzania where different cultural limited pregnant mothers from attending maternal care services. This is associated with practices such as Female Genital Mutilation (FGM) and early marriage are responsible for low awareness about the importance of regular attendance of ANC. This is because such mothers fear to expose their mutilated part to health care providers. Young mothers also feel shy to ask different reproductive health questions to care providers which all lead to irregular attended of ANC.

Concurring findings are also reported by Pell and colleagues in 2013, in a study carried out in Kenya showed that, most mothers feared wizards to terminate their pregnancies thus consulted them more than modern health care providers which reduced the chances of attending ANC (Pell *et al.,* 2013). Findings attributed this to misconceptions most mothers had about the right place where to seek health care during pregnancy.

The Yoruba clan of Nigeria forbids pregnant women from walking the streets in broad day light. They believe that when the sun is at its brightest, evil spirits roam the town and could enter into a pregnant woman making her to give birth to deformed babies (Nigerian Bulletin, 2016). This of course limits access to ANC.

Similar findings were reported in a study carried out in Uganda by Kawungezi *et al.,* (2015) where majority of mothers who highly believed in cultural norms and customs were less likely to regularly attend ANC and this was associated with the false confidence they derived from the sorcerers that herbal medicine was far better them convectional medicine which was not right. On the other highly religious women were more likely.

2.1.4 Religious factors

Religion is one of the most powerful aspects that influence Antenatal Care. This is because to most people, anything that the cleric or any religious leader considers wrong and declares it ungodly it's automatically not utilized and if it's considered Godly then utilization increases. Some of these religions have got big numbers of people and assuming such a religion does not support ANC usage, then its utilization will be low.

A study in Latin America on the private health care sector and the provision of prenatal care services found out that, unrevised adherence to religious practices impede prenatal care utilization by Asian and Muslim women. A vast majority of women have to first consult their clerics before they accept to attend different health care session such as antenatal care. If the clerics have a negative attitude towards antenatal care, then the followers will be more like to attend less and where clerics have positive attitude, antenatal care visit will be high (Arrieta, *et al.,* 2011*)*

The proportion of pregnant women attending the WHO – recommended 4 antenatal visits is highest in Christian dominated communities (76.8-89%) than in the Muslim – dominated communities (35.5 – 51.9%) (Maryam *et al.,* 2016).

Similar findings were reported in a study carried out in Uganda showing the impact of religion in determining maternal and child health care service utilization (Mbonye *et al.,* 2012). Findings to this study show that, the Islamic injunction encouraged male dominance which constraints the autonomy and decision making power of women. This purportedly could limit the ability of pregnant mothers to make important health seeking decision due to restricted movements, thus low attendance of antenatal care services (Mbonye *et al.,* 2012).

Other unregistered religions whose origin is not clear have also been discouraging there followers from utilizing medical services though limited data is available about them only televisions capture this information in Uganda and therefore the need for this research.

2.1.5 Social status

Social status is the relative rank that an individual holds, with attending rights, duties, and life style in a social hierarchy based upon honor or prestige (Holger, 2018). In most societies, such attributes as a respected occupation, the possession and consumption of material goods, physical appearance and dress, and etiquette and manners have become more important than linage in determining one's status (Cattell, 2016). Uptake of ANC is so much influenced by the status of the mother, husband and the family in the society.

A study in Northwest Ethiopia revealed that, many people from high social status families prefer and can easily attend antenatal care (Kebede *et al.*, 2013). According to this study, they mainly do so because they perceive this as source of prestige, honor and in most cases they are well off financially so can pay for treatment prescribed in ANC as compared to their counterparts of low social status and also considers it as the ideal way to live. Social inequalities in education, economic resources and residence (rural or urban) among some communities highly determine the rate of antenatal care attendance and access to prenatal care

However differing findings were found in a study carried out in a rural setting in Coast Province, Kenya by *Mwangome et al., (2012*) who revealed that, people in low social status disliked their wives to attend antenatal care from health care centers because their wives would not be brave enough to deliver babies. This differed from findings by Ngabo *et al.,* (2012) where women from low social status families never had high antenatal care attendance due to stigma and lack of enough financial resources to meet the health facility costs.

A study in Kisoro district Uganda revealed that 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 (Centenary, 2010)

2.2 Mother related factors influencing uptake of antenatal care services among pregnant women

Mother – related factors are those that directly affect the mother herself and lead to either increased uptake of ANC services or reduced uptake. These include knowledge about ANC, parity 0f the mother, level of male involvement, marital status, maternal preference to traditional medicine, language used, attitude towards HIV and place of residence.

2.2.1 Knowledge about Antenatal care

Knowledge is power as they say. Therefore if a mother is equipped with enough knowledge about antenatal care, she can stand the ground amidst all challenges and attain ANC services for she will be aware of the importance and the value of the services given.

A study carried out in Iran on the factors influencing the use of parental care by Hajizadeh *et al.,* (2016) found out that Knowledge was one of the effective factors on timely prenatal visits among the pregnant women who participated in the study. Therefore, increased knowledge about antenatal care and the number of visits was effective in performing regular visits. The results of a study by Paredes *et al*., (2005) demonstrated that knowledge about the importance of prenatal care in poor women was less compared to those from other economic strata of the society. Knowledge of women who received prenatal care was higher in comparison with those who had inadequate prenatal visits. This can be attributed to the fact that the more antenatal visits a woman attends, the more information she receives and vice versa.

In a study on the scale of faith based organization participation in health service delivery in developing countries, results showed that 291 (72.7%) of the participants did not know the right gestation age at which a pregnant woman should start attending antenatal care. The 109 (27.3%) women who knew the right gestation age stated this time as three months (n = 83, 76.1%); four months (n = 17, 15.6%); two months (n = 6, 5.5%) and when a menstrual period is missed (n = 3, 2.8%). The majority (n = 101, 92.7%) of these109 women said that they were taught this time during health education in a health facility when they had attended antenatal care in previous pregnancies. Others said they had been told by their mother, sister or friend while one mother said she knew it from common sense. Still one mother said that she was taught in school. All this information could not be relied upon as a baseline for proper antenatal care visits (Kagawa *et al.,* 2012)

A study done in kisoro district revealed that mothers who had little knowledge about ANC were less likely to attend as compared to those with much knowledge because the former only knew TBAs and were not aware of the various unseen complications a child can have before delivery (Centenary, 2010) however limited information at Kisugu Health Center III prompted this research.

2.2.2 Parity of the mother

Parity is defined as the number of times that a woman has given birth to a fetus with a gestational age of 24 weeks or more, regardless of whether the child was born a live or was stillborn (Dr Colin, 2014)

A study carried out in United Kingdom by Simkhada *et al*., (2008) revealed that first time mothers were more likely to utilize prenatal and neonate services as compared to mothers who had given birth to more than one child. The study showed that young mothers had higher utilization of ANC because they had better access to information about the importance of health care during pregnancy as compared to older mothers. The younger mothers are more familiar with social network channels which avail them with up to date information unlike the old who are always occupied in day to day work. Similar results were reported by Ayoola *et al.,* (2010) in a study carried out in United States of America where ANC services were mostly sought by low parity mothers.

A study carried out in Iran on the factors influencing the use of parental care by Hajizadeh *et al.,* (2016) found out that low parity was the main factor influencing women with less than four ANC visits during pregnancy. Increased number of women with ANC visits during pregnancy and improved number of visits, especially in primiparous women, were important findings.

In a study carried out in the democratic republic of Congo, by Abel and colleagues (2012) on the factors associated with the utilization of maternal health services found out the ANC services were mostly demanded by primiparous women. Multiparous women took too long to seek ANC services on grounds that they had already given birth so had developed complacency that they had hardly got any health complication. Unlike in the study carried out in Congo, in the later study respondents revealed that, multiparous mothers had better knowledge on what to do during pregnancy where they could buy drugs over the counter to manage some simple health complications.

2.2.3 Level of male involvement

Since pregnancy is a product of male and female sexual involvement, it would be imperative that also the male counterpart gets involved.

In a study carried out in Indonesia; Asia, low male involvement in maternal health in most developing countries lowers the value males was attached to non-emergency occurrences in obstetrics and gynecology (*Titaley, et al., 2010).* According to this study, hindrances to male participation included complex and interrelated structural and cultural issues that most of them perceived as taboo to break even if they would have liked to do so.

There was low community sensitization as well as improving client-friendliness in the clinics in order to mitigate the social and cultural factors with modern health care seeking behavior that could favor seeking antenatal care as also observed by *Tweheyo, et al., (2010)* in a study carried out in northern Uganda.

A study in Bangladeshi reported that, *f*inancial capacity of the mothers influences her chances of accessing antenatal care services despite the fact that they are free of charge in most countries in the WHO region. Mothers who had spouses were in better financial positions and able to pay for transport costs, have more time to spare for health care and can afford paying additional costs at the health care facility as compared to their counterparts without husbands *(*Rahman et al., 2010)

Findings showed that, male involvement remains a challenge, and were highly influenced by; the education, age, type of marriage and religion. Younger husbands, monogamous, and non-Muslim men could hardly accompany their wives for ANC services (*Sanjel et al., 2012).*

A study on the health and nutrition knowledge, attitudes and practices of pregnant women attending and not attending ANC clinics in Western Kenya revealed that, there is low male involvement in antenatal care *(*Perumal et al., 2013). This study showed that many men are unaware of the importance of preparing during pregnancy and the subsequent spousal utilization support during the gestation period. Similarly, preparing for birth and being ready for any possible pregnancy complications could reduce all three phases of delay and thereby positively impact birth outcomes.

Spouses are in much influencing position to determine the attitude of pregnant women towards Voluntary Counseling and Testing during ANC. In most cases men do not accompany their wives for ANC or take the responsibility of knowing results due to fear of knowing their HIV status or being ignorant of the importance of ANC (*Byamugisha et al., 2011).*

This is a challenge because most men have the financial and social dominance, making final decisions about the timing and conditions of sexual relations, family size and access to health care including ANC attendance. This situation makes men critical partners for the improvement of maternal health and reduction of maternal mortality. Male partners who attend ANC are also likely to accept HIV testing.

2.2.4 Marital status

The marital status of the mother highly influences and dictates attendance of antenatal care. Linking families and facilities for care during pregnancy need the cooperation of the husband and the wife. Divorced, separated and widow mothers have lesser chances of accessing health care compared to their counterparts who are married and in settled relationships. This could be because mothers lack resources such as; transport money to buy medicines and mother kit requirements to enable adequate attendance to health care facilities. These mothers are at risk of high maternal mortality due to misconceptions and practices related to nutrition, maternal diet and maternal care and right mode of care (Lee *et al.,* 2009)

In a study carried out in Somalia, much reliance on the husbands was an impending factor to prenatal care and attendance for pregnancy was believed to be as a normal and some did not find it necessary to attend ANC *(Brar et al., 2009)*. This study revealed that there was a burden to most husbands as they viewed it as waste of money since the same procedures were performed on each visit by the same doctors and other health workers yet they never gave adequate information about pregnancy.

In a study carried out in Nigeria found that women, who were single, divorced or widowed and women who had no support from family, relative or friend were at a high risk of poor utilization of ANC services. Many studies show similar findings (*Srivastava et al., 2014 and Alenoghena et al., 2015).*

2.2.5 Maternal preference to traditional medicine

In many countries, TBA's are an important form of social and cultural support to women during childbirth and due to economic constraints and the difficulty in positing trained professionals to rural areas, many women continue to deliver with TBA's. In addition to the above, some of these TBA's have got experience, extra care and have delivered many mothers therefore most women see no need of attending ANC's when they have nearby help.

I'm a witness to this; I grew up in my village knowing two TBA's and majority of the mothers were delivered by these two. It was very rare to hear a woman delivering from the hospital and surprisingly, I have never heard any mother dying in their hands. The other challenge is the dose, for its not documented anywhere on how much to take and the time frame.

A study carried out in rural Burkina Faso on community effectiveness trial of strategies promoting intermittent preventive treatment with sulphadoxine-pyrimethamine in pregnant women indicated that majority of the women preferred traditional herbal medicine to modern medicine due to misconceptions that the latter had adverse side effects that could even lead to abortion and fetal deformities (Gies et al., 2008). This study also revealed that many mothers had a mind-set that they were to be forced to use some family planning methods that could lead to barrenness and cancer

Another study in South and Southeast Asia showed that when mothers were taught about family planning during antenatal visits, they absconded the next visits because their cultures did not approve modern family planning methods (Shiferaw *et al.,* 2013). They believed that intentional birth control by contraception is equivalent to abortion, murder and damnation to God's Plans of creation.

In a study on the barriers and promising interventions for improving maternal and newborn health in Sierra Leone, mothers showed that respondents did not realize any reason for spending their money in seeking antenatal care from health centers when they could freely get herbs from the bushes with the help of multiparous mothers and TBAs (Herschderfer *et al.,* 2013). The study revealed that, some health workers were too young to advise them on pregnancy and other reproductive health issues.

A study in northern Uganda showed that, delivery at home or TBA is supported with reasons such as; fear of mode of delivery at the hospital, encouraged by mother, husband's decision, and lack of problems during pregnancy. However some respondents were interested in delivering at the health facility but were limited by: loss of antenatal cards, abrupt onset and fast progress of labor, bad weather, distance and wiered hours (kawungezi, *et al.,* 2015). The limited information at Kisugu Healh centre III evoked a need for this research.

2.2.6 Language used

Language is very important as far as communication is concerned. When people are communicating using a common well known language, whatever they discuss is clearly understood and benefit from the communication. However if there are language differences, then information delivery becomes a problem and the receiver may not capture the rightful information. In this regard, health workers have got to understand the language of the mother and get someone who can fluently speak it for the mother to gain the confidence of even asking some private questions than asking and the respondent is only saying "what are you meaning, pardon, I don't understand"

Language barrier was found out by in a study carried out in 'Punjab' province of 'Pakistan' as a hindering factor to proper antenatal visits. Majority of mothers with low levels of education could not communicate with the health worker efficiently which failed them to have all their health issues attended to. Most public health care facilities lack interpreters to help mothers who cannot communicate with the health workers (Majrooh et al., 2014).

A study done in Rwanda revealed that language barrier limits antenatal care visits. Limited health care facility antenatal visits are also due to mother's ignorance of the language spoken by trained health care workers. Findings showed that, some health care worker knew French and yet some pregnant mothers knew Kinyarwanda which made communication difficult. These discouraged mothers to attend modern health care facilities because they do not expect adequate help *(*Ngabo et al., 2012) This ends in backing at the mothers which annoys them and refuses to come back next time. In this study the researcher will investigate whether language barrier is an impending factor to regular attendance of antenatal care in the study area as there is limited information as of now.

2.2.7 Attitude towards HIV status

There is no functional cure for HIV or AIDS meaning that there is no procedure or medication which has been scientifically proven to reliably eliminate the virus from a person's body or reverse the damage to the immune system (San Francisco AIDS foundation, 2013)

HIV stigma is a common thread in the narratives of pregnant women affected by HIV/AIDS globally and may be associated with refusal of HIV testing (Janet *et al.*, 2010)

A study done by Sanjel et al., (2012) on antenatal care practices in Tamang Community in Nepal revealed that mothers fear stigma when they are discovered being HIV positive. High levels of Stigma against HIV limit antenatal care uptake. Women fear a compulsory HIV - testing during antenatal care due to the fear of discrimination associated with a positive test both from their husband and other community members plus health workers at times as reported by Chivonivoni, *et al*., (2008) in a study carried out in Zimbabwe. Some feel the only way to avoid HIV-testing is not to attend antenatal care. Findings revealed that HIV positive pregnant mothers separated with their husbands which ended up in lack of care as most of them were low income earners.

In a similar study carried out in a rural district hospital setting in Malawi, at least 90% of mothers attending antenatal services accepted HIV voluntary counseling and testing (VCT), of whom approximately one-quarter were HIV-positive and enrolled into the PMTCT programme (Ediau *et al.,* 2013). It is also more like that women who attend ANC utilize skilled delivery care since they will be educated by the health workers. Nevertheless, 20% of all women who attend ANC four times or more in sub-Saharan Africa do not seek skilled delivery attendance (WHO, 2015). Similarly, despite the extremely high prevalence of HIV in many sub-Saharan countries, including Malawi, Zambia and Zimbabwe, women are rarely offered and accept HIV testing during antenatal care visits (Chivonivoni, *et al*., 2008)

2.2.8 Place of residence

Socioeconomic disparities in use of antenatal care are profound. In developing countries as a whole, women are more likely to report four or more antenatal care visits if they reside in urban rather than rural areas, have a higher education level or live in a richer household. These differentials are smaller in countries with overall high levels of antenatal care (*Mwangome et al., 2012)*.

A study carried out in Gambia West Africa show that, staying in rural areas is one of the r*eas*ons for not attending prenatal classes. This makes accessing prenatal support from public health and community nurses difficult since most of them are located in distant places (*McAree et al., 2010)*. Majority of the mothers who stayed near health care facilities had less access due to difficulty in transport means to seek health care. Most of the mothers lack alternative transport means in case of lack of public means of transport which minimizes their chances of regular seeking of ANC despite the fact that they may be willing to attend. The limited information at Kisugu Health centre III triggered a need for this research.

2.3 Health care factors influencing uptake of antenatal care services among pregnant women

The health care factors influencing uptake of antenatal care services among pregnant women are; dissemination of antenatal care information, distribution of healthcare facilities, drug availability, skills of the health care workers, number of trained healthcare workers, amount of space at the health facility, extortion of money from mothers, waiting time and distance to the health care facility.

2.3.1 Proximity to the health care facility

Mothers who are nearer to the health facility are more likely to attend ANC than their counter parts that stay far away (*Ishaque et al., 2011)*

A study in Kenya on the barriers to hospital delivery in rural setting in Coast Province showed that the odds of attending ANC reduced as the distance increased between a mothers' home and health facility. Mothers living 5 kilometers from a major road were twice as likely to attended ANC at the time of the survey. It was possible that women who lived further from transport networks or health services were more likely not to attend antenatal care than their counterparts who were near the health facility

The distance to the nearby health facility highly influences pregnant mothers' utilization of modern health care services. Being far away from the nearby health care facility especially public health centres forces many mothers who would have preferred to attend antenatal acre to abscond and resort to TBAs because the latter are easily accessible and cheaper *(Mwangome et al., 2012)*

It was also noted that 70% of mothers in developing countries lack easily accessible maternity homes to check and monitor the progress of their pregnancies. Given that in the first trimester mothers have fewer health complications they hardly attend antenatal care due to long distances to the health centre. This even hinders other mothers with low incomes to afford the transport costs (WHO, 2014a)

A study carried out in Niger Delta, majority of the mothers who were near health facility had more antenatal visits than mothers who were far away from the health facilities (Ndidi *et al.*, 2010). Due to limited information at Kisugu Health centre III, this research will bridge the gap.

2.3.2 Availability of health workers

Doctors were the main providers of antenatal care, particularly in Latin America and the Caribbean and North Africa/West Asia/Europe. In contrast, in sub-Saharan Africa women relied primarily on nurses or midwives for antenatal care (*Byamugisha., 2010).* Traditional birth attendants and other health personnel other than a doctor, nurse or midwife were rarely reported as providers of ANC, except in a very few countries (WHO, 2015).

Antenatal care provided by a skilled health provider—that is, a doctor, nurse or midwife—can be effective in identifying problems and pregnancy complications, given that such providers have been educated and trained to be proficient in the skills of diagnosing, managing and referring complicated pregnancies. Use of skilled health providers for antenatal care has been increasing in most of countries studied, although the degree of increase varies by country (*Iliyasu et al., 2010).* Skilled health providers are commonly reported as the providers of antenatal care in most countries, except for a few in Western and Central Africa.

In a study on designing and implementing an innovative sms-based alert system (RapidSMS-MCH) to monitor pregnancy and reduce maternal and child deaths in Rwanda it was found that, some pregnant mothers reporting negative interactions at facilities and lacking confidence in the health workers' abilities, who they considered undertrained, incompetent, and inexperienced, were less inclined to desire antenatal care *(Ngabo et al., 2012).* Women described providers as verbally and physically abusive, rude, bossy, disrespectful, insulting, easily angered, having poor attitudes, and lacking compassion (*Mwangome, Holding, Songola, and Bomu, 2012).*

Physical abuse included slapping, hitting, or forcefully holding women down. Negative interactions with providers were exacerbated for women of low socioeconomic status (*Izugbara, 2009).* Similar findings were reported by Serizawa *et al.,* (2014) in a study carried out in Eastern Sudan and Mbonye *et al.,* (2012) in a study carried out in Uganda. However this research will be the first to provide data for Kisugu Health Center III

2.3.3 Level of privacy at the health care facilities

Health records and health information about patients must be kept safe and private by all medical and healthcare professionals.

Some mothers do not or irregularly attend antenatal care from health care facilities because there is inadequate privacy. They feel shy to undress before health care workers open their legs to strangers yet they had ever delivered at home without any complication. Some

mothers reveal that at home they are within safe hands of the relatives who can provide herbal medicine which can help them to induce labor. Similarly *Cham et al., (2009)* in a study carried out in Gambia, showed that, some respondents felt better when they did attend antenatal care and took some drugs besides the ones prescribed at the health centers. Some respondents revealed that they can immediately get help such as hot water for bathing and foods when in antenatal homes unlike at TBAs centers.

Similarly in a study on the determinants of Antenatal Healthcare Utilization by Pregnant Women in Third Trimester in Peri-Urban Ghana, showed lack of privacy in many public health care facilities located in remote areas **(**Akowuah *et al.,* 2018)

A study done by Gloria, 2010 in western Uganda revealed that mothers feared attending antenatal care because they would be forced to deliver from the hospital and yet fear other people seeing their private parts (Centenary, 2010). The limited information at Kisugu Health centre III evoked a need for this research.

2.3.4 Timing of attending antenatal care

Most antenatal clinics have specific hours of operational. Most of them work from 8am to 2pm and do not work weekends and yet some mothers work from 8am to 5pm Monday to Friday and have free time on weekends so places where these clinics close at 2pm ANC service utilization is low.

In a study in Latin American countries, *i*nappropriate timing was reported for none attendance prenatal classes while incompatible opening hours (incompatible with women's own working hours or those of their husband or accompanying persons) were reported to affect their access to prenatal care. Transport and mobility problems were reported to complicate access to medical care during pregnancy, prenatal care and prenatal classes. Indirect discrimination also affected access to care (Arrieta *et al.*, 2011*)*

In a health care study about health of mobile pastoralists in the Sahel region of Africa, it was found out that most of the mothers never regularly attended antenatal care because the health facility working schedule never matched with the occupations and movements of the mothers. Given their nature of moving from one place to another for pastures, they could not have timely antenatal care attendance because not in every place they moved had health care facilities with ANC services (Montavon *et al.*, 2013). According to observation the clinic closes at 2pm therefore there might be a negative effect on the utilisation of ANC services.

2.3.5 Availability of essential examination equipment

In a study carried out in Italy on the social demographic factors associated with prenatal care shows that, mothers who were sure of the availability of essential examination equipment during pregnancy are more likely to accept and attend prenatal care as compared to mothers who reside in areas where health care facilities do not up to date equipment. Findings indicated that, with availability of equipment, mothers were sure that their health problems will be diagnosed and get the needed help unlike where the equipment were not available (Chiavarini *et al.,* 2014)

According to Birmeta et al., (2013) in a study on the determinants of maternal health care utilization in Holeta town, Central Ethiopia showed that, developing countries are characterized by poor health care systems where there are general lack of essential equipment to make vital tests and diagnoses. Essential examinations and tests, such as measuring blood pressure and testing urine and blood samples for certain diseases lack in many public health care facilities where it is mostly witnessed during antenatal care visits. Overall, and particularly in South/Southeast Asia and sub-Saharan Africa, women are more likely to have their blood pressure measured than to have urine and blood samples tested. Countries in Latin America and the Caribbean perform better than those in other regions with regard to delivering a majority of the selected services, but more efforts in teaching women about signs of pregnancy complications are needed.

2.3.6 Availability of health workers at the health centre

In a study on *h*eterogeneity in health seeking behavior for treatment, prevention and urgent care in four districts in western Kenya, showed that health workers are not always readily available at the health centre. Dispensaries, the most common public health facility and nearest type of facility for 43-65% of homes in this study, did not have opening hours on evenings or weekends. On average, women were supposed to travel 3–4 times as far to access a hospital with weekend operating hours.

This does not however play a limiting role in mothers' attendance at ANC (O'Meara et al., 2013). This will be investigated among pregnant women attending Kisugu Health Center III Antenatal Clinic.

In relation, the behavior of the health care providers significantly influenced seeking of antenatal care services. In a study done in Ethiopia, by Banteyerga, (2011) revealed that, many mothers do not regularly attend antenatal care because they are tired of the unfriendly

behavior of the health workers in most public health centers. In this study majority of mothers felt angry to health workers due to their accusation on failure to regularly attend antenatal care again. Some are accused of indecent dressing and hygiene as reported by Kebede *et al.*, (2013). Majority who could not standard such embarrassment resorted absconding antenatal care where no one could reveal the secrets. These were the reasons why government resorted to bringing maternal health care services near to the people.

Some health workers are corrupt that they extort money from the patients before they give them services. In a study carried out in Namibia, extortion of money from expectant mothers during antenatal visits discouraged mothers coming again to health care facilities to seek health care services (*Blangiardo et al., 2013)*. Most of the mothers are poor that they cannot afford to meet all the requirements that are needed by modern health care workers during antenatal care. Adegoke *et al.*, (2009) in a study carried out in West Africa, noted that, in many public health centres, in Guine, Gambia, Liberia and sierra Leone, health workers demand money from patients before they are given services which jeopardizes the rate of antenatal care attendance. They frequently demanded money from pregnant mothers during antenatal visits and whenever they seek health care services from them. Majority of the respondents instead prefer self-medication and advice from friends and family menebrs than spending the little money they have.

2.3.7 Waiting time at the health care facility

Waiting time is the time from arrival of the patient at the ANC clinic to the time he / she is worked on. There is no standard time as such for this it depends on factors like the availability of enough health workers, number of mothers, time of arrival etc

Women also experienced neglect and long delays in attending to antenatal care as reported by Oyerinde *et al.,* (2012).

Health workers were slow to respond to patients' needs and women reported feeling alone during antenatal care as health workers had poor communication skills and did not provide updates on labor progression as reported in Tanzania (*Sorensen et al., 2011).* Inadequate facility infrastructure and staffing contribute to an overall perception of low quality of care and many women complain of overcrowd wards without dedicated staff to attend to them during antenatal visits (*Glenton,* et al., 2013). Lack of adequate staff also lead to overburdened lower-level providers and lack of privacy during checking which irritates most of the women and thus decide never to come back.

A study on the reasons given by pregnant women for late initiation of antenatal care in the Niger Delta, report that, waiting time was associated with regular attendance of antenatal care. Majority of the respondents revealed that long waiting hours at health centres make most mothers lose courage of ever attending antenatal care. In this study, some respondents revealed that they were discouraged to attend (Ndidi *et al.,* 2010).

2.3.8 Sanitation at the health care facility

In a study on *t*he private health care sector and the provision of prenatal care services in Latin America, note that mothers are highly attracted to attend ANC regularly if the sanitation at the health care facility is good. Mothers who were in urban areas had higher ANC attendance because they had good sanitation as suppliers are easily reach the health care facilities. Also mothers' higher level of civilization among urban mothers was significantly associated with proper use of sanitary facilities thus better sanitation as compared to rural settings. This was an insurance to mothers to be free of infections thus felt comfortable to attend seek ANC (*Arrieta et al., 2011).*

In a study carried out in Pakistan show that sanitation at the health facility was significantly associated with initiation and regular seeking of antenatal care services among pregnant mothers. Ref There was high antenatal care attendance in health care facilities where sanitation was good because mothers felt safe from infections (Majrooh et al., 2014).

On the contrary, in a study carried out in Uganda, Mbonye et al., (2012) found out that, sanitation at the health facility was not significant associated with seeking of antenatal care in most rural settings. This is because most pregnant mothers never spent a lot of time at the antenatal clinic due to low attendances. Other mothers considered care more important to sanitation because literally sanitation facilities at health care facilities were better than those at their homes.

In conclusion the market for ANC varies considerably between regions. The public sector is dominant in sub-Saharan Africa and Latin America & the Caribbean, while the commercial private sector has the largest share of the market in North Africa/West Asia/Europe and South/South-East Asia. Common across regions is the small size of the private not-for-profit sector, a finding that is consistent with a recent systematic review of the role of faith-based health providers (Kagawa et al., 2012). This is perhaps surprising, especially in sub-Saharan Africa, where there have been concerted efforts by some donors to engage with this sector.

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter includes; research design, source of data, study setting, sample size calculation, sampling technique, sampling procedure, study variables, inclusion criteria, exclusion criteria, data collection techniques, data collection instruments and measurement, data collection procedure, data analysis, quality control, dissemination of the study results, ethical issues and limitations of the study.

3.1 Study area

The research was conducted in Kisugu Health Centre III located Namuwongo, Makindye Division, Kampala district. This is because the pilot study done showed that only 29% of the pregnant mothers had attended all the recommended four visits yet they are given information during antenatal care and there is hardly any documented evidence on the factors associated with regular uptake of antenatal services among mothers in the 3rd trimester.

The health centre is a well staffed, non paying government facility operating through Kampala Capital City Authority (KCCA) and it provides out-patient services only that include; dental, laboratory, maternal and child health with a well equipped maternity ward, antenatal, family planning, immunization and cervical cancer screening, ART clinic, TB (PEPFA) ward, Pharmacy and minor surgery theatre among others and preventive medicine.
The antenatal clinic operates from 8:00 am in the morning to 5:00 pm in the evening. Antenatal clinic operates from Monday to Friday. The maternity ward operates 24 hourly. The clinic receives an average of 20 mothers for antenatal visit daily and, an average of five deliveries are conducted per day.

3.2 Research Design

A research design was a detailed plan of how the research study would be executed (Amin, 2005). The study adopted a cross sectional study design in which quantitative data collection and analysis methods will be used to select respondents. Cross sectional studies are well suited for prevalence studies and enable the researcher to get much information within a short period of time (Dawson & Trapp, 2004).

3.3 Sources of data

The study based on both primary and secondary data.

3.3.1 Primary data

Information was got directly from the respondents by use of structured interview guide (questionnaire) and from the ANC card.

3.3.2 Secondary data

Information was gathered from acknowledged studies in line with the study objectives. These mainly included; on-line journals, electronic books, library books, research dissertations, learning websites, etc.

3.4 Sample Size Calculation

Sample size of the study was determined by the Kish and Leslie formula for sample size determination 1965

The sample size will therefore be calculated as;

$$n = \frac{Z^2 p\,(1-p)}{d^2}$$

Where;

n= Minimum Sample size

z = is the z-value at $\alpha = 0.05$ corresponding to 1.96 approximately 2

p = proportion of pregnant mothers who regularly attended antenatal care

By convention this proportion p = 0. 5 if there is no literature found in the study area.

d = the proposed precision of the study = 0.1

Therefore;

$$n = \frac{2^2 \text{ X } 0.5\,(1 - 0.5)}{0.1^2}$$

$$n = 100$$

3.5 Sampling

3.5.1 Sampling Technique

The researcher used consecutive method to enroll the participants as no sampling frame to carry out was available at the site of study. In this method, participants were enrolled as they came in. In this case, any mother that was in her 3rd trimester and had consented to participate was quickly and easily enrolled.

3.5.2 Inclusion Criteria

The study included only pregnant women in their 3rd trimester attending Kisugu Health Centre IV who were available at the time of study and consented to take part.

3.5.3 Exclusion Criteria

The study did not consider pregnant mothers in their 1st and 2nd trimester and those who will not consent to participate in the study.

3.6 Study variables

The independent variables were; the social-demographic, mother related and health facility related factors that influenced regular uptake of antenatal care services among pregnant women who attend Kisugu Health Centre III Antenatal Clinic while the dependent variable will be proportion of pregnant mothers with regular antenatal care uptake as shown by the patient antenatal cards.

3.7 Data collection methods

Research administered questionnaires were used as the tool for data collection.

3.7.1 Research administered questionnaires

Questionnaires were administered to the respondents by the principal investigator to mainly collect quantitative data. This tool contained both close ended (structured) and open ended (semi-structured) questions as guided by the specific objectives.

3.8 Data Collection Procedure

The researcher introduced herself to the pregnant mothers and explained to them the topic and objectives of the research. Mothers who consented to take part in the study were required to read and sign a consent form and then recruited. A mother was recruited once on a given day and then different mothers on subsequent days. The researcher gathered the pregnant mothers at the health centre in a private place, asked for their cards and issued them with questionnaires. One was interviewed at time for the mothers who couldn't read or write. For those who could read and write English were issued questionnaires but filled them individually not in the group to avoid information manipulation. Mothers were urged to ask the researcher where they hadn't understood. The procedure went on until the sample size was reached.

3.9 Data handling and analysis

Quantitative data obtained using the questionnaire was entered onto computer using EpiData 3.1 software by double entry, followed by data cleaning and validation. Data was then be exported to statistical package for social sciences (SPSS), statistically analyzed and summarized in frequency tables using actual tallies and percentages. Relationships on categorical data were determined by the Chi-square test.

3.9 Quality Control

The research tool was pretested in a pilot study proposed carried out in Naguru Hospital because the environmental setting is the same, no payments required and status of the patients is almost similar. This helped to make necessary adjustments before the study is carried out in Kisugu Health Centre III. Redundant questions that would not be adding any value to the study will be deleted.

3.10 Dissemination of the study results

Five copies of the findings were produced. Three copies were submitted to Clarke International University, School of Nursing, one copy submitted to the Kisugu Health Centre III Administrators while the fifth copy was retained by the researcher for personal reference.

3.11 Ethical Issues

The researcher got a letter of introduction from Clarke International University Research Ethics Office that introduces her to the institution review board of Kisugu Health Centre III. These granted the researcher permission to carry out the study in the health facility. Administrators then introduced the researcher to the mothers attending the antenatal clinic.

Informed consent was obtained prior to data collection. The consent forms briefly explained the study, and then asked for the participant's consent to participate in the study. The form also make it clear that participation was voluntary and no one was to be compelled to participate if the study was perceived to cause any kind of discomfort or unease. It also clarified that participant could choose to discontinue the interview at any time.

A confidentiality clause was also included and asked the participant to read the consent form, answer any questions he / she had and asked if he / she was willing to be part of the study. Participants who could not read English, the interviewer explained the consent statement to the participant and asked him / her to sign or thumb print as may be required.

Names and addresses of the participant were not recorded on any of the documentation. Names were solicited only to establish rapport between the interviewer and respondent and facilitate the interview.

CHAPTER FOUR: RESULTS

4.0 Introduction

This chapter presents the study finding as obtained from the field by the researcher from a study entitled "Factors affecting regular uptake of antenatal services among pregnant mothers in their 3rdtrimester at Kisugu health center III". The study was guided by three research objectives; to assess the regular uptake of antenatal care services, to assess the social demographic factors affecting regular uptake of antenatal services, to determine the mother related factors affecting regular uptake of antenatal services and to assess the health care factors affecting regular uptake of antenatal services among mothers in the 3rd trimester at Kisugu Health Centre III Kampala.

The study involved a sample of 100 respondents who were subjected to 100 questionnaires. The respondents were only mothers in their 3rd trimester of pregnancy. To obtain some more detailed information, the researcher conducted some interviews.

4.1 Uptake of Antenatal care

In this study, a mother was considered to have attended ANC regularly if she had made 4 or more antenatal visits in her entire 9 months pregnancy (36 – 40 weeks) or made her 3rd visit in her early 3rd trimester (32 – 34 weeks). Regular uptake was measured through gathering information from the questionnaire on the number of antenatal visits made and then antenatal cards were used to confirm the number of visits a mother had made and the trimester in which she was.

According to this research, 53% of the mothers attended regularly and 47% irregularly attended. Mothers who attended once were only 2 (2%) and therefore all of them attended irregularly. Those who attended twice were 13 (13%) and all irregularly attended, 49 mothers (49%) attended 3 times and out of these, 17(34.7%) attended regularly because they were in there early 3rd trimester and yet had made 3 antenatal visits. Mothers who attended 4 or more antenatal visits were 36(36%) and all of them were considered as regular attendants of ANC.

Therefore the 17 mothers who attended 3 times and were in their early 3rd trimester plus the 36 that attended 4 and more visits sum up to 53% that attended regularly in this study. The table below summarizes the results of the uptake of ANC.

Table 2: Uptake of Antenatal Care among respondents

No. of Antenatal visits at 3rd trimester	No. of pregnant mothers	Regular uptake n(%)	Irregular uptake n(%)
1	2	00(00)	02(100)
2	13	00(00)	13(100)
3	49*	17(34.7)	32(65.3)*
≥ 4	36	36(100)	00(00)
Total	**100**	**53**	**47**

**Of the 49, 17 succeeded to make their 3rd visit within 32 – 34 weeks as required hence considered first batch of regular attendants.*

4.2 Determination of social demographic factors of the respondents

The social demographic factors considered in this study included; age, level of education, religion and employment status. The results of the mono-variate analysis of data are summarized in the table 2 below.

Table 3: Social demographic characteristics of the respondents (n=100)

Variable	N	% of mothers in 3rd trimester
Age		
15 – 19	12	12
20 – 24	46	46
25 – 29	27	27
30 – 34	11	11
35 – 39	3	3
40 – 44	1	1
Level of Education		
Primary	34	34
Secondary	54	54
Tertiary	07	07
None	05	05
Religion		
Christians*	81	81
Muslims	19	19
Job		
Employed	63	63
Not employed	37	37

**Christians included: Protestants, Catholics, Born again, seventh day Adventists*

The above results show that mean age of the participants was 24 years with majority in the age bracket 20 – 24 years (46%), teenagers 15 – 19 years (12%) and only one participant above 40 years (1%)

The research results show that majority of the ANC attendees were employed (63%) and only 37% of them were not employed. According to the researcher, most of the ANC attendees were of fair income.

Regarding religious beliefs, majority of the ANC attendees were Christians (81%) and the rest were Moslems (19%). According to this study, religious affiliation does not influence regular uptake of ANC services

Pertaining levels of education, majority (54%) of respondents indicated that they had attended secondary school, 34% had attended primary school, 7% had attended tertiary institutions and only 5% of them had never attended school. There was no significant difference in proportion of the ANC attendees in the timing for antenatal care and use uptake of ANC services in relation to literacy levels.

4.3 Association between socio-demographic factors and ANC regular uptake (n=100)

Following the mono-variant analysis, a bi-variant analysis was done to assess the relationship or association between regular ANC uptake and social demographic factors and the results are in the table below.

Table 4: Association between social demographic factors and uptake of ANC (n=100)

Variable	Category	n	Regular uptake n(%)	Irregular uptake n(%)	p-value
Age	15 – 19	12	05(41.7)	07(58.3)	0.278462
	20 – 24	46	20(43.5)	26(56.5)	
	25 – 29	27	17(63)	10(37)	
	30 – 34	11	08(72.7)	03(27.3)	
	35 – 39	03	02(66.7)	01(33.3)	
	40 – 44	01	01(100)	00(00)	
Highest Level of formal education	Tertiary	07	04(57.1)	03(42.9)	0.088124
	Secondary	54	30(55.6)	24(44.4)	
	Primary	34	14(41.2)	20(58.8)	
	None	05	05(100)	00(100)	
Religion	Christian	81	44(554.3)	37(43.7)	0.578926
	Moslem	19	09(47.4)	10(52.6)	
Employment	Employed	63	35(55.6)	28(44.4)	0.5040
	Not employed	37	18(48.6)	19(51.4)	

According to the results, socio-demographic factors were not significantly associated with uptake of ANC ($p > 0.05$)

4.4 Assessment of mother related factors of the respondents (n=100)

To determine mother related factors influencing ANC uptake, respondents were asked questions about; marital status, gravidity, number of visits (confirmed on antenatal card), knowledge about ANC and its contents and husband's involvement. According to our study gravidity means the number of pregnancies the mother has carried by the time of this study.

The results of the mother-related factors are summarized in the table 5 below.

Table 5: Mother related characteristics of respondents (n=100)

Variable	n	% of mothers in 3rd trimester
Marital status		
Married	72	72
Not married	28	28
Gravidity		
1 – 2	77	77
3 – 4	21	21
≥ 5	02	02
No. of Antenatal visits		
1	2	2
2	13	13
3	49	49
≥ 4	36	36
Trimester of starting ANC		
1st	44	44
2nd	51	51
3rd	05	05
Knowledge about ANC		
Yes	85	85
No	15	15
Explain about contents of ANC		
Accurate	35	35
Inaccurate	50	50
None	15	15
Husband's involvement		
Gets involved*	80	80
Does not get involved**	20	20

**Gets involved means: that the husband either escorts the wife to attend ANC or gives support in terms of transport, encouraging the mother to go for ANC and reminding her of the date.*

***Does not get involved means: Husband does not escort the wife, no support rendered to her and is not concerned whether the wife attends or not.*

The findings of our study revealed that, majority of the respondents (72%) 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 attend antenatal care regularly as compared to their counterparts the unmarried.

Regarding gravidity, majority of the participants were of gravidity 1 – 2 (77%) but 43% of these had only one child. There were actually fewer participants in the gravid bracket 3 – 4 (21%) and only 02 respondents were in the gravida bracket (≥ 5).

Concerning the number of visits made by the participants who were in their 3rd trimester revealed that majority of these mothers had attended ANC 3 times (49%). Those who attended once were 2 (2%), those who attended twice were 13(13%) and those who attended 4 or more times were 36%. The fact that all the respondents were in the 3rd trimester, those who had attended 1 or 2 times irregularly attended ANC services

A critical analysis of the field results indicates that, most of the mothers started their ANC visits in the 2nd trimester (51%), those who started in the 1st trimester were 44% and those who began in the final (3rd) trimester were 5%

According to the findings, most of the mothers had knowledge about ANC (85%). However a few mothers (21%) had enough information about the contents of ANC. They mostly got to know about it through their relatives and parents (85%).

Regarding husband's involvement, mothers revealed that most husbands do not escort them when attending ANC clinics but majority of them participate in ANC support (85%) by giving them transport to the clinic, reminding them and once in a while drop them at the hospital.

4.5 Association between regular ANC uptake and mother related factors in Kisugu Health centre III (n=100)

Following the mono-variate analysis, a bi-variate analysis was done to assess the relationship or association between regular ANC uptake and mother related factors.

Mother related factors considered here were; marital status, gravidity, number of visits (confirmed on antenatal card), knowledge about ANC and its contents and husband's involvement.

Knowledge was measured by asking the respondents whether they knew anything about ANC or not*. Participants were asked to explain the contents of the ANC package and in this case, those who explained the contents accurately scored 1 and those who did not scored 0.

*Those who said yes scored 1 and those who said no scored 0. The total scores were out of 2. Anybody who scored 50% and above was considered knowledgeable about ANC. Using the above scoring criteria, any respondent who scored 0% was not knowledgeable.

This information was used in the bi-variate analysis regarding the relationship of knowledge about ANC and regular uptake of ANC. As far as mother related factors and regular uptake of ANC are concerned, the results are summarized in the table 5 below.

Table 6: Association between regular ANC uptake and mother related factors (n=100)

Variable	Category	n(%)	Regular uptake	Irregular uptake n(%)	p-value
Marital status	Married	72	47(65.3)	25(34.7)	0.0000798*
	Single (never married, widowed and divorced)	28	06(21.4)	22(78.6)	
Gravidity	1 – 2	77	41(53.2)	36(46.8)	
	3 – 4	21	10(47.6)	11(52.4)	0.384874
	≥ 5	02	02(100)	00(00)	
Trimester of starting ANC	1st	44	20(45.5)	24(54.5)	0.249773
	2nd	51	29(56.8)	22(43.2)	
	3rd	05	04(80)	01(20)	
Knowledge about ANC	Yes	85	45(56.3)	40(43.7)	0.977617
	No	15	08(53.3)	07(46.7)	
Explain knowledge on contents of ANC	Accurate explanation	20	15(60)	05(40)	0.009341*
	Inaccurate explanation	61	33(54.1)	28(45.9)	
	None	19	05(26.3)	14(73.7)	
Husband's involvement	**Involved**	**80**	**49(48.8)**	**31(51.2)**	**0.0009465***
	Not involved	**20**	**04(20)**	**16(80)**	

**Variables with significant values (p < 0.05)*

According to our research marital status, knowledge on contents of ANC and husband's involvement significantly influenced ANC uptake (p-value < 0.05). On the other hand, gravidity, knowledge about ANC, trimester of starting ANC and its contents had no association with uptake of ANC (p > 0.05)

4.6 Determination of the health related factors of respondents (n=100)

To assess the mother related factors influencing ANC regular uptake at Kisugu health center III, respondents were asked questions about; privacy during examination, availability of health workers and whether they are enough or not and the general cleanliness of the health centre with the aim of identifying if all or any of these can influence regular ANC uptake. The results of the health related factors are summarized in table 6 below.

Table 7: Health related characteristics of the respondents (n=100)

Variable	N	% of mothers in 3rd trimester
Mothers privacy		
Privacy considered	100	100
Not considered	00	00
Availability of health workers		
Available	98	98
Not available	02	02
General cleanliness of the health center		
Very good	35	35
Good	65	65
Fair	00	00
Poor	00	00

Our findings revealed that most mothers' privacy during examination by the health workers is taken into account and that they credit the health centre for that.

Regarding the availability of health workers, the participants revealed that the health workers were always available on the clinic days to attend to them and that they were enough thereby working on every mother appropriately.

As far as the services given to the mothers during ANC visits are concerned, the majority of the mothers received a full package of ANC (82%).

The general sanitation of the health centre was good as reported by most of the respondents. This is seconded by the researcher who observed it and really agrees with the mothers.

4.7 Association between health related factors and regular uptake of ANC in Kisugu Health Centre III (n=100)

Following the mono-variate analysis, a bi-variate analysis was done to assess the association between regular ANC uptake and health related factors are summarized in table 7 below.

Table 8: Association between health related factors and regular uptake of ANC in Kisugu Health Centre III (n=100)

Variable	Category	n	Regular uptake n(%)	Irregular uptake n(%)	p-value
Mothers privacy	Considered	85	46(54.1)	39(45.9)	0.59398
	Not considered	15	07(46.7)	08(53.3)	
Availability of HWs	Available	90	48(53.3)	42(46.7)	0.8412
	Not available	10	05(50)	05(50)	
General cleanliness	Very good	35	19(54.3)	14(45.7)	0.5273
	Good	63	34(54)	29(46)	

It was revealed in our study that availability of health workers, general cleanliness of the place and mother's privacy had no significant influence in determining regular uptake of antenatal services ($p > 0.05$).

CHAPTER FIVE: RESULT DISCUSSION

5.0 Introduction

This chapter presents the discussion of the key research findings in line with the study objectives.

5.1 Regular uptake of antenatal care

In this study, a mother was considered to have attended ANC regularly if she had made 4 or more antenatal visits in her entire 9 months pregnancy (36 – 40 weeks) or made her 3rd visit in her early 3rd trimester (32 – 34 weeks).

The findings for this research showed that regular uptake of antenatal care was 53%. This finding is in agreement with the research done by UNICEF, 2018 in sub-Saharan Africa where Uganda falls that estimated ANC regular uptake at 52%. This could be because most Sub-Saharan countries share similar ANC policies and interventions such as reducing maternal mortality, affordability of ANC services, female education and Equality in the use of maternal and reproductive care services. Uganda has tried to put these into action which has led to this slight increase as per our study area.

This research showed a higher increase in uptake of ANC services considering a report by WHO, 2015 that revealed only 39% of mothers in developing countries attended regularly i.e. made at least 4 antenatal visits. However it's a lower percentage compared to Indonesia and Philippines where over 75% of women received four or more ANC antenatal visits (Kawungezi *et al.*, 2015). Philippines policy and intervention on ANC focuses much on early start of ANC i.e. first trimester, involving husbands and in-laws, improving on wealth inequality and girl education (Yuba, 2017)

This research showed a slight increase in uptake of ANC as compared to the research made by the Uganda Bureau of Statistics (UBOS) and Uganda Demographic health Survey (UDHS, 2011) which showed that only 48% of pregnant mothers made four and more ANC visits during the whole gestation period (UDHS, 2014).

According to Ugandan government, this 53% is below the acceptable level as per the ministry of health objective which targets 100% regular uptake of ANC. Therefore implementation of the policies should begin on emphasizing early start up of ANC (1st trimester) by the district through creating awareness using media platforms like TV stations, radio, news papers and social media and follow up by midwives at hospital level.

5.2 Socio-demographic factors influencing regular uptake of ANC services

The social demographic factors considered in this study included; age, level of education, religion and employment status. However all these factors were found not to have any significant association with regular uptake of ANC ($P > 0.05$).

This study found that age of the mother did not have a significant relationship with regular ANC attendance influenced regular uptake of ANC services.

This study revealed that mean age of the participants was 24 years with majority in the age bracket 20 – 24 years (46%), teenagers 15 – 19 years (12%) and only one participant above 40 years (1%)that 58 % of the mothers were below 25 years of age and among these, 43% attended ANC regularly and 57% attended irregularly. This offers a minimal difference between the old and the young mothers in terms of regular ANC uptake.

This finding is in contrary to the study carried out in Burkina Faso by Gies et al., (2008) which showed that, mothers of older age are more likely to attend antenatal care as compared to mothers with low age. A similar study on factors affecting the utilization of antenatal care services among adolescent pregnant mothers done at Naguru Teenage Health Center, Kampala Uganda showed similar findings that young mothers tend to begin ANC late which makes them attend irregularly. This may be due to the fact that this research was done from an urban area where access to information is easier through media like radio stations, TVs, newspapers, social media e.t.c of which the young group also utilizes freely.

Concerning levels of education, majority (54%) of respondents indicated that they had attended secondary school, 34% had attended primary school, 7% had attended tertiary and only 5% of them had never attended school. There was no significant difference in proportion of the ANC attendees in the timing for antenatal care and uptake of ANC services in relation to literacy levels. This is because even the 5 mothers that were not educated had attended 4 and more visits. This could be attributed to place of residence as most of the mothers live in Kampala where knowledge about ANC is easily shared through radio stations, TV, schools and many organizations encourage and teach mothers the importance of attending ANC.

Pertaining religion, most mothers were Christians but there was no association between regular uptake of ANC and religion since no mother that irregularly attended ANC gave any reason relating to religion.

However hospitals should set up teenage services to easily enable the young to maintain the uptake of ANC by all age groups and also encourage girl education as this also increases regular uptake.

5.2 Mother-related factors influencing regular uptake of ANC services

This study found that there was a significant relationship between the mother's marital status and regular uptake of ANC services ($p<0.05$). This is possibly because most of the married (72%) reported that their husbands provided transport and reminded them of them of the return dates. affected regular utilization of ANC services in this study. This finding coincides with those of Brar *et al.,* 2009 in Somalia and many other studies (Srivastava *et al.,* 2014 and Alenoghena *et al.,* 2015*)* both of which found a significant relationship between the mother's marital status and regular uptake of ANC services.

This study also found out that there was a significant relationship between the mother's regular ANC uptake and her husband's involvement. This is possibly because the husband provides both financial, physical and emotional support which encourages regular ANC attendance. This study finding is similar to another done in Bangladesh by Rahman et al.,(2010), which also found that better uptake of ANC services was by women whose husbands were greatly involved. This similarity in study findings is possibly because of the role men play in providing financial and emotional support to their wives.

Pertaining to knowledge, this study revealed that there was a significant relationship between a mother's knowledge about ANC and her regular ANC uptake ($p<0.05$), with most mothers (81%) knowing about ANC and its benefits. This explains why more than 50% of them attended regularly as compared to other research findings that have revealed a lower regular attendance (UNICEF, 2018; UDHS, 2011; UDHS, 2014). However few mothers were hesitant to attend ANC because they had not experienced any complications or pregnancy related problems so had no reason to bother themselves with ANC. This revealed some level of ignorance about the components and actual benefits of ANC.

This study found that gravidity was not significantly associated with the mother's regular ANC uptake($p>0.05$).This is possibly because all women of child-bearing age, regardless of their parity, have been widely exposed to information encouraging them to uptake regular ANC services. However, this study finding is contrary to another done by Hajizadeh et

al.(2016), which found that low parity was the main factor influencing women with less than four ANC visits during pregnancy.

In regards to the trimester of starting ANC, this study found that there was an insignificant relationship between a mother's trimester of starting ANC and her regular ANC attendance ($p>0.05$). This is possibly because all women, regardless of their trimester of pregnancy, have been increasingly widely exposed to information encouraging them to uptake regular ANC services.

Therefore to uphold regular uptake in Uganda, at hospital level, staff (midwives) should encourage husbands right from their first visit to always get involved up to the last visits. At district level, there should be relevant sensitization through radios, TVs for men in all local languages so that they are involved in ANC.

5.3 Health-related factors influencing regular uptake of ANC services

This study showed an insignificant association between the privacy of the mothers and their regular ANC attendance. On the other hand, the majority (85%) of the mothers reported that their privacy was taken into account during physical examination and this explains why mothers freely attend ANC from this health center including young mothers in their first trimester.

It was also revealed by majority(90%) of the respondents that health workers are readily available to give the necessary services at the facility. "There is no single day I've ever come here and failed to be attended too," a mother said. In addition to this, the clinic closes at 4pm and by this time most of the ANC attendees are already worked on. This could possibly have contributed to the increased regular uptake of ANC services.

This study finding is however contrary to another done in Ethiopia by Banteyerga(2011), who found that many mothers did not regularly attend ANC services because they are tired of the healthworkers' unfriendliness in most public health facilities.

This study also found that there was an insignificant relationship between the mother's regular ANC uptake and the general cleanliness of the health centre, though a majority (65%) rated the facility's cleanliness as good, which possibly explains their good regular ANC uptake (53%).

However, this study finding is contrary to another done in Pakistan by Majrooh et al.(2014), which showed that there was a significant relationship between sanitation at the health facility and the mother's regular ANC uptake.

In view of the above, hospital administration should continue to provide more privacy during examination of mothers and ensure confidentiality. Also the general cleanliness at Kisugu Health Centre III should be maintained.

CHAPTER SIX
CONCLUSION AND RECOMMENDATION

6.0 Conclusions

In conclusion, this study has found a moderate ANC regular uptake of 53% among pregnant mothers in their 3rd trimester at Kisugu Health Centre III. In Uganda, the morbidity and mortality of pregnant mothers has been a challenging issue. Uganda has many policies in place but uptake of ANC services is still a gap especially, up taking ANC services regularly. Many policies and guidelines however, have not been fully integrated and implemented by the health providers and the clients, leading to irregular uptake of ANC partly due to limited funding of the overall health sector, lack of public awareness.

It's also found that marital status, husband's involvement and mother's knowledge about ANC had significant relationship with regular uptake of ANC services at the health centre. However, age of the mother, level of education, religion, employment status, gravidity, trimester of starting ANC, mother's privacy at the health center, availability of health workers and general cleanliness of the health centre had insignificant relationship with ANC regular uptake.

This therefore calls upon the policy makers to be vigilant about regular uptake of ANC from the highest level to the lowest level in the health service, here by, encouraging husband involvement, sensitizing the public about regular uptake of ANC services, making ANC services easily accessible and affordable to all expectant mothers.

6.1 Recommendations

1. It is therefore recommended that much emphasis should be put on educating the public especially mothers on the importance of receiving ANC care and the contents of ANC so that when mothers attend, they demand for a full package of it.
2. The government should also provide enough of the materials and other requirements like drugs, vaccines so that mothers easily access them than telling them to buy because some mothers may not have enough money.
3. The already available policies and guidelines concerning ANC utilization should be put in place because there is a very critical policy gap especially in early starting of antenatal care visits.

4. The hospital administration of Kisugu Health centre III should continue to provide more privacy during examination of mothers and ensure confidentiality. Also the general cleanliness at Kisugu Health Centre III should be maintained.
5. The ministry of health through hospital administration and at staff level (midwives) should encourage husbands right from their first visit to always get involved up to the last visits. At district level, there should be relevant sensitization through radios, TVs for men in all local languages so that they are involved in ANC.

6.2 Study Limitations

The limitations faced during this study were mainly to do with the small sample size and the study design which showed only the present situation at the time of the study, and it was also challenging to obtain information from mothers who were tending to labor time.

Although the frequency of ANC uptake was explored in this study did not examine frequency of timely ANC attendance. This was not part our objective but may also have impacted the findings as adequate attendance defined in the current study was based on the number of ANC visits and not whether the visits were timely as per the WHO focused ANC model.

REFERENCES

Adegoke, A.A. and Van den Broek, N. (2009) Skilled birth attendance-lessons learnt. *BJOG;* 116(1): 33-40.

Akowuah, J.A., Agyei-Baffour, P. and Awunyo-Vitor, D. (2018) Determinants of Antenatal Healthcare Utilisation by Pregnant Women in Third Trimester in Peri-Urban Ghana, Journal of Tropical Medicine,Volume 2018 (2018), Article ID 1673517, 8 pages

Alenoghena, I.O., Isah, E.C., Isara, A.R. (2015) Maternal health services uptake and its determinants in public primary health care facilities in Edo state, Nigeria. Niger Postgrad Med J; 22(1):25–31.

Arrieta, A., Garcia-Prado, A.*and*Guillen, J. (2011) The private health care sector and the provision of prenatal care services in Latin America. *World Development*,39, 579–587.
ate Medicine; 11:21–26.

Atinga, R., Baku, A. and Adongo, P. (2014) Drivers of prenatal care quality and uptake of supervised delivery services in Ghana.Ann Med Health Sci Res, 4 (suppl 3): S264-S271.

Austin, A., Langer, A., Salam, R.A., Lassi, Z.S., Das, J.K. and Bhutta, Z.A. (2014) Approaches to improve the quality of maternal and newborn health care: An overview of the evidence.Reprod Health; 11 suppl(2): 170-179.

Awusi, V.O., Anyanwu, E.B. and Okeleke, V. (2009) Determinants of antenatal care services utilization in Emevor Village, Nigeria. *Benin Journal of Postgradu*

Babalola, S. and Fatusi, A. (2009) Determinants of Use of Maternal Health Services in Nigeria-Looking Beyond Individual and Household Factors, *BMC Journal of Pregnancy and Childbirth*; 9(1):43.

Bakundane, C. (2017) Attendance of antenatal care at Kisugu Health Centre III, Kisugu Health Centre III, Namuwongo, Makindye Division, Kampala.

Banteyerga, H. (2011) Ethiopia's health extension program: Improving health through community involvement. *MEDICC Review,* 13(3): 46–49.

Bayu, H., Adefris, M., Amano, A. and Abuhay, M. (2015) Pregnant women's preference and factors associated with institutional delivery service utilization in Debra Markos Town, North West Ethiopia: a community based follow up study. *BMC Pregnancy Childbirth*;15:15.

Binder, P., Borné, Y., Johnsdotter, S. and Essén, B. (2012) Shared language is essential: communication in a multiethnic obstetric care setting. J Health Commun, 17 (10): 1171-1186.

Birmeta, K., Dibaba, Y. and Woldeyohannes, D. (2013) Determinants of maternal health care utilization in Holeta town, central Ethiopia, BMC Health Serv Res, 13: 256-9

Blangiardo, M., Cameletti, M., Baio, G. and Rue, H. (2013) Spatial and spatio-temporal models with R-INLA.Spatial and Spatio-temporal Epidemiology, 4: 33-49.

Brar, S., Tang, S., Drummond, N., Palacios-Derflingher, L., Clark, V., John, M., and Ross, S., (2009) Perinatal care for South Asian immigrant women and women born in Canada: telephone survey of users. J ObstetGynaecol Can, 31(8): 708-716.

Brown, C.A., Sohani, S.B., Khan K., Lilford, R. and Mukhwana, W. (2008) Antenatal care and perinatal outcomes in Kwale district Kenya. BMC Pregnancy Childbirth, 8: 2-10.1186/1471-2393-8-2.

Byamugisha, R., Åstrøm, AN., Ndeezi, G., Karamagi, CA.,Tylleskär, T. and Tumwine, JK. (2011) Male partner antenatal attendance and HIV testing in eastern Uganda: a randomized facility-based intervention trial. J Int AIDS Soc, 14: 43-10.1186/1758-2652-14-43

Byamugisha, R., Tumwine, JK.,Semiyaga, N. and Tylleskär, T. (2010) Research Determinants of male involvement in the prevention of mother-to-child transmission of HIV programme in Eastern Uganda.Reprod Health, 7: 12-10.1186/1742-4755-7-12.

Cham, M., Sundby, J. and Vangen, S. (2009) Availability and quality of emergency obstetric care in Gambia's main referral hospital: women-users' testimonies. Reprod Health; 6:5.

Chivonivoni, C., Ehlers, V.J. and Roos, J.H. (2008) Mothers' Attitudes towards using Services Preventing Mother-to-Child HIV/AIDS Transmission in Zimbabwe: An Interview Survey. *International Journal of Nursing Studies;* 45(11): 1618–1624.

Choté, A.A., Koopmans, G.T., Redekop, W.K., de Groot, C.J., Hoefman, R.J., Jaddoe, V.W., Hofman, A., Steegers, E.A., Mackenbach, J.P., Trappenburg, M. and Foets, M. (2011) Explaining ethnic differences in late antenatal care entry by predisposing, enabling and need factors in the Netherlands. The generation R study. Matern Child Health J., 15 (6): 689-699.
Conrad, P., Schmid, G., Tientrebeogo, J., Moses, A., Kirenga, S., Neuhann, F., Müller, O. and Sarker, M. (2011) Compliance with focused antenatal care services: do health workers in rural Burkina Faso, Uganda and Tanzania perform all ANC procedures? *Tropical medicine & International health: TM & IH;* 17(3), 300–307.

Ediau, M., Wanyenze, R.K., Machingaidze, S., Otim, G., Olwedo, A., Iriso, R. and Tumwesigye, N.M. (2013) Trends in antenatal care attendance and health facility delivery following community and health facility systems strengthening interventions in Northern Uganda, *BMC Pregnancy and Childbirth*; **13:**189.

Ergano, K., Getachew, M., Seyum, D. &Negash, K. (2012) Determinants of community based maternal health care service utilization in South Omo pastoral areas of Ethiopia. *Journal of Medicine and Medical Sciences;* 3(2): 112–121.

Fagbamigbe, A.F. and Idemudia, E.S. (2015) Barriers to antenatal care use in Nigeria: evidences from non-users and implications for maternal health programming. BMC Pregnancy Childbirth; 15:95.

Gies, S., Coulibaly, S.O., Ouattara, F.T., Ky, C., Brabin, B.J. and D'Alessandro, U. (2008) A community effectiveness trial of strategies promoting intermittent preventive treatment with

sulphadoxine-pyrimethamine in pregnant women in rural Burkina Faso. Malar J., 7: 180-10.1186/1475-2875-7-180.

Gitonga, E. (2017) Determinants of Focused Antenatal Care Uptake among Women in TharakaNithi County, Kenya, *Advances in Public Health*, 2017 (2017), Article ID 3685401, 4 pages.

Gitonga, E. and Felarmine, M. (2016) "Determinants of health facility delivery among women in TharakaNithi County, Kenya," *The Pan African Medical Journal*, 2(2); 9.

Gitonga, E. and Felarmine, M. (2016) "Determinants of health facility delivery among women in TharakaNithi County, Kenya," *The Pan African Medical Journal*, 2(2); 9.

Gitonga, E. Keraka, M. and Mwaniki, P. (2015) "Birth preparedness among women in TharakaNithi County, Kenya," *African Journal of Midwifery and Women's Health*, 9(4), 153–157.

Glenton, C., Colvin, C.J., Carlsen, B., Swartz, A., Lewin, S., Noyes, J. and Rashidian, A. (2013) Barriers and facilitators to the implementation of lay health worker programmes to improve access to maternal and child health: qualitative evidence synthesis. Cochrane Database Syst Rev, In press

Gravett, C.A., Gravett, M.G., Martin, E.T., Bernson, J.D., Khan, S., Boyle, D.S., Lannon, S.M.R., Patterson, J., Rubens, C.E. and Steele, M.S. (2012) Serious and life-threatening pregnancy-related infections: Opportunities to reduce the global burden.PLoS Med, 9: e1001324-

Gudissa, D.T. (2015) Factors Associated With Late Antenatal Care Attendance among Pregnant Women Attending Health Facilities of Ambo Town, West Shoa Zone, Oromia Region, Central Ethiopia. *Int J Med Pharm Sci*; 1(2):56–60.

Gulema, H. and Berhane, Y. (2017) Timing of First Antenatal Care Visit and its Associated Factors among Pregnant Women Attending Public Health Facilities in Addis Ababa, Ethiopia, *Ethiop J Health Sci,* 27(2): 139-149

Herschderfer, K., Sam, E., Walker, P., Jalloh-Vos, H., Detmar, S. and Koning, K.D. (2012) Barriers and Promising Interventions for Improving Maternal and Newborn Health in Sierra Leone. Royal Tropical Institute (KIT).

Iliyasu, Z., Abubakar, I.S., Galadanci, H.S. and Aliyu, M.H. (2010) Birth preparedness, complication readiness and fathers' participation in maternity care in a northern Nigerian community.Afr J Reprod Health, 14 (1): 21-32.

Ishaque, S., Yakoob, M.Y., Imdad, A., Goldenberg, R.L., Eisele, T.P. and Bhutta, Z.A. (2011) Effectiveness of interventions to screen and manage infections during pregnancy on reducing stillbirths: a review.BMC Public Health, 11 (Suppl 3): S3-10.1186/1471-2458-11-S3-S3.

Kagawa, R.C., Anglemyer, A. andMontagu, D. *(*2012*)* The scale of faith based organization participation in health service delivery in developing countries: systematic [corrected] review and meta-analysis. *PLoS ONE7,*e48457.

Kawungezi, P.C., AkiiBua, D., Aleni, C., Chitayi, M., Niwaha, A., Kazibwe, A., Sunya, E., Mumbere, E.W., Mutesi, C. and Tukei, C. (2015) Attendance and Utilization of Antenatal Care (ANC) Services: Multi-Center Study in Upcountry Areas of Uganda. *Open J Prev Med*;5(3):132–42.

Kawungezi, P.C., AkiiBua, D., Aleni, C., Chitayi, M., Niwaha, A., Kazibwe, A., Sunya, E., Mumbere, E.W., Mutesi, C., Tukei, C., Kasangaki, A. and Nakubulwa, S. (2014) Attendance and Utilization of Antenatal Care (ANC) Services: Multi-Center Study in Upcountry Areas of Uganda,*Open J Prev Med*; 5(3): 132–142.

Kawungezi, PC., AkiiBua, D.,Aleni, C., Chitayi, M., Niwaha, A., Kazibwe, A., Sunya, E., Mumbere, E.W.,Mutesi, C., Tukei, C., Kasangaki, A. and Nakubulwa, S. (2015) Attendance and Utilization of Antenatal Care (ANC) Services: Multi-Center Study in Upcountry Areas of Uganda, *Open J Prev Med*; 5(3): 132–142.

KDHS, (2015) Kenya National Bureau of Statistics, Kenya Demographic and Health Survey 20014-15, KNBS, Nairobi, Kenya, 2015.

Kebede, B., Gebeyehu, A. and Andargie, G., (2013) Use of previous maternal health services has a limited role in the attendance for skilled institutional delivery: cross-sectional survey in Northwest Ethiopia. *Intern J Women's Health*; 5:79–85.

Kisuule, I., Kaye, D.K., Najjuka, F., Ssematimba, S.K., Arinda, A., Nakitende G. and Otim, L. (2013) Timing and reasons for coming late for the first antenatal care visit by pregnant women at Mulago hospital, Kampala Uganda. *BMC Pregnancy Childbirth*; 13(121):3–6.

Lawn, J.E., Kerber, K., Enweronu-Laryea, C. and Cousens S. (2010) 3.6 Million neonatal deaths—what is progressing and what is not? SeminPerinatol, 34 (6): 371-386.

Lee, A.C.C., Lawn, J.E., Cousens, S., Kumar, V., Osrin, D., Bhutta, Z.A. and Darmstadt, G.L. (2009) Linking families and facilities for care at birth: What works to avert intrapartum-related deaths? *International Journal of Gynaecology and Obstetrics;* 107 Suppl: S65–85. S86–8.

Lungu, F., Malata, A., Chirwa, E. and Mbendera, I. (2011) Quality assessment of focused antenatal care services in Malawi. *African Journal of Midwifery and Women's Health*, 21; 169–175.

Majrooh, M.A., Hasnain, S., Akram, J., Siddiqui, A. and Memon, Z.A. (2014) Coverage and quality of antenatal care provided at primary health care facilities in the 'Punjab' province of 'Pakistan'.PLoS One, 9 (11): e113390-10.1371.

Manju, R., Sekhar, B. and Harvey, S. (2008) Differentials in the Quality of Ante-Natal Care in India. International Journal for Quality in Health Care.2008;20:62–71.

Mbonye, A.K., Sentongo, M., Mukasa, G.K., Byaruhanga, R., Sentumbwe-Mugisa, O. and Waiswa, F., NaamalaSengendo, H., Aliganyira, P., Nakakeeto, M., Lawn, J.E. andKerber, K. (2012) Newborn survival in Uganda: A Decade of Change and Future Implications. *Health Policy and Planning*; 27(suppl 3):iii104-17.

McAree, T., McCourt, C. and Beake, S. (2010) Perceptions of group practice midwifery from women living in an ethnically diverse setting. Evidence based Midwifery, 8 (3): 91-97.

Ministry of Health, (2010) *Uganda Clinical Guidelines: antenatal care. 2010, 325*-Revised first edition;

Montagu, D., Yamey, G. and Visconti, A. (2011) Where do poor women in developing countries give birth? A multi-country analysis of demographic and health survey data.*PLoS ONE;* 6(2), e17155.

Montavon, A., Jean-Richard, V., Bechir, M., Daugla, D.M., Abdoulaye, M., Bongo Naré, R.N. and Zinsstag, J. (2013) Health of mobile pastoralists in the Sahel - Assessment of 15 years of research and development, *Tropical Medicine & International Health,* 18(9): 1044–52.

Mrisho, M., Obrist, B., Schellenberg, J.A., Haws, R.A., Mushi, A.K., Mshinda, H., Tanner, M. and Schellenberg, D. (2009) The use of antenatal and postnatal care: perspectives and experiences of women and health care providers in rural southern Tanzania**.** *BMC Pregnancy and Childbirth,* 9:10.

Mushi, D., Mpembeni, R. and Jahn, A. (2010) Effectiveness of community based safe motherhood promoters in improving the utilization of obstetric care. The case of Mtwara rural district in Tanzania. BMC Pregnancy Childbirth, 10: 10-14.

Mwangome, F.K., Holding, P.A., Songola, K.M. and Bomu, G.K. (2012) Barriers to hospital delivery in a rural setting in Coast Province, Kenya: community attitude and behaviours. Rural Remote Health, 12: 1852.

Mwangome, F.K., Holding, P.A., Songola, K.M. and Bomu, G.K. (2012) Barriers to hospital delivery in a rural setting in Coast Province, Kenya: community attitude and behaviours. *Rural Remote Health, 12: 1852.*

National institute of statistics of Rwanda, (2016) Fourth Population and Housing Census (RPHC). 2016.

Ndidi, E.P. and Oseremen, I.G. (2010) Reasons Given by Pregnant Women for Late Initiation of Antenatal Care in the Niger Delta, *Nigeria Ghana Med J*; 44(2): 47–51.

Ngabo, F., Nguimfack, J., Nwaigwe, F., Mugeni, C., Muhoza, D., Wilson, D.R., Kalach, J., Gakuba, R., Karema, C. and Binagwaho, A. (2012) Designing and Implementing an Innovative SMS-based alert system (RapidSMS-MCH) to monitor pregnancy and reduce maternal and child deaths in Rwanda. Pan Afr Med J., 13: 31-43

Ngabo, F., Nguimfack, J., Nwaigwe, F., Mugeni, C., Muhoza, D., Wilson, D.R., Kalach, J., Gakuba, R., Karema, C. and Binagwaho, A. (2012) Designing and Implementing an Innovative SMS-based alert system (RapidSMS-MCH) to monitor pregnancy and reduce maternal and child deaths in Rwanda. Pan Afr Med J., 13: 31-43

Ngomane, S. and Mulaudzi, F.M. (2012) Indigenous beliefs and practices that influence the delayed attendance of antenatal clinics by women in the Bohlabelo district in Limpopo, South Africa, Midwifery, 28 (1): 30-38.

Ngomane, S. and Mulaudzi, F.M. (2012) Indigenous beliefs and practices that influence the delayed attendance of antenatal clinics by women in the Bohlabelo district in Limpopo, South Africa. *Midwifery, 28 (1): 30-38.*

Nzioki, J.M. Onyango, R.O. and Ombaka, J.H. (2015) "Socio-demographic factors influencing maternal and child health service utilization in Mwingi; A rural semi-arid district in Kenya," *American Journal of Public Health Research*, 3(1); 21–30.

Nzioki, J.M. Onyango, R.O. and Ombaka, J.H. (2015) "Socio-demographic factors influencing maternal and child health service utilization in Mwingi; A rural semi-arid district in Kenya," *American Journal of Public Health Research*, 3(1); 21–30.

O'Meara, W.P., Platt, A., Naanyu, V., Cole, D. and Ndege, S. (2013) Spatial autocorrelation in uptake of antenatal care and relationship to individual, household and village-level factors: results from a community-based survey of pregnant women in six districts in western Kenya, *International Journal of Health Geographics*, **12**:55.

Oyerinde, K., Harding, Y., Philip, A., Garbrah-Aidoo, N., Kanu, R., Oulare, M., Shoo, R. and Daoh, K. (2012) Barriers to Uptake of Emergency Obstetric and Newborn Care Services in Sierra Leone: A Qualitative Study. J Commun Med Health Educ, 2 (5): 1-8.

Perumal, N., Cole, D.C., Ouedraogo, HZ., Sindi, K., Loechl, C., Low, J., Levin, C., Kiria, C., Kurji, J. and Oyunga, M. (2013) Health and nutrition knowledge, attitudes and practices of pregnant women attending and not-attending ANC clinics in Western Kenya: A cross-sectional analysis. BMC Pregnancy Childbirth, 13: 146-150.

Rahman, M., Islam, R. and Rahman, M. (2010) Antenatal care seeking behaviour among slum mothers. A Study of Rajshahi City Corporation, Bangladesh.*SQU Med J*; 10:50-6.

Rashid, M. (2014) Socio-economic position as a determinant of maternal healthcare utilization: a population-based study in Namibia.

Sanjel, S., Ghimire, R., and Pun, K. (2012) Antenatal care practices in Tamang community of hilly area in central Nepal. Kathmandu Univ Med.; 9: 57-61.

Santon, C., Blanc, A.K., Croft, T. and Choi, Y. (2007) Skilled care at birth in the developing world: progress to date and strategies for expanding coverage.*J Biosoc Sci.;* 39(1):109–20.

Serizawa, A., Ito, K., Algaddal, A.H. &Eltaybe, R.A.M. (2014) Cultural perceptions and health behaviors related to safe motherhood among village women in Eastern Sudan: Ethnographic study. *International Journal of Nursing Studies* 51(4): 572–81.

Shiferaw, S., Spigt, M. and Godefrooi, M. (2013) Why do women prefer home births in Ethiopia? *BMC Pregnancy Childbirth;* 13:5.

Simkhada, B. Van Teijlingen, E.R., Porter, M. and Simkhada, P. (2008) "Factors affecting the utilization of antenatal care in developing countries: systematic review of the literature," *Journal of Advanced Nursing*, 61(3); 244–260.

Srivastava A, Mahmood S, Mishra P, Shrotriya V. (2014) Correlates of maternal health care utilization in rohilkhand region, India. Ann Med Health Sci Res; 4(3):417–25.

Sudhakaram, V. (2014) Institutional deliveries in India: A socio-economic and cultural view.
Sutton, J., He, M., Despard, C. and Evans, A. (2007) Barriers to breastfeeding in a Vietnamese community: a qualitative study. Can J Diet Pract Res, 68 (4): 195-200.

Thiam, S., Kimotho, V. and Gatonga, P. (2013) Why are IPTp coverage targets so elusive in sub-Saharan Africa? A systematic review of health system barriers.Malar J., 12(1): 353-360.

Titaley, C.R., Cynthia, L. and Peter, H. (2010) Why don't some women attend antenatal and postnatal care services? A qualitative study of community members' perspectives in Garut, Sukabumi and Ciamis districts of West Java Province, Indonesia. BMC Pregnancy Childbirth;10:61.

Tunçalp, Ö., Were, W.M., MacLennan, C., Oladapo, O.T., Gülmezoglu, A.M. and Daelmans, B. (2015) Quality of care for pregnant women and newborns-the WHO vision.*BJOG.;*122(8):1045–1049.

Tweheyo, R., Konde-Lule, J., Tumwesigye, N.M. and Sekandi, J.N. (2010) Male partner attendance of skilled antenatal care in peri-urban Gulu district, Northern Uganda. BMC Pregnancy Childbirth, 10: 10-53.

Tweheyo, R., Konde-Lule, J., Tumwesigye, NM. and Sekandi, JN. (2010) Male partner attendance of skilled antenatal care in peri-urban Gulu district, Northern Uganda. *BMC Pregnancy Childbirth, 10: 53-10.1186/1471-2393-10-53.*

UBOS, (2014) The population of the Regions of the Republic of Uganda and all Cities and Towns of more than 15,000 Inhabitants, *Citypopulation. De Quoting*, Uganda Bureau of Statistics (UBOS). Ministry of Statistics.

UBOS, (2014)"The Population of the Regions of the Republic of Uganda And All Cities And Towns of More Than 15,000 Inhabitants". *Citypopulation.de Quoting* Uganda Bureau of Statistics *(UBOS).*

Uganda Bureau of Statistics UBOS and ICF International Inc: (2012) Uganda demographic and health survey 2011. 2012, Kampala, Maryland: ICF International Inc, Kampala Uganda.

Uganda Bureau of statistics, (2011) *Uganda demographic and health survey,* Kampala, Uganda
Umubyeyi A, Mogren I, Ntaganira J, Krantz G. (2014) Intimate partner violence and its contribution to mental disorders in men and women in the post genocide Rwanda: findings from a population based study. *BMC Psychiatry*; 14:315.

UNICEF data: Monitoring the situation of children and women 63% in 2016
UNICEF, (2014) The State of the World's Children 2014 in Numbers: Every Child Counts,

UNICEF, (2015) Monitoring the situation of Women and children, Trends in accessing antenatal care, WHO.

UNICEF, (2015) *Monitoring the situation of Women and children*, Trends in accessing antenatal care, WHO.

UNICEF, (2015) Trends in accessing antenatal care, WHO.

United Nations, (2012). The millennium development goals report, New York: United Nations.

WHO, (2012) Trends in Maternal Mortality: 1990–2010, Geneva: WHO, UNICEF, UNFPA, & The World Bank.

WHO, (2014a) Maternal mortality country profiles; Geneva, WHO

WHO, (2014a) *Maternal mortality country profiles;* Geneva, WHO.

WHO, (2014c) Adolescents: Health risks and solutions; Geneva, WHO.

WHO, (2014c) *Adolescents: Health risks and solutions;* Geneva, WHO.

WHO, (2015) Global attendance of antenatal Care*;* Geneva, WHO.

Wilson, A., Gallos, I., Plana, N. and Lissauer, D. (2011) Effectiveness of strategies incorporating training and support of traditional birth attendants on prenatal and maternal mortality: meta-analysis. *BMJ,* 7102: 1–10.

Wilson, A., Gallos, I., Plana, N. and Lissauer, D. (2011) Effectiveness of strategies incorporating training and support of traditional birth attendants on prenatal and maternal mortality: meta-analysis, *BMJ,* 7102: 1–10.

Yuba Raj Paudel, Trishna Jha and Suresh Mehata. (2017) Timing of First antenatal care and inequalities in early initiation of ANC in Nepal; 5:242

APPENDIX I: CONSENT FORM

My name is **Kyomuhendo Phionah** a student from International Health Sciences University pursuing a Bachelor degree of nursing science and research is one of the requirements for the award of my course.

I am conducting a study on the Factors affecting regular uptake of Antenatal care services among pregnant mothers in their 3rd trimester at Kisugu Health Center II1.

Information to be collected will be kept confidential such that only the researcher and the supervisor will access it and sensitive information like your names will not surface anywhere rather will be replaced with codes to hide personal identity. The time spent will be entirely 30 minutes.

Your participation is entirely voluntary and you are free to withdraw at any level / time if you feel uncomfortable with the study your participation. There is no any major/minor risks the study is expected to pose to the participants. No monetary benefits for participation in this study as its purely academic but findings will help in improving uptake of ANC services at the health center and Uganda as a whole.

If there is any questions about this research, kindly contact the principal investigator and the supervisor on 0700535451 and 0704736838 respectively.

Statement of consent

I do hereby confirm that the above research study has been thoroughly explained to me and I have understood all the benefits and risks involved and therefore agree to willingly participate. I have been assured total confidentiality and that the results of the study shall not identify me.

Respondent's signature / Thumb print

.....

Date.....

Investigator

Name; KYOMUHENDO PHIONAH

Sign……

APPENDIX II: RESPONDENT'S QUESTIONNAIRE

Dear Respondent,

This study is carried out to determine the factors influencing regular uptake of Antenatal Care services in Kisugu Health Center III Kampala district. As a mother, you are encouraged to participate in this study. The information given will be kept confidential and will only be used for academic purposes.

NB: Please circle / tick the correct answer and fill in the blank spaces

Questions

Social demographic factors

1. How old are you?……
2. What is your education level?
   - Primary ☐
   - Secondary ☐
   - Tertiary ☐
   - No education ☐
3. From which region of the country are you?
   - Central ☐
   - Eastern ☐
   - Western ☐
   - Northern ☐
   - West Nile ☐
4. What is your religion?
   - Catholic ☐
   - Protestant ☐
   - Muslim precept ☐
   - Any other, specify……..
5. Are you employed?
   - Yes ☐
   - No ☐

Mother related factors

6. What is your place of residence / location?……
7. Do you know what antenatal care is?

Yes ☐

No ☐

8. How did you get to know about ANC?

   Through a friend ☐

   Through media (Radio, TV, News papers) ☐

   By health worker ☐

   My parent / Relative ☐

   Any other, specify……..

9. What is your marital status?

   Married ☐

   Not married ☐

   Widowed ☐

   Divorced ☐

   Any other ,specify……

10. Does your husband escort you when attending ANC?

    Yes ☐

    No ☐

11. If yes, what is his level of participation?

    Always / regularly ☐

    Once in a while ☐

    Any other …….

12. If no, then why?……

13. How many pregnancies have you conceived?……

14. Have you ever lost any child before birth? (Still birth / Miscarriage)

    Yes ☐

    No ☐

15. How many months is your pregnancy?……

16. How many antenatal care visits have you attended?

    1 ☐

    2 ☐

    3 ☐

    4 ☐

    > 4 ☐

17. When did you start antenatal visits?

    1st trimester (1 – 3 months) ☐

    2nd trimester (4 – 6 months) ☐

    3rd trimester (7 – 9 months) ☐

18. Is the language used by health worker friendly / well understood?

    Yes ☐

    No ☐

Health care related factors

19. During examination, is your privacy taken into account by health worker?

    Yes ☐

    No ☐

20. Are health workers enough?

    Yes ☐

    No ☐

21. Are they always available?……

22. Do you know the contents of ANC?

    Yes ☐

    No ☐

23. Do you receive the full package /contents of ANC?

    Yes ☐

    No ☐

24. If no, what don't you receive?

……

……

25. When does the clinic close and by the time it closes, are you all attended to?

……

……

26. How is the general cleanliness at the health centre?

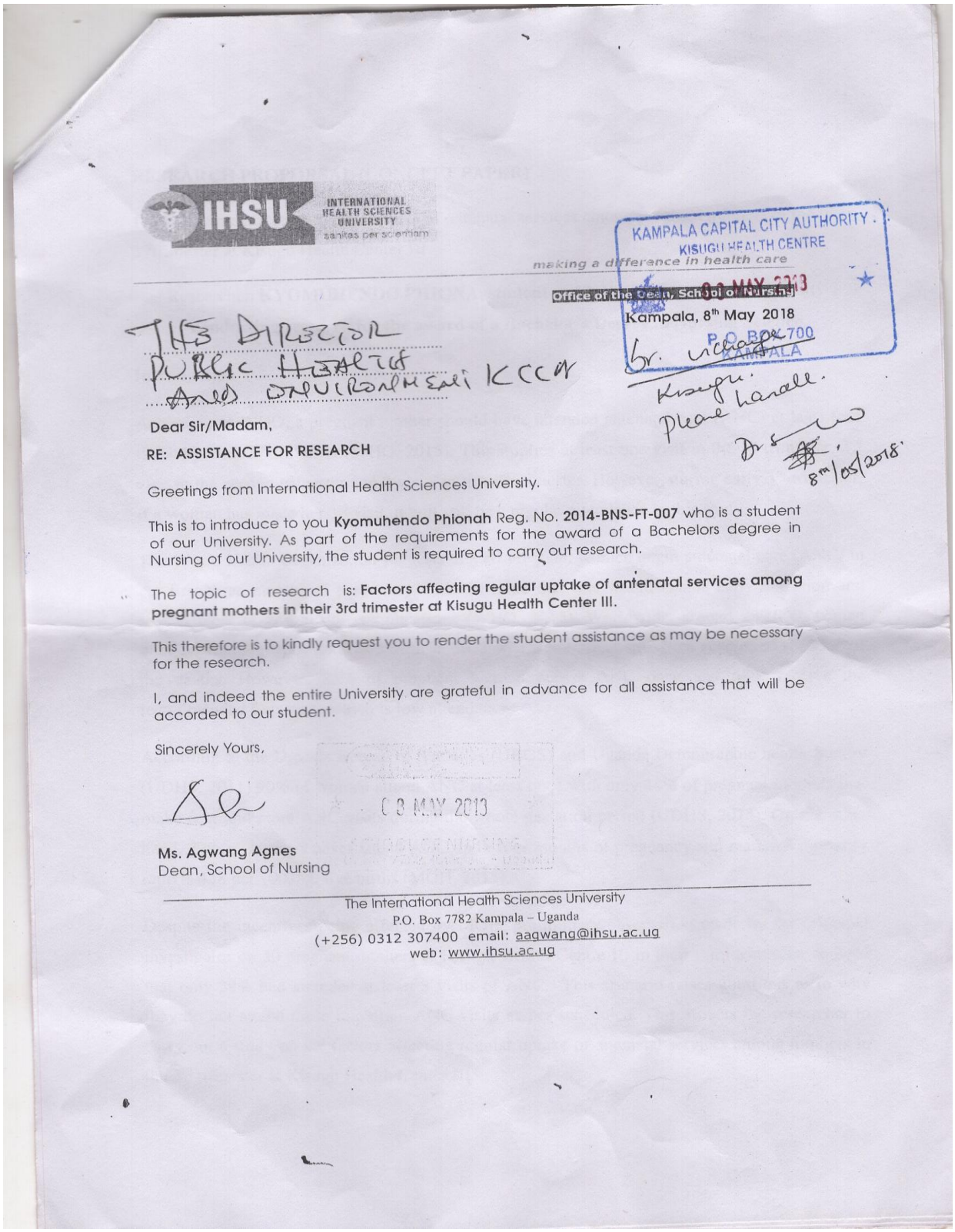
    Very good ☐

    Good ☐

    Fair ☐

    Poor ☐

APPENDIX III: INTRODUCTORY LETTER



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KAMPALA CAPITAL CITY AUTHORITY
KISUGU HEALTH CENTRE
08 MAY 2018
P.O. BOX 700 KAMPALA

Office of the Dean, School of Nursing

Kampala, 8th May 2018

THE DIRECTOR
PUBLIC HEALTH
AND ENVIRONMENT KCCA

Dr. Richard
Kisugu.
Please handle.
8th/05/2018.

Dear Sir/Madam,

RE: ASSISTANCE FOR RESEARCH

Greetings from International Health Sciences University.

This is to introduce to you **Kyomuhendo Phionah** Reg. No. **2014-BNS-FT-007** who is a student of our University. As part of the requirements for the award of a Bachelors degree in Nursing of our University, the student is required to carry out research.

The topic of research is: **Factors affecting regular uptake of antenatal services among pregnant mothers in their 3rd trimester at Kisugu Health Center III.**

This therefore is to kindly request you to render the student assistance as may be necessary for the research.

I, and indeed the entire University are grateful in advance for all assistance that will be accorded to our student.

Sincerely Yours,

08 MAY 2018
SCHOOL OF NURSING

Ms. Agwang Agnes
Dean, School of Nursing

The International Health Sciences University
P.O. Box 7782 Kampala – Uganda
(+256) 0312 307400 email: aagwang@ihsu.ac.ug
web: www.ihsu.ac.ug

APPENDIX IV: CORRESPONDENCE LETTER

DPHE/3409/2018

KCCA
KAMPALA CAPITAL CITY AUTHORITY
For a better City

OFFICE OF THE AUTHORITY COUNCILOR NAKAWA I
KAMPALA CAPITAL CITY AUTHORITY
TEL: 0704636083/0782941747
EMAIL:mosesmugisha19@yahoo.com

9th May 2018

THE DIRECTOR, PUBLIC HEALTH
AND ENVIRONMENT
KAMPALA CAPITAL CITY AUTHORITY

KAMPALA CAPITAL CITY AUTHORITY
KISUGU HEALTH CENTRE
09 MAY 2018
P.O. BOX 7010
KAMPALA

Dear Sir/Madam,

RE: <u>RECOMMENDATION OF KYOMUHENDO PHIONAH.</u>

Following the reference above, I hereby recommend the named student to do her research in Kisugu Health Centre III that will lead to the award of a Bachelor's degree in Nursing from the University as one of the usual requirements.

Thank you for a positive response.

Yours in service,

Mugisha Moses Okwera
AUTHORITY COUNCILOR – NAKAWA I

KAMPALA CAPITAL CITY AUTHORITY
DIRECTORATE OF PUBLIC HEALTH AND ENVIRONMENT
09 MAY 2018
RECEIVED

P.O. Box 7010 Kampala - Uganda
Plot 1-3 Apollo Kaggwa Road
Tel: 0204 660 000
Toll Freeline: 0800 99 0000
Sms code: 7010
Web: www.kcca.go.ug. Email: info@kcca.go.ug
f: facebook.com/kccaug. t: @KCCAUG