MOTHERS PERCEPTIONS OF SELECTED FACTORS INFLUENCING AWARENESS OF PREVENTION OF MOTHER TO CHILD TRANSMISSION OF HIV (PMTCT) SERVICES IN RIFT VALLEY PROVINCIAL GENERAL HOSPITAL, NAKURU.KENYA

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EGERTON UNIVERSITY

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DECLARATION AND RECOMMENDATION

Declaration

I declare that this research report is my original work and has not been presented for a degree in any other University.

Signature …….. …….
Yuniah B.B. Nyanchoka Date
Reg. No.EM16/1697/06

Recommendation

This Research Report has been submitted for examination with my approval as the University Supervisor.

Signature …….. Date…….
Dr. M. Chepchieng

DEDICATION

This work is dedicated to my Husband Josephat, Children Sheila, Kevin and Diana, my mother and everlasting memory of my late father Ex-Senior Chief Nelson Nyanchoka Akeya (EBS) who always told me to “COUNT MY BLESSING”

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ABSTRACT

Prevention of Mother-to-Child Transmission of HIV services is very essential in this era of HIV/AIDS. In effect, the Ministry of Health through various organizations and donors have come up with a comprehensive PMTCT service package to combat transmission of HIV to infants and also keep the mothers healthy. However, there are still very high rates of HIV infection among women and young girls that has resulted to high number of deaths among infants. This study therefore was to establish mothers' perceptions of selected factors influencing awareness of PMTCT services at the Rift Valley Provincial General Hospital, Nakuru. The population of study was 217 pregnant women who attended ANC and PMTCT clinic at the Rift Valley General Hospital. Case study design was used and the data was collected by use of a questionnaire designed by the researcher. The results were analyzed and represented using frequencies, percentages, and Chi-square. Statistical Package for Social Science, (SPSS) was used for data analysis. The response rate of questionnaire was 97.7%. It was established that the majority of the respondents indicated that they were moderately aware of PMTCT Services compared to those who indicated that they were highly aware of the PMTCT Services**.** It was also established that the majority of the respondents perceived counseling as moderately effective on PMTCT Services as compared to those who perceived it as highly effective. The research recommends a need to scale up awareness campaign of PMTCT Services through public meetings, support groups and mass media to breach the gap between awareness and intake of the services. The HIV Counseling and testing should be normal ANC routine service, to enable pregnant women to make informed decision about their pregnancy and receive appropriate and timely interventions to reduce MTCT of HIV. The findings may be generalized to Rift Valley Province and other similar areas where PMTCT services are provided but with caution.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Page

LIST OF ABBREVIATIONS AND ACRONYMS

AIDS-	Acquired Immune Deficiency Syndrome
ANC-	Antenatal Clinic
ARV-	Antiretroviral Treatment
CDC-	Center for Disease Control
CBS-	Central Bureau of Statistics
CHW-	Community Health Worker
FGM-	Female Genital Mutilation
GOK-	Government of Kenya
HIV-	Human Immune Virus
MTCT-	Mother-to-child Transmission
MOH-	Ministry of Health
NGO-	Non Governmental Organization
NACC-	National Aids Control Council
NASCOP-	National Aids, STD Control and Prevention
PMTCT-	Prevention of Mother to Child Transmission of HIV
PGH-	Provincial General Hospital
PLWHA-	People Living with HIV and AIDS
UNICEF-	United Nations Children Education Fund
UNAIDS-	United Nations Aids
WHO-	World Health Organization

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The World Health Organization (WHO) estimates that 40 million people are living with HIV/ AIDS worldwide and 28 million in sub-Saharan Africa whereby 2.2 million are in Kenya (WHO, 2007). The report further indicates that 55% of the infected are women in their child bearing age (15-49 years). This indicates that women and girls are the growing proportion of those infected by HIV/ AIDS, prompting the initiation of various preventive programmes of which mother-to-child transmission of HIV is one of them.

Heterosexual transmission is the major route to HIV infection in sub-Saharan Africa, Kenya included, resulting to 60% of women adults living with the virus (Center for Disease Control CDC, 2007). The report further indicated that over 2.2 million Kenyan adults are dying with HIV/ AIDS. Out of the 2.2 million, 1.5 million are women and yet the prevalence had gone down from 6.1 to 5.1 in 2006. According to NASCOP (2007), the prevalence is low but 1.5 million pregnant women need counseling and testing to determine their status whereas 68,000 need to prevent HIV transmission to infants In 2008 NASCOP revealed that the prevalence had gone up from 1.5 to 1.7.This was revealed from a research carried out on sampled PMTCT Centre countries wide which indicate low awareness of PMTCT services. It was due to the disparities between prevention, death, effectiveness of counseling and awareness that the study attempts to establish awareness levels effectiveness of counseling and other factors on prevention of mother-to-child transmission of HIV (PMTCT) services among pregnant women attending antenatal clinic at the Provincial General Hospital Nakuru, Kenya.

The Mother-to-Child Transmission of HIV (MTCT) is one of the consequences of HIV/AIDS transmission (World Change Program, 2007). The program indicates that women have 10% prevalence, while men have 5% which indicates high transmission of HIV to infants and mothers. This has drawn more attention to research on saving the children from the scourge of HIV and ignoring the mothers who are equally infected.

Thus, an in-depth study was necessary on mothers' perceptions of selected factors influencing awareness levels of HIV (PMTCT) services

In Kenya, over 50,000 infants are born with HIV and out of 1.3 million births annually there was a very small number born with negative status (CDC, 2006). These overwhelming figures have prompted research to be carried out including PMTCT programs.

The Ministry of Health (MOH) through National AIDS Control and Prevention has taken several measures in carrying out programmes especially for the mother and children like maternal child care, but still there are high infections and more deaths. The PMTCT services provision was a (MOH) initiative to extend the services to all parts of Kenya targeting 80% by 2007 (MOH 2003, National Health Program & Strategic Planning, 2003-2007). It was for this reason that the proposed research was designed to carry out an in-depth study on the mothers perceptions of selected factors influencing awareness levels of HIV (PMTCT) services in the Provincial General Hospital Nakuru, Kenya.

1.2 Statement of the Problem

According to the Kenya NASCOP (2007), 10% of the reported deaths of infants are due to Mother to Child Transmission of HIV in Kenya. This death and transmission rate may have been avoided if pregnant mothers were aware of PMTCT services. A few researchers have tried to carry out studies on prevention of mother-to child transmission of HIV. For instance World Change Program (2007) researched on mother to child transmission of HIV (MTCT). Pathfinder International (2003-2007) and Avert Organization (2006) researched on save the child from the scourge of HIV. From available literature there is no in-depth study that has been carried out on mothers' perceptions of selected factors influencing awareness levels of HIV (PMTCT) services. Against this backdrop, the current study aimed to establish the mothers' perceptions of selected factors influencing awareness of HIV (PMTCT) services. These factors include counseling, information, poverty, female genital mutilation domestic violence, early marriages, and fear of disclosure, age, stigma and discrimination in the Rift Valley Provincial General Hospital Nakuru.

1.3 Purpose of the Study

The purpose of the study was to establish the mothers' perceptions of selected factors influencing awareness of PMTCT services at Provincial General Hospital Nakuru, Kenya

1.4 Objectives of the study

The following objectives guided the study:

a) To establish awareness of PMTCT services among mothers attending ANC at Rift valley Provincial General Hospital Nakuru.

b) To establish the mothers perceptions of the following selected factors influencing awareness of PMTCT services at Rift valley Provincial General Hospital Nakuru

(i) Counseling

(ii) Provision of information

(iii) Poverty and female genital mutilation

(iv) Domestic violence and early marriages

(v) Fear of disclosure, Stigma and discrimination

(vi) Age

1.5 Research Questions

a) What were the awareness levels of PMTCT services among mothers attending ANC at Rift Valley Provincial General Hospital Nakuru?

b) What were the mothers' perceptions of the following selected factors influencing awareness of PMTCT services at Rift valley Provincial General Hospital?

(i) Counseling

(ii)Provision of information

(iii) Poverty and female genital mutilation

(iv) Domestic violence and early marriages

(v) Fear of disclosure, Stigma and discrimination

(vi) Age

1.6 Significance of the Study

The research findings may be beneficial to all mothers of child bearing ages since it may be used to encourage them to go for PMTCT services wherever they are. The information may enable the infected and affected to create awareness on PMTCT services and therefore increase awareness levels.

The Ministry of Health may use the findings to scale up the PMTCT services to reach those who have not got the services. The Non-Governmental Organization (NGOS) may use the findings to fund awareness campaigns on PMTCT services and also to provide antiretroviral treatment (ART). MOE can also use this information to include guidance, counseling, and teaching of life skills in schools so as to reach the infected like female teachers in primary, secondary, colleges and affected children.

1.7 Scope of the study

The study was carried out at the Antenatal clinic of Rift Valley Provincial General Hospital Nakuru, Kenya. It was confined to the mothers' perceptions of selected factors influencing awareness of PMTCT services.

1.8 Limitations of the study

The study was limited only to pregnant mothers where by some could refuse the questionnaire due to fear that they do not know what they are being asked but the questionnaires were availed every day until the sample of 217 was attained.

1.9 Assumptions of the Study

The study was based on the following assumption

i) All the pregnant women attending ANC benefit from the PMTCT Services.

ii) The PMTCT services are available for all mothers free of charge.

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1.9.1 Definition of terms

The following terms have been operationally defined as herein:

Awareness Level: The knowledge the pregnant women had about PMTCT Services.(low ,moderate and high.)

Breast feeding Replacement: An infant feeding formula chosen by mothers who are HIV Positive to replace the normal breastfeeding for their infants.

Child: Babies who are 0 to 5 years old.

Counseling: Receiving of information from a professional related to Prevention of mother to child transmission of HIV services.

Disclosure: Revealing or sharing certain facts with one another such as HIV diagnosis or to family or partner.

Discrimination: An act or behavior based on prejudice. It is a way of expressing not liking thoughts either purposely or unknowingly towards people who are HIV positive.

Influence: Extent to which counseling or other factors affect awareness of PMTCT Services.

Mother: Any woman at the age of 15-49 years with child/children,

Prevention: To stop passing the HIV virus to the un-born infant baby.

PMTCT: Prevention of Mother- to- Child Transmission**.** These are services provided in health facility to prevent transmission of HIV from mother to child.

Services: Professional help/assistance provided by all those working with health facilities.

Stigma: It is unfavorable attitude and belief directed towards people who are knowingly or suspected to be HIV positive.

Transmission: To infect or pass HIV virus to the infant baby before delivery, at birth, or during breastfeeding

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CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of related literature on the PMTCT services, which include education, counseling and testing delivery choice, antiretroviral treatment and breast feeding replacement. It also looks at selected factors influencing awareness levels on prevention of mother-to-child transmission of HIV (PMTCT) Services. These factors include, counseling provision of information about PMTCT, poverty, female genital mutilation, domestic violence, early marriages, fear of disclosure, stigma discrimination and age. Conceptual frame work highlighting the relationship among variables of study and others of interest are also covered in this chapter.

2.2 Prevention of Mother to child transmission of HIV (PMTCT) services and awareness.

The PMTCT services are various preventive measures which have been put in place in some health facilities around the country (MOH, NASCOP, 2007). The measures are taken up before a woman becomes expectant if she knows her status or that of her husband, or if she is pregnant and do not know her status. She is encouraged to visit the nearest antenatal clinic where some of the services are available (National Guidelines on PMTCT, 2002).

The preventive measures are taken up when a mother infects her infant in the uterus during the last weeks of pregnancy, labor, and delivery and during breastfeeding time (Aids Wikipedia Encyclopedia, 2007). The free encyclopedia indicates that specific preventive measures have been put in place like the use of antiretroviral drugs for treatment after infection, delivery through caesarean section, choosing of breastfeeding replacement.

According to NASCOP (2006) 10% of the pregnant women are living with HIV/AIDS however 38% of the pregnant women, know that they can pass the HIV Virus to their infant through breastfeeding. But overall PMTCT, is not well established and studies carried out in developed countries indicate that the uptake and awareness of PMTCT services is over 80% like in America and some European countries, (Adler, 2001).

He further explains that these countries had serious awareness campaigns on PMTCT services in hospitals and other health facilities.

In Kenya, the National Technical Working Group (TWG) was formed to spearhead the PMTCT Program and was launched in 2002 aimed at attaining PMTCT services to 80% by the year 2007 (pathfinder International, 2003). According to the Ministry of Health (MOH), it is working towards integrating PMTCT services to other programs, which are a success, like maternal child care, reproductive health services and family planning. This is the ultimate goal of the Ministry of Health to benefit all mothers and infants.

In Kenya, the MOH has specific model of approach for specific health based facility for PMTCT services. Others are community based while others are facility based for example the area under study is facility based. At the healthy facility the main role of PMTCT facility is aimed at educating, counseling and testing of pregnant mothers so as to enhance their understanding of HIV/AIDS and help the women make informed choices and decisions about their health and infants. MOH 2002.The counseling must be carried out by a professional e.g. health worker, nurses, educationist, trained lay people or volunteers.

The specific PMTCT intervention depends on whether a woman knows her HIV status. Thus HIV counseling is carried out, followed by HIV testing. The counseling is individual after psycho education on general hygiene is given in a group setting at the Antenatal clinic.

2.2.1 Psycho Education, Counseling and Testing

HIV infection is the most devastating health risk factor to the child and the mother, therefore pregnant mothers are encouraged to know their HIV infection status as well as for the partners. At clinic, the pregnant women seek medical care to ensure their babies are health and their own health thus Psycho Education and Counseling is a comprehensive package of care, (National PMTCT Guidelines, 2002).

The National Guidelines indicates the following as the type of psycho education to be done by a qualified professional. This includes the following;

i) Individual Counseling
ii) Test done for HIV
iii) Sharing results with partners
iv) Partner to clinic (or VCT site) for testing
v) Antiretroviral therapy
vi) Infant feeding
vii) Self care
viii) Hygiene
ix) Maternal nutrition
x) STD's
xi) Danger signs in pregnancy
xii) Labor
xiii) Baby care
xiv) Family Planning

The Psycho education is given as a way of making the pregnant women to be a ware of the services available for them and the importance of the services: In the group setting pre- test and post- test information includes:

i) Basics of HIV/AIDS
ii) Safe sex services
iii) Prevention and treatment of STDS
iv) HIV testing, post test counseling and follow up services
v) Prevention of HIV in infants and young children including interventions PMTCT.
vi) The psych education is recommended and given at the 1st ANC visit
vii) The mothers may be at different gestational period that is 1st trimester 2nd or 3rd trimester.

Counseling is the most essential PMTCT services given at the Antenatal clinics, after education has been given. It is a relationship that is safe, client centered and dynamic, PMTCT Guidelines (2005). According to the PMTCT Guide lines the counseling is split into 3 levels, which is in line with Egan's Gerald's book 'The skilled helper'. These stages are exploration which is the beginning stage, understanding the middle stage, where client is able to determine what they want and lastly is the Action stage when the counselor develops strategies on how to help the client. The 3 stage model is very essential in the PMTCT setting. It is applied at the individual counseling level where by the client understands and becomes aware of other services offered. The client chooses the course of action.

The guidelines further explain that the guiding principles for counseling in PMTCT settings must be upheld that is confidentiality, informed consent and post support services. These are principles upheld by any trained counselor.

They are applied during antenatal where by the pregnant women are educated in a group or an individual with a counselor. The confidentiality and informed consent are also upheld during pretest and post test moments. Pre-testing counseling is very vital due to the fact that; it must take place during the 1st visit to the ANC. The information discussed includes, recommended routine ANC tests including HIV testing, questions are answered regarding the psycho education session, tests procedures are explained and verbal consent obtained National guidelines on PMTCT 2002. The Guidelines indicates that prevention counseling has to be done, where by safer sex practice are discussed. The mother's plan for disclosure and support systems are dealt with (whether HIV infected or not infected).

At this stage understanding, sharing of results and recommendations for couple are included. Results or post test counseling at the ANC setting is one of the most sensitive parts of counseling. The results are interpreted with assistance of a counselor whereby according to the guidelines the results are explained in simple way for the mother to understand. Meaning of results are explained whether negative or positive HIV results.

Table 1 indicates the type of counseling which takes place at every level as the mother visits the ANC to access the PMTCT Services. Once the woman learns that conception has taken place, during the 1st trimester, she starts the ANC visit where psycho education counseling takes place in a group, followed by HIV counseling which includes pre-test, post-test and support service. This further includes counseling for delivery option and counseling for planning of infant feeding, Avert Organization (2006). It explains further that counseling is a continuous process which does not end after provision of ARV's but also involving partner and as the mother continues to visit the ANC for PMTCT services, whether HIV positive or HIV negative, the counseling continues showing its importance in the provision of PMTCT services. The counseling is very essential as indicated by Avert Organization (2006).

Table1

Facility Based PMTCT Services

Pre-Pregnancy	• HIV risk assessment and prevention counseling. • Condom distribution with a focus on dual protection. • Family planning counseling and supplies. • Laboratory tests as routine. • HIV counseling and testing.
Antenatal	• All elements of essential ANC package. • Education and group counseling. • Promotion of mother friendly continues care. • HIV Counseling and testing. • Counseling for delivery option • Counseling planning for infant feeding. • After delivery contraceptive planning. • Counseling and provision of Navirapine or other ARV at first ANC visit. • Involvement of partner and family. • Referral to support group.
Labor and Delivery	• HIV counseling and testing if status is not known. • Continuous labor support and infection prevention. • Mother dose of Navirapine at onset of active labor. • Avoid rapture of waters/or C-section • Minimize virginal examination. • New born care, Navirapine dose within 72 hours. Counseling for contraceptive choice.
Infant feeding and post Partum care	• Counseling, planning and support for exclusive and replacement feeding. • Counseling on weaning and minimizing mixed feeding. • Treatment of breast infections in the mother and oral thrush in the baby. • Frequent visit to facility support group. • Condom promotion for all.
Ongoing	• Treatment and prophylaxis for opportunistic infections for mother, partner and baby • Mothers HIV progression and comprehensive care including ART. • Monitoring baby for signs of AIDS and HIV testing at 18 months. • Referral to support group or CHW. • Family planning and method provision.

Source: National Guidelines PMTCT 2003-2007

2.2.2 Delivery Option and Awareness

Vaginal delivery has been found to be associated with increased chance of transmission of HIV from mother to the child. Normal obstetric guidelines in most areas are followed. If the mother is not under any retroviral then caesarian section can be carried out. This is where the baby is delivered through the mother's abdominal wall; it is done to avoid direct contact with her blood and bodily fluids (United Nations Children Education Fund, 2006). As UNICEF explains, if the mother was taking combination antiretroviral therapy then caesarian section is not recommended because the risk of infection is very low. Some researchers have shown a lot of concern for this option of delivery because it has to be carried out in very clean environment with enough equipment, but most of the health facilities do not have. Thus have opting for combination of antiretroviral therapy. Those pregnant women, who are negative, can also opt for caesarean section to avoid severe labor pains or any complications, thus equipment should be available. Unavailability of these services in rural dispensaries hinders awareness of the services.
The delivery option can only be done in an equipped health facility by doctors, thus its risky to deliver at home or on the way whether HIV positive or negative. The Ministry of Health has recommended hospital or health facility delivery as the best; because it is clean, with expert doctors for any eventuality (MOH, 2003).

All deliveries have risk of mother to child transmission of HIV and can be higher for vaginal delivery than for a scheduled cesarean. The cesarean section can also have anesthesia related problems and other risks associated with various surgeries as explained by AIDS info, HIV and pregnancy, (2008). The report further indicated that a pregnant mother who is HIV positive should receive intravenous AZT to be started 3 hours before a scheduled cesarean delivery and is continued until delivery. The baby born to the HIV positive mothers should receive medication to prevent mother to child transmission of HIV which is 6 weeks of ART. Mothers who have visited ANC; they are educated and are aware of this service.

2.2.3 Anti Retroviral Treatment and Awareness

During 2nd visit to the PMTCT clinic, mothers receive ARV's counseling by the nurse counselor or educationist; they are made aware of dangers of ARV's and goodness. The pregnant mothers' co-operation and adherence is very essential in taking of the ARV's.

According to the National PMTCT Guidelines, the antiretroviral therapy for the mother and infant is provided to avoid many complications. The guidelines explain why the ARVs should be given. This is because they reduce mother-to–child transmission of HIV. The mother becomes aware that it reduces the cost of caring for an HIV positive infant in the family. It reduces HIV infected infants and the burden they impact on caretakers and resources (National PMTCT Guidelines, 2002).

The research carried out by Aids info (2008) indicates that the choice of ARVs depends on cost and financial status of the mother and the time in point when she presents herself for care. The research further explains that most pregnant mothers who are low income earners or with no jobs do not access the ARVs thus succumb to AIDS then die. But those who have the finances sometimes do not adhere to treatment effectively, thus may drop somewhere, and do not accept the status, and also succumb to AIDS. This shows that lack of education and awareness being vulnerable, with no income or support will definitely lead to inability to access the PMTCT services.

The ARV services being expensive have been availed to pregnant mothers for free, so long as one accepts, to visit antenatal clinic once she is pregnant. The ARVs are given after the HIV status has been established to all those who attend clinic early, late, or those who do not and only come to deliver and their HIV status is not known. The guideline recommends that the ARVs start at 2nd trimester of pregnancy. The Avert organization recommends that combination of drugs has be taken, because they are more effective in preventing transmission from mother to child including AZT and other drugs.

It further recommends that, the drugs can be stopped once the child is born. They seek medical advice, from doctors who have to carry out various tests on the patients' viral load. The ARVs have side effects and rules to adhere to which as Avert. Organization proves that, instructions have to be adhered to and good diet should be maintained.

This information is only available at the health facilities. Pregnant mothers who do not visit ANC may not get adequate information.

2.2.4 Breastfeeding Replacement and Awareness

This is one of the best ways of taking care of an infant. For the positive mother HIV is found in breast milk, and once the mother breastfeeds, there is a significant chance of transmitting HIV to her baby (Avert organization, 2006). It further recommends that if the mother has safe breast milk replacement, then she is advised not to breastfeed.

According to WHO (2004), late postnatal transmission may occur that is after 3 months. It has been described as contributing 4 – 20% overall transmission in breastfed infants in Africa. This is due to the fear and stigma for being HIV positive. Thus high transmission rates are experienced. The World Health Organization further indicates that most of the research carried out shows breastfeeding replacement as a complex issue; therefore the mothers should be educated and counseled well before making a choice. This is because there is need to pressure the benefits of breastfeeding for uninfected women and children while finding a suitable, feasible and affordable breast milk replacement. Therefore the research recommends that, the mothers should visit the health facility for further counseling on breastfeeding replacement, so that their babies are not infected. After counseling on HIV and infant feeding the mother should be able to choose between breast milk and commercial infant formula. She should demonstrate the ability to prepare whatever choice taken.

2.3 Other factors Influencing Awareness of PMTCT Services

In most parts of the developed world, pregnant mothers, know their HIV status and those who are HIV positive are aware of PMTCT and have accessed to more than 2%, while awareness is 90 – 95% in developed countries but this is reverse in developing world where transmission is over 35% while awareness is approximately below 50% and the majority of women have never been tested for HIV, and some have never accessed ANC services where PMTCT services are integrated. Some of the factors which influence PMTCT services include counseling, early marriages, female genital mutilation, age, and domestic violence.

Provision of information may also influence PMTCT services through the means of Television, Radio, News Papers, Health Personnel, and Fear of disclosing HIV status, stigma and discrimination can also influence awareness of PMTCT services.

In Sub-Saharan Africa, some health facilities do offer PMTCT services but not all women accept the services due to various reasons (Avert Organization, 2004). According to Avert Organization most poor women have a lot of responsibility like, preparing food, fetching water, firewood, tending crops and they may be far from a health facility making it hard for this poor women access the facility. That is why 1/3 of the pregnant women in developing world do not attend ANC, while 2/3 give birth unattended by a skilled health worker, this means little awareness on importance of PMTCT services. This can only be prevented as Avert.org.explains by providing travel services or mobile PMTCT services so that the rural pregnant women can be reached. Those who cannot deliver at the facility can be given Navirapine pill in advance and through assistance of CHW'S they reach the clinic within 72 hours of delivery. Traditional birth attendants and midwives can be used to raise awareness levels and also provide PMTCT services like education, counseling, testing and advice on infant feeding.

The WHO predicated in the year 1993 that by the year 2000, 90% of all new AIDS cases in the world will have been acquired through heterosexual and more women than men would be infected (WHO 2007). This prediction has been proved to be true despite the predicted percentage being slightly higher; it stands at 75% (NASCOP, 2007). This evidence has not only raised researchers' eye brows but it has had great social economic impact among people globally. Women have been described as being more vulnerable to HIV due to the cervical ectopic exposed to infections more than men. They also have young women with immature genital tract, coupled with unprotected anal and virginal intercourse (Health 24.com Education 2007). This is because women are the recipients of semen, therefore exposed to semen longer than a man is exposed to the body fluids for only short time. This makes women to be at risk of HIV infection coupled with other factors like socio-cultural factors.

The social-cultural factors also make women vulnerable to HIV/AIDS, this includes: female genital mutilation (FGM), early marriages, poverty illiteracy and domestic violence. The FGM is an act of removing part of female genital, which is practiced widely in some countries in Africa Kenya included. But through research it is a psychological torture to the victims who are women especially young girls (Touba, 1995). This is putting their health at risk and also open to HIV infection, for it normally takes place in very unhygienic conditions that give chance to spread of infections to the victim (Willis, 2004). Poverty easily gets some women into risky behaviors or in risky situations where by they can easily get the HIV infection. Some women have no alternatives but resort to sex so as to satisfy their basic needs (UNAIDS, 2004). The economic dependence of women on men, rob them off the control over circumstances of safer sex. It takes away their safe sex say or bargaining. Therefore they cannot be able to afford transport to the clinic once expectant, buy proper clothing, food, medication and other basic necessities. This can make them not know or be aware about PMTCT services.

The National Development Plan (2002-2008) reveals that few women have high income jobs and others small scale farming business that gives them meager income to cater for their needs. The girl child becoming pregnant at the age of 9 to 10 makes the girl highly vulnerable than a boy because education ends and is forced to care for other siblings even if their elder brother is there. Some may become commercial sex workers and can easily be sexually and physically abused and thus increase the risk of HIV infection (Family Magazine, 2004). Some of the young girls who are victims of rape and young mothers will never access PMTCT services because of fear, stigma coupled with their young age; they are ashamed of being mothers.

Another research carried out by Ngashi in Botswana indicates that there was very low uptake of PMTCT services among pregnant women despite being aware of the services. This is because of their culture which makes them not to go to the clinic as they learn the HIV status and thus can be isolated and even loose family support especially from the spouse who is viewed as the provider of food, shelter and care of the mother and children. Thus, most mothers do not even attempt to access the services at all therefore almost 70% of the pregnant women choose to be silent about their status (Ngashi, 2002).

Ngashi's research concurs with the research carried out by Pathfinder International in North Rift District of the Rift Valley Kenya which indicated that Pregnant women have no power, to declare their HIV status because, they are regarded as children thus do not take drugs even when pregnant, or have no reason as to why they should not breastfeed their infants thus describing the whole idea as risky and foreign (Pathfinder International Kenya, 2006).
Most of the factors involve women of childbearing age, but it also affects young girls, which interprets to teenage pregnancy.

Among some communities young girls are forced into early marriages, exposing them to the HIV infection. Some AIDS sufferers are resorting to sexual intercourse or marriage to young girls or virgins with the hope of being cleansed (Rambeya, 2000) and thus indicates that they are used as cleansing vessels of AIDS suffering men. This has also made very old men marry young women as second or third wife on the belief that they are less likely to have HIV/AIDS (Willis, 2004).

Domestic violence is a major factor that makes women more vulnerable to HIV/AIDS (UNAIDS correspondent, 2004). It indicates that there are 7 -8 times more likely to experience sexual harassment than men. The violence places women in a position that they are not able to negotiate for safe sex because refusal to use condom or abstinence may lead to violence and if the partner is already infected, the woman cannot escape. This are women who fear in wanting to know their HIV status, they fear more violence and isolation thus do not visit health facility even if they are aware of the services.
Social inequality often makes women more vulnerable to HIV infection especially in societies which accord women a lower status than men. This has been revealed by the research carried out by Health 24.com education (2007). It indicates that women in such situations have little or no control over their sexual lives and they are not in a position to negotiate for safer sex practice because they fear violence and abandonment should they try to do so. Women from low socio-economic environments are often driven to prostitution and are particularly vulnerable to rape and HIV and AIDS. The suggestion to use condom is viewed as a sign of infidelity (Mathu, 2004). Even those married in some communities do not negotiate for safe sex hence men dominance and more women vulnerability to HIV/AIDS (Balmer, 1995).

The idea of being viewed as unequal may render some women not able to be aware of PMTCT services because of being confined to homestead activities only. The women, who are exposed to such factors, do not access PMTCT services and therefore never access Health facility.

2.3.1 Provision of information on PMTCT services and awareness

Due to overwhelming deaths on both mothers and children, the information on the availability of the PMTCT services has not reached the targeted people especially the many segments of the rural population, most of which are illiterate about PMTCT services (Sonja and Benn, 2003). According to UNICEF (2006), UNAIDS (2004), and WHO (2003) PMTCT campaigns have not reached people. They concur with Sonja and Benn. This is because proper mechanisms have not been put in place to intensify awareness campaigns on PMTCT services.

Some countries in Sub-Saharan Africa have PMTCT success stories, like Botswana and Uganda. Despite the fact that some countries do not have this services others have but not efficient while other services cannot be accessed while in all the African countries there is a problem of stigma and fear accompanied by cultural factors this, has led to many mothers and children with HIV, and some have succumbed to AIDS due to lack of awareness of the existing PMTCT services. Avert.org. (2006) explains that, they have launched a campaign of enabling pregnant women and other women of child bearing age to receive all the help they need in order to stop AIDS among children and enable them to live a healthy long life.

One senior United Nations Officials also admitted that all programmes on PMTCT have been a failure despite the big funding. Pregnant women still don't have access to the PMTCT to enable them prevent them transmitting the virus to their baby. He further gave reasons for this failure as lack of enough services, the existing services to not reach many of the local women in need, and there is no enough awareness of these services.

There was the launch of National Women and girls HIV/AIDS awareness day which was first celebrated in 10th March 2006, 2007 and 2008. 10th March every year is a day set aside to raise awareness among women and girls about HIV/AIDS, know their status, promote access to preventive services for healthy living and reduce risk of HIV infections.

This is carried out by the U.S.A. Government. In Kenya the Clinton foundation gave Kenya a blank medical cheque with a pledge to pay for the treatment of HIV infected children. It also launched awareness campaigns worth Shillings 70 million targeting pregnant women including parents of HIV exposed children (Mbogo, 2007).

According to Sonja and Benn (2003), there should be provision of information including PMTCT services which requires all the sources of the information that is public, private and mission based facilities to provide current and relevant information on PMTCT services. This will included all medical personnel, Doctors, Nurses, Community Health Workers, (CHW'S) Midwives, Lay Counselors, Volunteers, at the affected and infected pregnant mothers. It will ensure that appropriate messages are conveyed to others and even those who are hard to reach like young girls who are not acting on the assumption that they run a risk of HIV infection once pregnant. The rising of awareness can be communicated through word of mouth at the Healthy facility, posters, newsletters, magazines, video, Audio like National and Local Radio stations, television, through public meetings of the Government officials, Church leaders, even in self help groups formed by various people (Pathfinder International , 2003, Sonja & Benn, 2003).

2.3.2. Fear of Disclosure and Awareness

Some women refuse HIV testing because they are afraid of learning that their HIV status life is threatening disease and are afraid that, worry and distrust will quicken death once they know. This will be a barrier to others because such pregnant mothers will keep quiet and not tell others about PMTCT services (Pathfinder International, 2004). Poor counseling leads to distrust and misunderstanding which may make some pregnant women to break up accessing further treatment. In this circumstance, disclosure can be difficult and therefore the counselors are carefully to explore the mother's fears before encouraging disclosure. According to the Kenya National PMTCT training Manual 2005 the counselor is to ensure that she/he should not knowingly exhibit any behavior that may increase fear and make disclosure impossible.

The counselor should carry out intensive exploration in dealing with fear and disclosure especially in accepting and receiving the HIV positive infection results, sharing results with the partner because, this is where support system at home lies and also will determine subsequent visits, plan for safe delivery and infant feeding, (PMTCT Training Manual,2005). The counseling is continuous for if it does not, it will lead to stigma and discrimination.

2.3.3 Stigma, Discrimination and Awareness

Many women are concerned that once they are found to be HIV positive, it is never a secret because it will be read on their face as they come out of the testing room, they do not want anybody to know, because it causes fear, discrimination and stigma, especially from friends. They know to have a life threatening situation some feel, its better they do not know anything to do with the PMTCT services than to be stigmatized and discriminated. It is good to involve partner and family so as to overcome discrimination and fear. It is also good to disclose to the birth attendants and health workers so that necessary precautions are carried out (National Guidelines on PMTCT, 2002).

The women's fear of being stigmatized is of great concern it influences the awareness of PMTCT services. According to Ayisi (2002) women fear and feel that they will be stigmatized if their status is known by partner and friends, if found out that she is taking drugs and not breastfeeding, returning for checkups every month, she will always try to keep secret by not accessing the PMTCT services even if she is aware that they exist.

He further explains that research carried out in Uganda indicated that stigma, makes many mothers to deliver at home and never return for any follow up. It is therefore the responsibility of counselor to give proper, true and appropriate information as concerns stigma and discrimination.Lack of being aware of stigmatizing and discriminatory behaviors can make disclosure difficult, and thus understanding of the mother should be dealt with in more than one session. According to Kenya National PMTCT curriculum, June, (2005). Lack of knowledge and fear foster stigma and discrimination, thus the counselor gives understanding on HIV & AIDS, and progression of the disease.

Stigma and discrimination pose distinct challenges to the provision of PMTCT services for instance avoid replacement feeding because they will be labeled as HIV-infected if they are not breastfeeding. Stigma and discrimination puts off awareness in that, it discourages women from accessing Antenatal care services, get tested for HIV and access PMTCT Services. It discourages women from discussing their HIV test results and disclosing the same to their partners. Discourages women from accepting PMTCT interventions like, ARV therapy and prophylaxis and recommended PMTCT safer infant feeding practices.

2.4 Age and Awareness of PMTCT Services

The PMTCT services focuses, on pregnant mothers. This is according to WHO which indicates that child bearing age is 15 years to 49 years and that all women within the age bracket should adhere to PMTCT services, if not it will result to several deaths of children under 5 years old. The age difference will also include all men who are sexually active as from 15 years onwards but according to Sonja and Benn there is age group difference in infections. The figures given by Sonja and Benn indicate that as at 2001 both men and women adults between 15 – 24 years were equally infected but in 2003 onwards fewer men were infected at age of 15 – 24. Infection was 3-6% showing that women were more infected than men. In most Africa countries Age group 15 – 24 years of women are 2-8 times more HIV infected than men. The prevalence is more pronounced in urban areas than rural areas. Women of child bearing age are infected more in some African countries. Figure 1 shows the infection rates in selected African countries. It indicates that the percentage of female infection is high than that of male thus need for intensive PMTCT services.

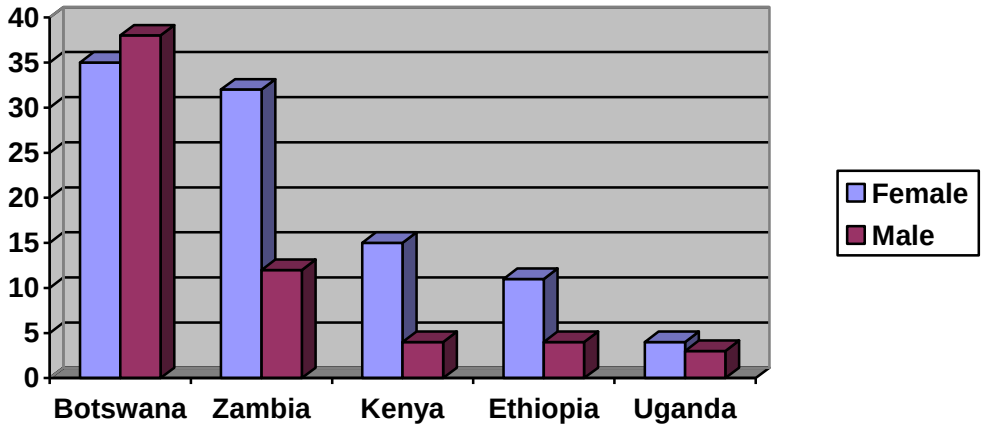


Figure 1

Infection Rates in Selected African Countries

Source: UNAIDS 2002

There is attendance of young girls having sexual intercourse with older men ("Sugar Daddies) in exchange of favors and finances, the men also feel that they are HIV free. The research from UNAIDS indicates that, young girls cannot negotiate for safe sexual intercourse thus leading to risk of infection. It is also possible that the older men can infect their partners and future husbands then later to children, thus bring in another age bracket to infection (UNICEF, 2004).

In 2001, 11.8 million young people between ages 15-24 were infected and living with HIV Worldwide. The spread of HIV has been halted and quite a lot of behavior changed has been achieved among young people. The young people exposed to sexual intercourse, and few due to intravenous drug injections have obtained information on prevention. Despite the decrease, young girls have increased with teenage pregnancy which is explained to originate from older men of different age bracket as explained earlier (UNAIDS, 2002).

According to Benn and Sonja (2003) duties carried out in Kenya indicated that most young people had sexual intercourse before their 15th birthday. It also established that there is less use of condoms. According to Kenya's monitoring and evaluation committee (2006) new infections occur every day especially among young people while those still living with the virus are the majority ranging 25-49. With Kenya's population of 35,000,000 million people UNAIDS, WHO (2006) gave the following report of infection according to age:

Table 2

Age and HIV Infection

Age and HIV infection	NO/%
Number of people living with HIV	1,300,000
Adults living with HIV 15 Years and over	1,200,000
Women age 15 and over living with HIV	740,000
Adult prevalence	5.1%
Children aged 0-14 living with HIV	150,000
Orphans, children under 17 die to AIDS	1,100,000

Source: World Health Organization (2006)

Despite the fact that, new infections have decreased by 15% and ARV'S have about 57,000 deaths being averted, the awareness of PMTCT services and uptake is not well indicated.

It's often argued that it's difficult or unadvisable to speak with children before puberty about sexuality.

Arguments however show that sex education for children is important especially 9 – 10 years old (Sonja & Benn, 2006). According to Sonja and Benn, young peers generally are confronted with sexuality via video, advertisements television thus are aware of sexuality but as a commodity, thus adults must convey appropriate message to children and young people early on.

Awareness is said to be there among young girls under 18 years for instance in Zambia who are either pregnant or already have a child. Research shows that sex and sexuality are learned in the period between 10 and 14 years of age, it is the best way to establish such behavior patterns in children is easier than changing high risk behavior later at older change (UNICEF/UNAIDS/WHO, 2005).Many programs and initiatives have started to target primary school children and children of similar ages HIV prevention. In research carried out by Sonja and Benn, young people have significant information deficit concerning HIV/AIDS. In addition, most young people lack the necessary resources and skills to effectively protect themselves against infection and transmission, thus are not very much aware of the HIV and Transmission.

2.5 Theoretical Framework

The assessment of awareness levels of PMTCT services among pregnant women is a study guided by the health communication theory which was presented by. Hochbaum (1950) It was developed in response to the failure of free tuberculosis (TB) health screening program and since then, it has been adapted to explore long term and short term health behavior including transmission of HIV/AIDS. The health communication theory had the understanding that a person would take other related action if that person, feels that negative health conditions like HIV can be avoided. If the person had a positive expectation that by taking recommended action, he/she, would avoid a negative health condition; that is, change behavior, abstain, and use condoms would be effective at preventing HIV and believes that he/she can successfully take recommended health action by using condoms comfortably with confidence.

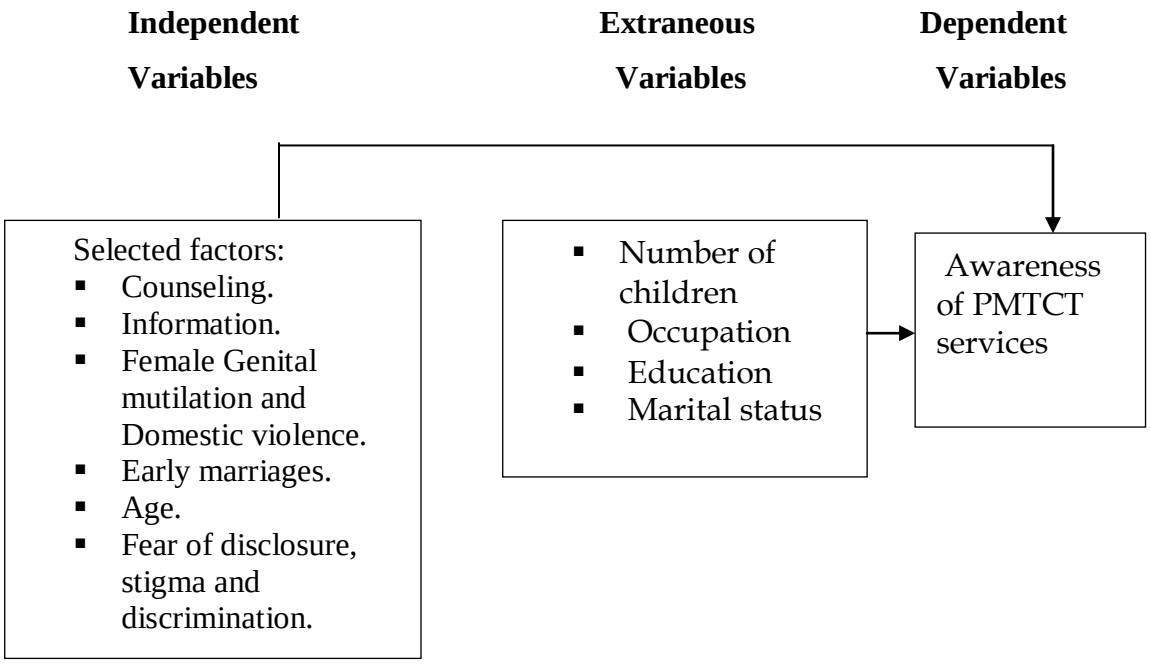
The pregnant women's awareness on PMTCT services may have been there or not but if she feels that a negative health condition for her and infant can be avoided she can respond by attending the clinic. At the ANC, she would develop a positive expectation after counseling and education, take all the recommended actions like, listening to counseling, consent and be tested, receive results if she has no HIV she may continue using condoms, or being faithful so that she can avoid the negative health condition. If she is positive, meaning that the negative health condition was not avoided, the pregnant women takes recommended action, take ARVS, opt for caesarian section of delivery, choose breastfeeding replacement recommended so as to improve their health, prolong their lives and also avoid infecting their infants. If the pregnant women belief that they can successfully take recommended health action, for instance take tests comfortably, talk about PMTCT services and their HIV status even disclosing without fear they can choose infant replacement and take their pills with confidence

2.6 Conceptual Framework

The independent variables of study were levels of awareness of PMTCT services, and influence of counseling, age and other factors. The dependent variable was awareness of pregnant women of PMTCT services offered in Rift valley provincial hospital. However, there are other variables like number of children, occupation, education level, gestation age and marital status that may intervene between independent variable and dependent variables. There were controlled by being in-built to the study and their effects gotten rid of statistically by partial correlations.

Figure 2

Influence of selected Factors on Awareness Levels of PMTCT Services.



CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the research design used in the study is described; it also outlines the location of study, the target population, sample size and sampling procedures, instrumentation, data collection procedures and data analysis.

3.2 Research Design

Case study design was used in the study. This is a type of design whereby the researcher is interested in opinion of a large group about a particular topic and a number of questions are asked in relation to the issue to find answers (Fraenkel & Wallen, 2006). The information was collected at just one point which was at Rift valley Provincial General Hospital Antenatal Clinic. It was conducted to establish mothers' perceptions of selected factors influencing awareness levels PMTCT services.

3.3 Location of the study

The location of the study was the Provincial General Hospital of Rift Valley Province. The area was conveniently selected because of its accessibility and also because it serves a large province as a referral hospital thus made data collection process faster.

3.4 Population of the Study

The accessible population of the study was 500 pregnant women, who had been established to be attending the antenatal clinic at Provincial General Hospital every month. The pregnant women were involved in the study because it was about Mothers perceptions of selected factors influencing awareness levels of HIV (PMTCT) services.

3.5 Sampling Procedures and Sample Size

The sample was carefully selected from the population by use of purposive and convenient sampling methods. The pregnant women were purposively selected because they were primary clients of PMTCT services and could provide information needed by research.

The researcher selected the participants of study as they were available in ANC clinic of Rift valley provincial hospital between 16th and 27th November, 2009.

From the population of approximately 500 pregnant women, a sample of 217 was selected. This was considered representative as per the table for determining sample size as suggested by Kathuri and Pals, (1993).

3.6 Instrumentation

The instrument used in data collection was a questionnaire with closed ended items. The instrument was developed by the researcher. The questionnaire had three sections; Section A contained Demographic and background information, Section B contained items measuring awareness on PMTCT services, where by the respondents indicated how they receive the PMTCT service. While section C contained items which indicated how the mothers' perceived counseling on PMTCT services and section D contained items which influence the PMTCT services.

3.6.1 Validity and Reliability of the Instrument

Validity of the instrument was achieved by developing questionnaires that were related to the objectives. The researcher carried out a pilot study to establish the reliability of the randomly selected sample of three pregnant women at Moi Referral Hospital ANC, Eldoret, which was 1% of total sample as recommended by Orodho (2004), and Mugenda and Mugenda (2005). The reliability of the instrument was tested using the split- half method.

Reliability Coefficient of the scores of total test = $\frac{2 \times \text{reliability of half text}}{1 + \text{reliability of half text}}$

The result obtained was: $\frac{2 \times 0.64}{1 + 0.64} = \frac{1.28}{1.64} = 0.78$

A reliability coefficient of 0.7 and above was considered acceptable (Fraenkel & Wallen 2006). The instrument was adopted as reliable as indicated by the calculated reliability coefficient.

3.7 Data Collection Procedures

The researcher obtained permission from the hospital medical superintendent to carry out the study. This was done after the research proposal was approved. The Matron in charge and nurses of the antenatal clinic were also informed who in turn informed the respondents under study daily. The pregnant mothers who arrived and booked for ANC were given questionnaires to fill in relation to the issue under study as they came every day, until the sample of 217 was attained. The researcher assisted those who were not be able to fill the questionnaire by themselves by asking them the questions then the research further explained the procedure of responding to the questionnaire.

3.8 Data Analysis

The collected data was organized, categorized and analyzed by use of descriptive statistics (frequencies, percentages and cross tabulation) Chi square was used to establish influence of age on awareness levels of PMTCT services. The test was done at a significant level of 0.05 Data analysis was aided by Statistical Package for Social Science (SPSS) version 15.0

CHAPTER FOUR: RESULTS AND DISCUSSIONS

4.1 Introduction

The results of the data analysis on the mothers' perceptions of selected factors influencing awareness levels of Prevention of mother to child transmission of HIV services at provincial general hospital Nakuru, Kenya are presented and discussed in this chapter. The chapter gives a summary of demographic and background characteristics of the mothers. The data was analyzed and presented using frequencies, percentages, cross tabulations and Chi-square. Statistical package for social science aided in data analysis. The response rate of questionnaires was 97.7%. The results and discussions were guided by the Research Questions of the study as follows:

a) What were the awareness levels of PMTCT services among pregnant mothers attending ANC at the Rift valley Provincial General Hospital Nakuru?

b) What were the mothers' perceptions of the following selected factors influencing awareness of PMTCT services?

(i) Counseling

(ii) Provision of information,

(iii) Poverty and Female genital mutilation

(iv) Domestic violence and early marriages

(v) Fear of disclosure, Stigma and Discrimination

(vi) Age

4.2 Demographic and Background Characteristics of the Mothers

This section gives a summary of the distribution of the mothers demographic and background characteristics: Age, marital status, level of education, occupation, pregnancy history, attendance of ANC and PMTCT clinics.

Table 3

Demographic Characteristics

Characteristics	Frequency	Percentage
Age		
Non-response	2	.9
Below 20	29	13.7
21-30 years	145	68.4
31-40 years	34	16.0
Over 41 years	2	.9
Marital Status		
Divorced	1	.5
Widow	2	.9
Separated	5	2.4
Single	21	9.9
Married	183	86.3
Level of Education		
No formal education	2	.9
Primary	54	25.5
Secondary	93	43.9
Tertiary and college	54	25.5
University	9	4.2
Occupation		
No response	3	1.4
No formal employment	20	9.4
House wife	71	33.5
Business or self employed	83	39.2
Employed	32	15.1

Results in Table 3 indicated that majority of the mothers were aged 21-30 (68.4%) and were married (86.3%). The mothers who had secondary education were 43.9% as compared to 25.5% who had tertiary or college education.

The mothers who were doing business or self-employed were 39.2% as compared to 15.1% who had formal employment as indicated table 3, as far as those characteristics are concerned. It can therefore be concluded that the mothers age ranges from 21-30 years this concurs with Sonja and Benn (2003) that it's the peak of child bearing age compared to the age of 31-40. Most married people do seek ANC services compared to single, separate and divorced. It can also be concluded that most of the mothers attained secondary education 43.9%, for the researcher did not experience any problem with the language (English) which indicated that most mothers are able to read and respond to the responses. Most mothers were also found out to be engaged in business or self-employment, 32.9% indicating that they have some kind of income and therefore can access PMTCT services.

The mothers who indicated that their pregnancy during the survey was not the first one were 59.0% with 47.6 % indicating that they were in their 7-9 months as shown in Table 4. The results in the same observation indicate that 28.8% and 44.3% did not attend ANC and PMTCT services respectively.

Table 4

Background characteristics

Characteristics	Frequency	Percentage
First pregnancy		
No response	6	2.8
Yes	81	38.2
No	125	59.0
Pregnancy period		
No response	3	1.4
0-3 months	13	6.1
3-8 months	86	40.6
7-9 months	101	47.6
I do not know	8	3.8
Attendance of ANC clinic		
No response	42	19.8
Yes	109	51.4
No	61	28.8
Attendance of PMCT clinic		
No response	36	17.0
Yes	82	38.7
	93	44.3

The background characteristics indicates that most mothers have had more than one pregnancy and they visit the clinic when they are about to get the baby (7-9) months while most have attended ANC clinic indicating that they know its importance while 44% of the mothers indicated that they had not attended PMTCT clinic anywhere indicating that they do not know PMTCT Services or they know and have reasons as to why they have not attended the clinic.

4.3 Awareness levels of PMTCT services

Research question one was to establish awareness levels of the PMTCT services among pregnant mothers attending antenatal clinic at Rift valley Provincial General Hospital Nakuru.

The PMTCT services offered included maternal and infant care, diet, and hygiene; information on sexually transmitted infections including HIV/ AIDS; birth plan and family planning; counseling and testing of HIV, management of positive status and prevention of mother to child transmission of HIV

Awareness scale of three levels was constructed and total scores in the scale were divided into three categories; low (16-32), scores, moderate (33-49), scores, and high (50-64) scores. Findings revealed that more than half of the mothers (52.4%) indicated that they were moderately aware of the PMTCT services as compared to 26.4% who indicated that they were highly aware of the PMTCT services as shown in Table 5.

Table 5

Awareness Levels of PMTCT Services

Level	Frequency	Percentage
Low (16-32)	45	21.2
Moderate (33-49)	111	52.4
High (50-64)	56	26.4
Total	**212**	**100.0**

The findings indicate that there is awareness of PMTCT services among the mothers These concurs with the efforts of the MOH and NASCOP, who availed PMTCT services in some health facilities'.

However this has not matched the uptake of PMTCT services in developed countries which is over 80% as Adler, 2001 explains thus there is need for serious awareness campaigns on PMTCT services in health facilities.

The results in table 6 indicated that 28.3%22.2%, and 16.5% of the mothers were not aware of the importance of having sex during pregnancy, taking of ARVS, use of Navirapine to prevent HIV transmission to infants

Table 6

The mothers' awareness of PMTCT Services

Service	Responses									
	NR		NA		A		DK		VMA	
	Fre	%	Fre	%	Fre	%	Fre	%	Fre	%
Counseling and testing	6	2.8	37	17.5	48	22.6	18	8.5	103	48.6
Self care	14	6.6	40	18.9	50	23.6	12	5.7	96	45.3
Hygiene	9	4.2	39	18.4	55	25.9	15	7.1	94	44.3
Diet	19	9.0	37	17.5	46	21.7	22	10.4	88	41.5
Danger signs	19	9.0	43	20.3	44	20.8	34	16.0	72	34.0
Sex during pregnancy	17	8.0	60	28.3	51	24.1	42	19.8	42	19.8
STI	19	9.0	44	20.8	47	22.2	39	18.4	63	29.7
Hospital delivery	15	7.1	39	18.4	40	18.9	20	9.4	97	45.8
Care of the baby	15	7.1	40	18.9	46	21.7	20	9.4	90	42.5
Breast feeding	13	6.1	37	17.5	40	18.9	22	10.4	99	46.7
Family planning	14	6.6	36	17.0	60	28.3	34	16.0	67	31.6
Share of HIV results	17	8.0	36	17.0	42	19.8	58	27.4	58	27.4
Nevirapine	12	5.7	35	16.5	37	17.5	61	28.8	67	31.6
ARVs for mother	10	4.7	47	22.2	32	15.1	54	25.5	69	32.5
Delivery method	9	4.2	34	16.0	42	19.8	67	31.6	60	28.3
Resistance of ARV	9	4.2	39	18.4	37	17.5	84	39.6	43	20.3

Key: NR (Non-Response), NA (Not Aware), A (Aware), DK (Do not Know), VMA (Very Much Aware)

These percentages were compared to 19.8 %, 28.8 % and 25.5 % who did not know any information about the same services.

About 40% of the mothers indicated that they did not know any information on what to do in case there was resistance of ARVs as shown in Table 6. Slightly less than half of the mothers indicated that they were very much aware about information on counseling and testing for HIV. Moreover, in Table 6, less than half of mothers (46.7%) indicated that they were aware about information on breast feeding and replacement methods if they were HIV positive. This meant that 53.3% of the mothers either did not know the information on infant feeding or they were not aware.

The findings that only 26.4% of mothers were highly aware of PMTCT services concurred with Sonja and Benn (2003) that postulated that increasing HIV infection and subsequent transmission to their infants was an indication that PMTCT services have not reached the targeted group. The results that 46.7% of the mothers were very much aware about the information on infant feeding are comparable with NASCOP study (2006) that found out that 1.5 million of the women living with HIV only 38% knew that they could pass the HIV virus through breast feeding.

The findings also indicated that 31.6% of the mothers did not know that they had a right to choose a delivery method once they have known their HIV status showing low accessibility to PMTCT services in the health facility. According to AIDS info 2008, they are not aware. Their research findings concurred with that of Adler (2001) and NASCOP (2006) that overall PMTCT services is not well established and serious awareness campaigns have not been carried out in developing countries like in the developed countries. The research findings does not concur with MOH 2006, which has been working to integrate PMTCT with other programs which are a success, but the PMTCT services are yet to be a big success

4.4 The mothers' perception of counseling on PMTCT services

The second research question was to establish the mothers' perceptions of selected factors influencing awareness of PMTCT services Table7 show the perceptions of counseling as one of the factors which influence awareness of PMTCT services. The counseling included pre-testing, during testing and post-testing ARV Prophylaxis, treatment during pregnancy, infant feeding, delivery, diet, nutrition stigma and discrimination; and sharing of HIV results.

Table 7

Perceptions of counseling on PMTCT Services

Level	Frequency	Percentage
Low (10-25)	39	18.4
Moderate (26-41)	108	50.9
High (42-56)	65	30.7
Total	**212**	**100.0**

Scale of three levels was constructed and total scores divided into low (10-25), moderate (26-41) and high (42-56). More than half of the mothers (50.9%) perceived counseling as moderate on PMTCT services as compared to 30.7% who perceived it as high. This results show that the recommended three levels of counseling by PMTCT guidelines were well followed as continues process which does not end. This concurs with Avert Organization (2006) which views counseling as a very essential service and an entry point in creating awareness of other PMTCT services.

The results of table 8 indicate that 25.5%, 22.2%, and 31.1% of the mothers perceived post counseling, sharing of HIV results as effective respectively.28.3% of the mothers did not know that they can choose an alternative method of delivery other than the normal one.

Table 8

Mothers' perceptions of types of counseling on PMTCT Services

Counseling service	**Responses**									
	NR		**NE**		**E**		**DK**		**VE**	
	Fre	**%**	**Fre**	**%**	**Fre**	**%**	**Fre**	**%**	**Fre**	**%**
Individual counseling	9	4.2	40	18.9	65	30.7	27	12.7	71	33.5
Pre-testing counseling	8	3.8	39	18.4	55	25.9	22	10.4	88	41.5
Counseling during testing	8	3.8	40	18.9	60	28.3	21	9.9	83	39.2
post testing counseling	6	2.8	54	25.5	55	25.9	24	11.3	73	34.4
Sharing results with a partner	14	6.6	47	22.2	49	23.1	36	17.0	66	31.1
Sharing results -important person	12	5.7	66	31.1	54	25.5	27	12.7	53	25.0
Medicine for positive infant	18	8.5	46	21.7	46	21.7	37	17.5	65	30.7
Maintaining negative status	13	6.1	48	22.6	45	21.2	28	13.2	78	36.8
Alternative to vaginal delivery	11	5.2	41	19.3	47	22.2	60	28.3	53	25.0
Alternative to breast feeding	12	5.7	35	16.5	50	23.6	48	22.6	67	31.6
Importance of breast feeding	13	6.1	37	17.5	45	21.2	34	16.0	81	38.2
Medical check up	10	4.7	37	17.5	56	26.4	36	17.0	73	34.4
Diet	8	3.8	49	23.1	45	21.2	19	9.0	91	42.9
Stigma and discrimination	12	5.7	57	26.9	49	23.1	40	18.9	53	25.0

Key: NR (Non-Response), NE (Not Effective), E (Effective), DK (Do not Know), VE (Very Effective)

On the other hand, approximately, 42% of mothers indicated pre-testing counseling and counseling on diet were 'very effective'.

The findings also indicated that counseling on sex during pregnancy was not effective, 28.3% of the mothers were not aware of it, when it should stop and start after delivery.

The findings indicated that 31.6% of the mothers do not know that once a pregnant one had established her status, and as she starts taking Anti-Retroviral, and there is a likelihood of becoming resistant to the drugs. This has contributed to the counseling on the same whereby the information should be discussed fully in the first visit and then the ARVS are given during the second visit but the PMTCT Guidelines, (2002) do not advocate for that thus most mothers did not know therefore not effective. Finally, the NASCOP (2006) has done all the effort to ensure that counseling on PMTCT services was effectively done on all pregnant mothers who visit the ANC and .PMTCT facilities.

4.4.1 Perceptions of the provision of information on PMTCT services.

The selected factor was provision of information on PMTCT services, as indicated in table 9.The results indicated that15.6% of the mothers strongly agreed that they were poorly informed on how to prevent transmission of HIV to their infants. Moreover, 10.8% agreed that prevention services on HIV/AIDS have not been communicated in the country.

Table 9

Mothers' perceptions of provision of information on PMTCT services

	Responses											
Statement	**NR**	**%**	**SA**	**%**	**A**	**%**	**DK**	**%**	**D**	**%**	**SD**	**%**
I am poorly informed about how to prevent transmission of HIV to infant	6	2.8	33	15.6	31	14.6	24	11.3	67	31.6	51	24.1
The preventive services about HIV/AID have not been communicated in the country	13	6.1	20	9.4	23	10.8	23	10.8	70	33.0	63	29.7
The newspaper, radio, TV and clinics are ways through which preventive services can reach many pregnant women	9	4.2	18	8.5	12	5.7	14	6.6	88	41.5	71	33.5

Key: NR (Non-Response), SA (Strongly Agree), A (Agree), DK (Do not Know), D (Disagree), SD (Strongly Disagree).

Past studies have shown that message of PMTCT services should be communicated through mass media, public meetings and self-help groups. From results in Table 9, 8.5% and 5.7 % of participants concurred with these studies (Pathfinder International, 2003; Sonja & Benn, 2003).The results indicated that 31.6%, 33% and 41% disagreed that they were poorly informed on how to prevent transmission of HIV to infants, the services have not been communicated to them and that the TV, newspapers, radio and clinics were means through which

preventive services may reach pregnant women respectively. This shows that they were aware of the preventive services compared to those who strongly agreed.

4.4.2 Mothers Perceptions on influence of early marriages on PMTCT Services

From the results in Table 10, 28.3% of participants agree that young girls of fewer than 20 years were exposed to HIV more than others in the older age. Furthermore, 38.2% agreed that unwanted pregnancies were common among young unmarried girls under age 24.

Table 10

Mothers' perceptions on influence of early marriages on PMTCT Services

	Responses											
Statement	**NR**	**%**	**SA**	**%**	**A**	**%**	**DK**	**%**	**D**	**%**	**SD**	**%**
Getting married at under age 15 make one not to get the PMCT services	13	6.1	25	11.8	48	22.6	28	13.2	54	25.5	44	20.8
Young girls of under 20 Years are exposed to HIV more than others in older age	12	5.7	45	21.2	60	28.3	27	12.7	40	18.9	28	13.2
Unwanted pregnancies are common among young unmarried girls under age 24	9	4.2	63	29.7	81	38.2	20	9.4	81	38.2	63	29.7

(**Key:** NR (Non-Response), SA (Strongly Agree), A (Agree), DK (Do not Know), D Disagree), SD (Strongly Disagree).

The findings on the perception that younger girls were more vulnerable to HIV infection concurred with past studies that indicated that male adults were resorting to sexual intercourse to young girls with a belief either that they will be cleansed if they are suffering from AIDS young girls were less likely to be infected (Willis, 2002; Rambeya, 2000).

4.4.3 Mothers Perception on Influence of Stigma and Discrimination on PMTCT Services

Approximately twenty two percent of mothers strongly agreed that stigma and discrimination may make HIV positive mothers from taking replacement feeding method to prevent transmission of HIV to their infants as indicated in Table 11.

Table 11

Mothers' perceptions of Influence of Stigma and Discrimination on PMTCT Services

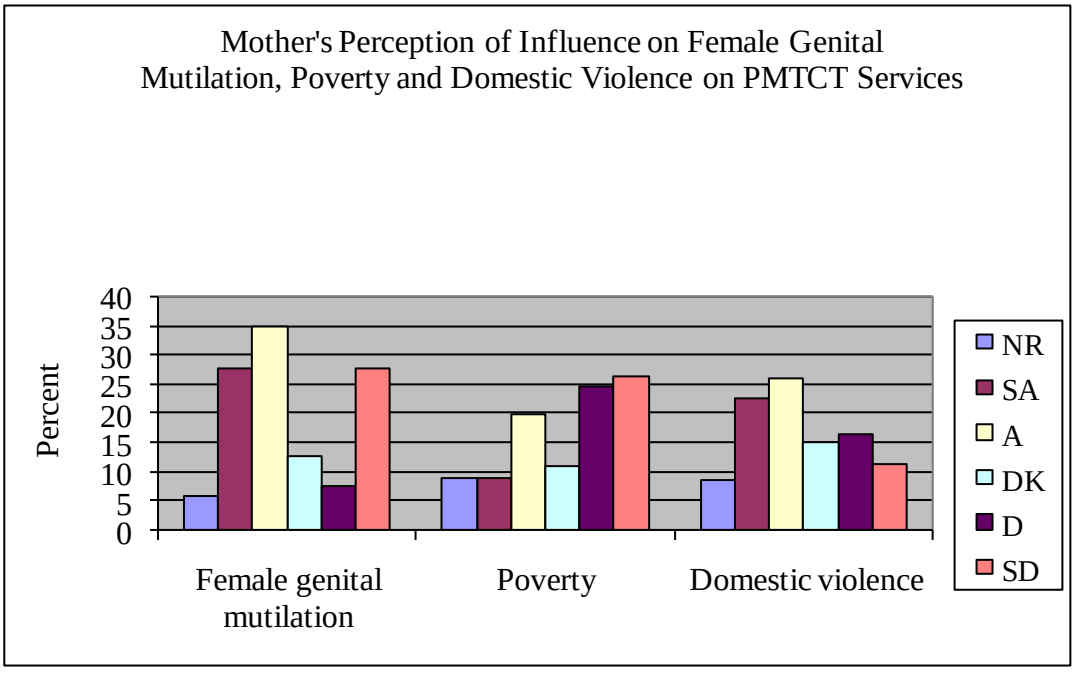
	Responses											
	NR	**%**	**SA**	**%**	**A**	**%**	**DK**	**%**	**D**	**%**	**SD**	**%**
Statement												
The mothers who are HIV positive fear to practice another infant feeding method other than breast feeding due to stigma and discrimination	13	6.1	46	21.7	59	27.8	43	20.3	29	13.7	21	9.9
HIV related stigma and discrimination is found in all societies	19	9.0	48	22.6	72	34.0	28	13.2	26	12.3	19	9.0

Key: NR (Non-Response), SA (Strongly Agree), A (Agree), DK (Do not Know), D (Disagree), SD (Strongly Disagree)

The findings that HIV positive mothers may not adopt replacement method to breast feeding because they fear of being stigmatized and discriminated concurred with Ayisi (2002) study that found out that they will be stigmatized if their status would be known by partner and friends. This affects their subsequent visit to health facility thus may deliver at home and also not take preventive drugs and adopt replacement infant feeding.

4.4.4 Mother's Perception of Influence on Female Genital Mutilation, Poverty and Domestic Violence on PMTCT Services

The results in Figure 3 show that 34.9 and 25.9% participants agreed that female genital mutilation and domestic violence influence HIV infection and the intake on PMTCT services. Twenty percent agreed had poverty influence on PMTCT services.



Key: NR (Non-Response), SA (Strongly Agree), A (Agree), DK (Do not Know), D (Disagree) SD (Strongly Disagree)

Figure 3: Mothers' Perception on Influence of Female Genital Mutilation, Poverty and Domestic Violence on PMTCT Services.

This concurs with the research carried out by (UNAIDS correspondent 2004) that domestic violence and female genital mutilation makes women more vulnerable to HIV/AIDS because women are 7-8 times more likely to be sexually harassed than men. The research carried out by (Touba 1995, Willis 2002) concurs with findings that female Genital Mutilation do influence HIV infections long before a woman is pregnant by putting her health at risk and it also takes place in very unhygienic conditions giving chance to spread of infections to victims while it's psychological torture to the victims.

The results of 25.9% participants indicated that domestic violence influenced the uptake of PMCT services supported the findings other past studies (UNAIDS Correspondent, 2004). The report asserted that women fear in wanting to know their status with fear that violence and isolation may result making them not access PMTCT services even if they were aware of them.

The results that poverty influence PMTCT services supported the research carried out by Aids info, (2008) that pregnant mothers who were low income earners or with no jobs did not access PMTCT services hence transmission to their infants and even succumb to Aids.

4.4.5 Mothers perceptions, on fear of disclosure on PMTCT Services

The mothers who agreed that HIV positive pregnant women who did not easily disclose their status were 34.0% and whereas 23.6% did not take HIV preventive drugs due to fear of disclosure according to results in Table 12. These results were compared to 11.3 % of participants who strongly disagreed that HIV pregnant women do not easily disclose their status to anybody as indicated in the same table.

Table12

Mothers' perceptions on fear of disclosure on PMTCT Services

Key: NR (Non-Response), SA (Strongly Agree), A (Agree), DK (Do not Know), D (Disagree), SD (Strongly Disagree)

Statement	**NR**		**SA**		**A**		**DK**		**D**		**SD**	
	Fre	**%**	**Fre**	**%**	**Fre**	**%**	**Fre**	**%**	**Fre**	**%**	**Fre**	**%**
Pregnant women who are HIV positive do not accept to take HIV preventive drugs due to fear of disclosure.	16	7.5	24	11.3	50	23.6	34	16.0	47	22.2	41	19.3
Pregnant women who are HIV positive do not easily disclose their status to anybody	21	9.9	32	15.1	72	34.0	28	13.2	35	16.5	24	11.3

The findings that HIV positive mothers did not easily disclose their status concurred with past research by Ngashi (2002) who found that 70% of pregnant mothers chose to be silent about their HIV status Similar research by Pathfinder International (2006) postulated that such women who do not disclose their HIV status act as barriers to others as they may not tell other women about PMTCT services.

4.5 The influence of age on awareness of PMTCT services among the mothers

The objective aimed to find out whether age differences influence awareness levels of PMTCT services. There were four age categories and awareness scale was divided into three classes as indicated earlier.

A cross tabulation of these binary variables was run and Chi-square was used to test whether there was any significant influence

Table 13:

Analysis on the influence of Age on Awareness of PMTCT services

	Awareness level							
	Low (16-32)		**Moderate (33-49)**		**High (50-64)**		**Total**	
Age	**Freq.**	**%**	**Freq.**	**%**	**Freq.**	**%**	**Freq.**	**%**
Below 20	10	32.3	14	45.2	7	22.5	31	14.9
21-30	23	16.2	81	57	38	26.8	142	68.2
31-40	8	24.2	12	36.4	13	39.4	33	15.9
Above 41	0	0	2	100	0	0	2	1.0
Total	**41**	**19.8**	**109**	**52.4**	**58**	**27.8**	**208**	**100.0**

$\chi 2 = 12.477$ df=6 p=.131> 0.05

The results of Table 13 show that there was no significant influence of age on awareness levels. The analysis indicated that 32.3% of participants aged below 20 had low awareness levels as compared to 22.5% of same age range who had high awareness levels. The participants aged 31-40 and who had high awareness levels were 39.4 % as compared to 24.2% of same age range who had low awareness levels those.

Past studies have shown age differences in infection (Sonja & Benn, 2003, UNAIDS, 2004). However, the people below age of 20 years, had low awareness levels, this concurs with the research carried out by Sonja and Benn that the young people have significant information deficits concerning HIV/AIDS and transmission thus low awareness.

Most of the mothers attending ANC over 20 years were found to be moderately aware at 57% compared to the participants of same age

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter deals with the summary of major findings, the conclusions reached, recommendations to be implemented and areas that require further research.

5.2 Summary of Findings

i) It was found out that more than half of the mothers indicated that they were moderately aware of the PMTCT services as compared to those who indicated that they were highly aware of the PMTCT services.

ii) It was found out that more than half of the mother's moderately perceived counseling as effective on provision of PMTCT services as compared to those who perceived it as highly effective.

iii) It was found out that some mothers strongly agreed that they were poorly informed on how to prevent transmission of HIV to their infants.

iv) The mothers agreed that female genital mutilation and domestic violence influence transmission of HIV and the intake of PMTCT services.

v) Some mothers indicated that they had fear of disclosing their HIV status and taking HIV preventive drugs.

vi) It was also established that most mothers agreed that they may not adopt a replacement method to breast feeding because they did not want to be stigmatized and discriminated against.

vii) It was also found out that there was no significant influence of age on awareness levels of PMTCT Services.

5.3 Conclusions

Based on the findings of the study discussed in the previous chapter, the following conclusions were drawn:

i) Despite Rift Valley Provincial Hospital being one health facility where PMCT services were introduced on pilot basis, there was still a gap between awareness and intake of the services as the results found that more than half of mothers were moderately aware of the services

ii) The study found that majority of mothers' perceived counseling offered during PMTCT clinic as moderate, because the primary advantage of HIV counseling and testing was for those who do not know their HIV status.

iii) The study revealed that there were other factors in the community that influence awareness of PMTCT services like: poverty, domestic violence, Female Genital mutilation, stigma and discrimination which have been enhanced at the community level through a system of norms, values and believes

iv) There was no significant influence of age on awareness levels of PMTCT Services; therefore awareness campaigns should target all women and girls including their families.

5.4 Recommendations

Based on the study findings, the following recommendations have been made:

i) There is need to scale up awareness campaigns of PMTCT services through public meetings, support groups and mass media to bridge the gap between the awareness and intake of services

ii) HIV counseling and testing should be a normal ANC routine service to enable HIV positive women to make informed decisions about their pregnancy and receive appropriate and timely interventions to reduce MTCT.

iii) The current study recommends that it is important for MTCT to be addressed through awareness campaigns so that HIV positive women could access PMTCT services without feeling threatened.

iv) Some factors like early marriages and domestic violence that influence PMTCT intake involve men; therefore they should be sensitized on the need for PMTCT services.

5.5 Suggestions for Further Research.

The researcher recommends further research in the following areas.

i) There is need for nationwide study that will involve all health facilities where PMTCT services are offered

ii) The study was based on Rift Valley Provincial hospital that is in an urban area. There is need for study that will focus on a facility that is located in rural areas.

iii) The study targeted pregnant women. However, a study that will target mothers after giving birth will be necessary as a follow up.

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Appendix A: Pregnant Mothers Questionnaire

Dear Mum,

I am Yuniah B. Nyanchoka, a student at Egerton University, pursuing Master of Education Degree in Guidance and Counseling. I am doing research on *Mothers perception of selected factors Influencing awareness of prevention of mother to child transmission of **HIV** services at Rift valley Provincial General Hospital, Nakuru, Kenya.* You have been selected as a mother in this research because you are expectant (pregnant). The participation is voluntary and is not related to the services you get in this clinic. I kindly request you to respond to items asked. The success of this research depends on your truthfulness and complete answers to the items asked. Your name will not be used in regard to your respond and will not be linked to you. There are no right or wrong answers. Please tick the most appropriate answers among the choices provided.

SECTION A:

1. What is your age
   - Below 20 ☐
   - 21-30 ☐
   - 31-40 ☐
   - Over 40 ☐
2. What is your marital status?
   - Married ☐
   - Single ☐
   - Separated ☐
   - Widow ☐
   - Divorced ☐
3. What is your highest level of education you reached?
   - No formal Education ☐
   - Primary ☐
   - Secondary ☐
   - Tertiary & College ☐
   - University ☐
4. What is you occupation (what you do for a living).
   - Business/Self Employed ☐
   - Employed ☐
   - No formal employment ☐
   - Housewife ☐

5. a) Is this your first Pregnancy
   - Yes ☐
   - No ☐

   b) If No to 5a, did you ever attend any ANC clinic
   - Yes ☐
   - No ☐

   c) If Yes to 5 b, did you receive prevention of mother to child transmission of HIV (PMTCT) services?
   - Yes ☐
   - No ☐
6. How many months is your pregnancy?
   - 3-6 ☐
   - 7-9 ☐
   - 0-3 ☐
   - I don't know ☐

SECTION B

The following are services (NO. 7-22) given and thought at Antenatal clinic including prevention of mother to child transmission of HIV (PMTCT) services and they are found on the clinic card. Please indicate by [√] how you received the information.

Statement	**Very Effect-Ive**	**Effect-ive**	**Not Effect-ive**	**I don't know**
7. Counselling and Testing Pregnant Women for HIV.				
8. Self care when pregnant				
9. General Hygiene when pregnant.				
10. The kind of foods to eat when pregnant.				
11. Danger signs when pregnant				
12. Having sex during pregnancy				
13. Sexually Transmitted infections (STD's)				
14. Giving birth at Hospital and why.				
15. Caring for a new born baby				
16. Baby Feeding and Breast Feeding.				
17. Family Planning after birth				
18. How to share results of HIV Positive mothers.				
19. Medicine (Navirapine) to prevent HIV transmission to the baby.				
20. Medicine (Antiretroviral) for HIV positive mothers to keep them Healthy.				
21. Choosing method of giving birth if one is HIV positive.				
22. If the medicine (Antiretroviral) can make one resistant and what can be done.				

SECTION: C

The following information (No, 23-33) is on counselling which is an entry or starting point for pregnant mothers so as to prevent transmission of HIV to their infants. **NOTE**. The items are meant for pregnant mothers whether one knows her HIV status or not. Indicate [√] against each statement on how the counselling was received.

Statement	**Very Effect-ive**	**Effect-ive**	**Not Effect-ive**	**I don't know**
23. Individual counselling (You & counselor/nurse				
24. Counselling before testing for HIV.				
25. Counselling during Testing				
26. Counselling after testing				
27. Counselling to share results with sexual partner.				
28. Counselling to share results with an important person to you.				
29. Counselling on how to get medicine for infant if one is HIV positive				
30. Counselling on how to maintain HIV negative status.				
31. Counselling on how to choose alternative method of giving birth a part from vaginal delivery if HIV results are positive.				
32. Counselling on how to choose a safe, good and affordable method to feed the infant apart from breastfeeding if HIV positive.				
33. Counselling on importance of breastfeeding if HIV negative.				
34. Counselling for prompt (at right time) medical check-up and treatment of any illness after delivery (giving birth).				
35. Counselling for eating a balanced diet (taking care of self and baby).				
36. Counselling on how to deal with bad feelings and discrimination of other people.				

SECTION D

The following information can influence a pregnant mother in getting (accessing) prevention of mother – to child transmission of HIV services please [√] tick one of the choices provided. There are no correct or wrong answers.

Statement	Strongly Agree	Agree	Dis-agree	Strongly Disagree	I Don't Know
37. I'm poorly informed about how to prevent transmission of HIV to my infant.					
38. The preventive services have not been communicated in the country					
39. The newspaper, radio, TV and clinics are ways through which the preventive services can reach many pregnant women.					
40. Pregnant mothers should attend antenatal clinic regularly so as to (access) get all PMTCT services.					
41. Pregnant women of low income have no access to PMTCT services					
42. Commercial sex workers, once pregnant rarely attend PMTCT services					
43. Pregnant mother should not seek consent from family or partners to attend antenatal clinic.					
44. Domestic violence can expose pregnant mother to HIV including death of infant or both.					
45. Testing HIV positive if one is pregnant can be a life threatening condition					
46. Attending clinics for counselling can lead to HIV positive pregnant mothers to disclose their status.					
47. Pregnant women who are HIV positive do not accept prevent drugs due to fear of disclosure.					
48. Pregnant women who are HIV positive do not easily disclose their status to any body.					
49. HIV related stigma and discrimination is found in all societies.					
50. The fact that one is HIV positive cannot develop fear of stigma and discrimination.					
51. The mother who are HIV positive fear to practice another infant feeding method other than breastfeeding due to stigma and discrimination.					
52. With the intervention of counselling stigma and discrimination towards HIV positive mother does not exist.					
53. Getting married at under 15 years make					

one not get (access) the PMTCT services.					
54. Female circumcision has exposed some young girls to HIV infection.					
55. Most pregnant mothers with no proper giving birth plans do not attend ANC.					
56. Most pregnant women can take care of themselves and do not need ANC or PMTCT services.					
57. Young girls of under 20 years are exposed to HIV more than others in older age.					
59. Unwanted pregnancies are common among young unmarried women under 24 years.					
60. Despite high awareness about HIV many women between ages of 15 – 40 are being infected.					