

**FACTORS DETERMINING THE PREVALENCE OF HIV AMONG
HIV EXPOSED INFANTS IN ISHAKA ADVENTIST HOSPITAL**

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DECLARATION

I **SERUGO JOHN**, declare that this research report is my own work and it has never been presented to any university or any other institution for any award or qualification whatsoever. Where the work of other people has been included, acknowledgement to this has been made in accordance to the text and preferences. This study has never been submitted before for either publication or award of any kind.

SERUGO JOHN

SIGNATURE.....

DATE.....

APPROVAL

This is to certify that this research report has been prepared under the guidance of my supervisor.

Supervisor's name

Signature

Date

MR. MWAKIO WARRENLEE

.....

.....

(BSC. Public Health, DCM and CH)

DEDICATION

I dedicate this book to my beloved sister Ms.Namata Oliva and my colleagues in the same professional.

ACKNOWLEDGEMENT

First and foremost I thank the almighty God for His unfailing provision.

I acknowledge the financial and physical support I received from my beloved sister thank you and God bless.

I acknowledge the Ishaka Adventist hospital for the permission they granted to me to conduct my research there, thanks.

I wish to acknowledge and appreciate the valuable contribution of my supervisor **Mr Mwakio Warrenlee**. who devoted his independent seniority, professionalism, commitment, guidance and correction which made me succeed to make a complete research.

I would like to thank the entire faculty of Allied Health Sciences who equipped me with relevant knowledge and skills that am proud of now.

ABSTRACT

Introduction: HIV is a viral infection that is primarily transmitted by sexual contact or sharing needles, or from an infected pregnant woman to her new-born. Despite the PMTCT services that involves screening of mothers of HIV and administration of Anti-retroviral drugs to HIV infected mothers and exposed infants coupled with early infant diagnosis of HIV/AIDS and care of diagnosed infants with HIV children continue to die of the epidemic.

Broad objective: To determine the HIV prevalence among HIV exposed infants in Ishaka Adventist hospital.

Method: A cross sectional study focused on HIV exposed infants brought in the EID clinic of Ishaka Adventist Hospital from Bushenyi, Mitooma, Rubirizi and Buhweju district.

Results: The summary of the main findings of the study were highlighted and discussed. 89% of the mothers had ever heard about PMTCT and its importance and 11% had never had about it. 51% of the mothers were aware of the services offered during PMTCT among them includes HIV counselling and testing for pregnant mothers for safe delivery. 58% said the child acquires the virus at birth while 33% said the child acquires virus while still in the uterus and 7% said during breast feeding. Hence, this raised awareness about feeding options in which 80% had idea about feeding options among mothers who are HIV positive, only 16% did not know about any option and only 4% were confused.

Discussion: Most mothers 54% were house wives, this shows that poverty is a factor that contributes to prevalence of HIV to mothers and their infants because pregnant mothers who are HIV positive cannot seek PMTCT services or clinic because she has no money. 16% were business women, 7% peasants and others were 14%. Married mothers were mostly affected 60% due to unfaithfulness and least affected mothers had separated with 5%. 54% were Banyankole because they are the inhabitants or residents of the study area. Catholics were 48%, 20 % were protestants, 2% other religions.

Recommendations: Government should encourage health education on PMTCT services, people should be checked medically, health services should be brought nearer to the people and people should be encouraged to test for HIV regularly.

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LIST OF ABBREVIATIONS

- ❖ **3TC**- Lamivudine
- ❖ **AMREF**-African Medical Foundation
- ❖ **ANC**- Antenatal Care
- ❖ **ART**- Anti Retro Therapy
- ❖ **ARVS**- Anti Retrovirals
- ❖ **AZT**- Zidovudine
- ❖ **BDI**-Beck' Depression Inventory
- ❖ **CHW**- Community Health Workers
- ❖ **DHO**- District Health Officer
- ❖ **DSM-IV**-Diagnostic and Statistical Manual of Mental Disorders Fourth Revised Edition
- ❖ **DNA**- Deoxyribo Nucleic Acid
- ❖ **EFV**- Efavirenz
- ❖ **ELISA**- Enzyme Linked Immunosorbent Assay
- ❖ **HC**-Health Centre
- ❖ **HIV**- Human Immune Virus
- ❖ **ICD**-International Statistical Classification of Disease and Related Health problems.
- ❖ **LC**- Local Chairman
- ❖ **LPV/r**- Lopinavir/ritonavir
- ❖ **MTCT**- Mother To Child Transmission
- ❖ **MOH**- Ministry of health
- ❖ **MOE&S**-Ministry of Education and Sports
- ❖ **ME**-Mercapto Ethanol
- ❖ **NGOs**- Non Government Organisations

- ❖ **NVP-** Nevirapine
- ❖ **PCR-** Polymerase Chain Reaction
- ❖ **PMTCT-** Prevention of Mother To Child Transmission
- ❖ **SA-** Serum Agglutination
- ❖ **TDF-** Tenofovir
- ❖ **UAC-** Uganda Aids Commission
- ❖ **UNICEF-** United Nations International Children's Emergency Fund
- ❖ **USA-** United States of America

OPERATIONAL DEFINATIONS

- ❖ **Chronic**- Of long duration
- ❖ **Complications**-An accident or record disease arising
- ❖ **Depression**- A condition of general dejection and withdrawal; sadness greater and more prolonged than that warranted by any objective reason
- ❖ **Diagnosis**-Determination of the nature of disease
- ❖ **Epidemic**-The presence of disease in certain population
- ❖ **Population**-Total number of people inhabiting a particular area
- ❖ **Prevalence**-The rate at which incidence occurs

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Acquired Immune deficiency syndrome will be first reported in the United States in 1981 and has since become a major worldwide epidemic. An estimated 34 million people are living with HIV, according to UNAIDS estimates released early December 2011. The number of AIDS linked death globally is steadily dropping from a peak of 2.2 million seen in 2005 to 1.8 million in 2010. (AFP, 2011). Uganda will be one of the first sub Saharan countries to be affected by HIV epidemic. The first acquired Immune deficiency syndrome case reported in the country will be recognized in 1982. Following this report, efforts will be mounted to deal with the epidemic (MOH Uganda, 2015). According to Uganda AIDS commission (UAC), close to 128,980 people acquired HIV in 2010 up from 124261 in 2009. UAC estimates that 64016 people die in Uganda from HIV/AIDS per year. This trend points to decline in both institutional and individual levels in crucial interventions such as testing. (Ssenkaba, 2011). The percentage of people living with HIV in Uganda has risen from 6.4% to 6.7% (Masaba, 2012)

In 2010, around 390,000 children aged under 15 became infected with HIV. Almost all of these infections occur in low and middle income countries and more than 90% are the result of mother to child transmission during pregnancy, labour and delivery, or breast feeding. Without interventions, there is a 20-45% chance that a baby born to an HIV infected mother will become infected. (UNAIDS, 2011). In low and middle countries, there are numerous barriers to prevention of vertical transmission: antenatal care attendance is low, particularly in rural areas; too few pregnant women have access to HIV testing; access to optimal

antiretroviral prophylaxis or therapy is insufficient, and alternatives to breast feeding are uncommon (Greenfield, 2012).

The government of Uganda in collaboration with UNAIDS and UNICEF and other partners initiated a pilot programme for prevention of mother to child transmission of HIV services in 2000 and will be scaled up to all Districts by 2004. The programme involved provision of a comprehensive package of care including administration of prophylactic antiretroviral drugs to pregnant mothers living with HIV during pregnancy, labour and immediate post-partum period (MOH Uganda, 2006). Presently every pregnant mother should seek for ANC services as early as after missing 2 menstrual periods and all facilities offering ANC have the capacity to test every mother for HIV as part of ANC and to institute treatment for a mother that tests positive following guidelines issued by MOH. The treatment aims at caring for the mother's health and protection of the baby. (Nantulya, 2012)

In order to diagnose HIV infection definitively in children aged 18 months, virological tests are required. HIV infection can definitively be diagnosed in most infected infants by 4-6 weeks by using PCR viral diagnostic assays. HIV DNA virological test is used in testing children below 18 months. The Uganda National programme in charge of PMTCT and ART has put in place diagnostic protocols to ensure systematic testing of HIV exposed infants and symptomatic children where HIV is suspected. DNA PCR test facilities are now accessible at District and Health centre 4 units with an Active ART programme. This makes it possible to make an early diagnosis of HIV infection in children less than 18 months. In addition, dried blood spots on filter papers can be obtained from infants by finger or heel prick and transported to regional referral laboratories for PCR (MOH, Uganda 2009). Once diagnosis of HIV has been confirmed, the child is started on ART and continues with cotrimoxazole prophylaxis (GUIDELINES FOR PMTCT AND PAEDATRIC HIV CARE, 2011)

1.2 Problem Statement

Mother to child transmission of HIV accounts for 90% of HIV transmission in children. The transmission risk for a child born to an HIV infected mother in an African setting without interventions for preventions of mother to child transmission is about 30 – 40%. The other 60 – 70% of children although not HIV infected, still have a 2-5 fold risk of mortality as a direct consequence of the mothers HIV disease, when compared to children born to uninfected mothers. (Tindebwa et al 2014). Pediatric cases of HIV are becoming a growing problem in Uganda where mother to child transmission is still a concern. HIV progresses much faster in children than it does in adults. If a positive infant is left untreated for 2 years, they face a 50% mortality rate. (Elyanu, 2011)

There is no data concerning serostatus and frequency of ill health of HIV exposed infants and also there is no data concerning the feeding options chosen by mothers of these infants in Ishaka Adventist Hospital. Children are continuing to die yet PMTCT services exist in the country and are being implemented in all Districts of Uganda. Despite the presence of PMTCT services which involves screening pregnant mothers of HIV and administration of antiretroviral drugs to the HIV infected mothers and HIV exposed infants coupled with early infant diagnosis of HIV/AIDS and care for diagnosed infants with HIV, children continue to die of the epidemic.

1.3 Study Objectives

1.3.1 Broad Objective

To determine the HIV prevalence among HIV exposed infants in Ishaka Adventist hospital and its catchment areas.

1.3.2 Specific Objectives

- 1) To determine the prevalence of HIV infection among HIV exposed infants.

- 2) To determine the feeding options chosen by mothers of HIV exposed infants.
- 3) To determine the frequency of ill health among HIV exposed infants.

Research Questions

1. What is the prevalence of HIV among HIV exposed children?
2. What are the feeding options chosen by mothers of HIV exposed infants?
3. What is the frequency of ill health of HIV exposed infants?

1.5 Justification of the Study

The study is designed to come up with the prevalence of HIV infection among HIV exposed infants, the feeding options chosen by mothers and also the frequency of ill health among HIV exposed infants. The data generated will serve the following purposes below.

It will be used by policy makers, implementers and stake holders of Bushenyi District to improve on PMTCT services and early infant diagnosis of HIV/AIDS.

It will be shared with Hospital management committee, office of the DHO, relevant NGOS and MOH. This will assist in institution of Bi laws, policies and plans to improve on utilization of PMTCT services in the area.

CHAPTER TWO

LITERATURE REVIEW

2.1 HIV/AIDS

The acquired immune deficiency syndrome (AIDS) will be first recognized In 1981 and is caused by Human Immune deficiency virus (HIV)(Haslett et al, 2002). HIV is a retrovirus that primarily infects cells of the immune system. The function and number of CD4 T lymphocytes and other affected cells are diminished by HIV infection, with profound effects on both humoral and cell mediated immunity. In the absence of treatment, HIV infection causes generalized immune incompetence leading to conditions that meet the definition of acquired Immune deficiency Syndrome (Hay et al, 2009). The term AIDS applies to the most advanced stages of HIV infection. It is defined by the development of specified opportunistic infections, tumors, etc (Haslett, et al, 2012)

Horizontal transmission of HIV is by sexual contact (vaginal, anal or erogenous), percutaneous contact (from contaminated needles or other sharp objects), or mucus membrane exposure to contaminated blood or body fluids. Vertical transmission of HIV from mother to infant may occur transplacental in Utero, during birth, or by breast feeding (Marcdante et al, 2011). 1.3 million Ugandans are living with HIV/AIDS, 120000 of them are children. According to MOH, there are 140000 new estimated infections every year and there is an epidemic of pediatric HIV cases with 30000 new born babies infected annually. (Watiti, 2011)

The high HIV infection rate in children in Africa results directly from the high HIV infection rate in women of child bearing age and the efficiency of mother to child transmission (Tindebwa et al, 2014). 3-4% of married men and women in Uganda regularly test for HIV and approximately 90% of these individuals are unaware of the HIV status of their partners.

Today 65% of all new infections occur within married couples in Uganda. This poses a threat of increasing mother to child transmission of HIV. (Ssenkaaba, 2011)

A variety of signs and symptoms should alert the clinician to the possibility of HIV infection in a child. The presentations include recurrent bacterial infections, unrelenting fever, unrelenting diarrhea, unrelenting thrush, recurrent pneumonia, chronic parotitis, generalized lymphadenopathy, delay in development with failure to thrive, and significant pruritic dermatoses. Mucocutaneous eruptions may vary in presentation depending on the child's immune status (Greenfield, 2012).

AIDS is the fourth leading cause of under 5 mortality in Uganda of which the major route of transmission is mother to child. No family has been left untouched. When parents are infected and affected, the girl children often have to take up the burden of illness care, leading to a high drop out from school. Early marriages, discrimination, property grabbing and disinheritance are all more common for children in HIV affected families. HIV/AIDS also lead to important impacts on human rights including discrimination, stigmatization and other violations like child abuse. (Uganda AIDS commission, 2007)

2.2 MOTHER TO CHILD TRANSMISSION OF HIV.

More than 95% of HIV infected infants in Africa acquire HIV from their mothers during pregnancy, at the time of delivery or postnatal through breast feeding. Without any intervention, between 30 and 40% of breast feeding HIV positive women transmit HIV to their new borns (Tindebwa et al, 2014). Risk factors associated with MTCT include high maternal plasma HIV RNA, advanced maternal disease stage, low CD4 lymphocyte count, premature delivery, and factors related to increased exposure to maternal blood or cervical secretions at the time of delivery (e.g. duration of rupture of membranes, presence of blood in the infants gastric secretions, and first born twin delivery) (Hay et al, 2009)

2.3 PREVENTION OF MOTHER TO CHILD TRANSMISSION OF HIV (PMTCT)

Identification of HIV infected women before or during pregnancy is crucial to providing optimal therapy for infected women and their infants and to preventing perinatal transmission (Marcdante et al., 2011). Maternal antiretroviral medication began late in pregnancy, even as late as during labour or infant prophylaxis started within 48 hours after birth, also reduces perinatal infection. For women who are identified late or who fail to have viral suppression on treatment (plasma virus more or equal to 1000 copies per ml), an elective caesarean section prior to labour will reduce transmission risk by 50% (Hay et al, 2009). In Uganda, PMTCT services will be introduced in 2000 and scaled up to all Districts by 2004. Mothers are screened for HIV during Antenatal Care and once found HIV seropositive they are started on antiretroviral drugs according to the CD4 count or clinical stage of the disease (MOH Uganda, 2006).

The new PMTCT package recommends the following; (Esiru, 2010)

1. Routine HIV counseling and testing (RCT) with in the first trimester of pregnancy.
2. Comprehensive antenatal care, improved care during labour and delivery and post-natal care and follow up for mother and baby at least up to 18 months.
3. More effective antiretroviral drugs (either option A or B) for HIV positive mothers from 14 weeks onwards and their exposed babies until the end of breast feeding.
4. Counseling and support on optimal infant feeding (expressed breast feeding up to 6 months, complimentary feeding for up to 12 months)
5. Promotion of community and family support.

The four prolonged strategy to prevent HIV among infants and children between 2010–2015, is as below;

1. Prong 1: primary prevention of HIV among women of reproductive age with in services related to reproductive health such as ANC, post partum / natal care and other health and HIV service delivery points, including working with community structures.
2. Prong 2: Providing appropriate counseling and support to women living with HIV to enable them make an informed decision about their future reproductive life, with special attention to preventing unintended pregnancies.
3. Prong 3: For pregnant women living with HIV, ensure HIV testing and access to the antiretroviral drugs that will help mothers own health and prevent infection being passed on to their babies during pregnancy, delivery and breast feeding.
4. Prong 4: Better integration of HIV care, treatment and support for women found to be positive and their families.

2.4 HIV TESTING IN PMTCT AND EARLY INFANT DIAGNOSIS OF HIV / AIDS.

HIV infection is usually diagnosed by testing for antibodies against HIV- 1 and HIV -2 using an Enzyme linked immunosorbent assay (ELISA) test or a simple / rapid test and confirmed using a supplementary test. This is how a laboratory diagnosis of HIV is done for adults and adolescents. (MOH Uganda, 2009). However in infants it is different. Infants born to HIV infected mothers will have HIV antibody regardless of infection status – owing to trans placental passage of maternal antibody and so will test HIV seropositive using ELISA test. After 12-18 months of age, most clinicians will obtain HIV antibody testing to demonstrate reversion to seronegative status, thereby confirming the absence of infection. Exposed infants can be determined to be infected or uninfected with tests for viral nucleic acid (DNA or RNA). The majority of infected infants will have

detectable viral nucleic acid by two weeks of life and almost all have detectable virus by 4 weeks. “Definitive absence of infection is defined by negative HIV nucleic acid test at greater than 1 and 4 months”. Breast fed infants may acquire HIV at any time until they are weaned. In this case to confirm absence of HIV infection, HIV nucleic acid tests should be performed at least 6 weeks after the last exposure (Hay et al, 2009). In Uganda, women are recommended to breast feed exclusively for 12 months while receiving ARVs and then start on other feeds. The first PCR is done at 6 weeks; second PCR is immediately done when breast feeding and third is at 6 weeks after stopping breast feeding (MOH GUIDELINES FOR PMTCT AND PEDIATRIC HIV/AIDS CARE, 2011)

2.5 ANTIRETROVIRAL DRUGS FOR PMTCT (MOH Guidelines for PMTCT and pediatric HIV/AIDS care, 2011)

For HIV seropositive mothers, CD4 count is done and if it is greater than 350 cells or the patient is in stage I or II, AZT prophylaxis is started from 14 weeks of gestation until delivery. At onset of labour single dose nevirapine (sdNP) is given and AZT/3TC twice daily. For breast feeding mothers, AZT/3TC is continued for one week after delivery and the infant takes daily NVP until one week after stopping breast feeding. For those on replacement feeding, they continue with AZT/3TC for one week after delivery and infants take daily NVP from birth up to six weeks of age.

For HIV positive mothers whose CD4 count is less than 350 cells or are in stage III or IV, they are started on ART.

- First preferred line is TDF + 3TC + NVP (or EFV)
- First alternative line is AZT + 3TC + NVP (or EFV)
- Second preferred line is (AZT or TDF) + 3TC + LPV/r

However Efavirenz is not used in the first trimester of pregnancy because it is teratogenic. ART is continued for life and for infants, daily NVP is given until 6 weeks of gestation.

All HIV seropositive children should be clinically staged to determine the eligibility for ART, except for children under 2 years of age who should initiate ART immediately irrespective of clinical or immunological stage. The criteria for initiating ART in children is as below.

- For children under 2 years, initiate ART if confirmed HIV positive, regardless of CD4 count or clinical staging.
- For those 2 to < 5 years, initiate ART if they are in stage III or IV or if CD4 count percentage is <25% or if CD4 count is <750.
- For those 5 years and above, initiate ART if they are in stage III or stage IV or if CD4 count is < 350.

2.6.0 COTRIMOXAZOLE PROPHYLAXIS FOR PEOPLE WITH HIV/AIDS

Studies in Africa have shown a primary effect of cotrimoxazole prophylaxis on the incidence of mortality due to malaria, non typhoidal salmonellosis, Pneumocystis' Jiroveci pneumonia and diarrhea. In 2005, Uganda came up with a policy that "Cotrimoxazole prophylaxis should be given to all HIV infected adults and children in Uganda, regardless of whether they are on ART or not. In addition cotrimoxazole prophylaxis is indicated for all children born to HIV infected mothers, unless, testing has shown they do not have HIV" (MOH Uganda, 2005)

In PMTCT cotrimoxazole is indicated to all HIV exposed infants and is discontinued only once HIV infection has confidently been excluded in the following ways; for non-breastfeeding child <18 months of age, a negative DNA or RNA virological HIV testing or a negative HIV serology test is found and for a breast fed, HIV exposed child, a negative virological and serological testing are only reliable if conducted 6 weeks after cessation of breastfeeding (Guidelines for PMTCT and pediatric HIV care, 2011). Once diagnosis of HIV

has been confirmed, cotrimoxazole prophylaxis may be offered to children living with HIV in all clinical stages, including asymptomatic children irrespective of their CD4 level (MOH Uganda, 2009)

CHAPTER THREE

METHODOLOGY

3.1 AREA OF STUDY:

The study was carried out in Ishaka Adventist hospital located in Bushenyi-Ishaka municipality, Bushenyi district, 62km along Mbarara-Kasese high way. Bushenyi district is located in western Uganda. It borders with Rubirizi and Buhwezu districts in the north, Mitooma and Rukungiri districts in the west, Mitooma and Sheema districts in the south, Buhwezu and Sheema districts in the east. The district has seven sub counties namely; Kyamuhunga, Kyabugimbi, Kakanju, Nyabubare, Bumbaire, Kyeizooba and Bushenyi-Ishaka town council.

3.2.0 STUDY DESIGN:

The study design was descriptive cross sectional study to determine the serostatus and frequency of ill health among HIV exposed infants and the feeding options chosen by mothers.

3.3.0 STUDY POPULATION

The study focused on HIV exposed infants brought in the EID clinic from Bushenyi, Mitooma, Rubirizi, Sheema and Buhweju districts. According to the incharge EID clinic, the clinic gets about 10 patients per day and runs from Monday to Friday. The prevalence rate of HIV among mothers attending antenatal care in Bushenyi district is 7.2%. “Incharge EID clinic said” This gives a reflection of HIV exposed infants. The majority of people in Bushenyi district are small scale subsistence farmers, earning less than 1 dollar per day. The main cash crop is coffee and food crop is matooke. Other food crops include; Millet, cassava, potatoes, beans, groundnuts and peas. The animals kept mainly are; cows, goats, sheep and hens. (District records 2009)

3.4 Sample Size Determination

For the cross sectional study, the sample size for HIV exposed infants that was achieved a 5% level of precision at 95% confidence level was calculated using the formula described by Pfeiffer (2002).

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

Where

n = sample size

Z = Standard deviate at 95% confidence interval which is equal to 1.96.

P= the prevalence rate of HIV infection among mothers attending ANC in Bushenyi district is 7.2%

d= the acceptable degree of Error (taken as 5%)

From the formula,

$$n = \frac{(1.96)^2 \times 0.072(1 - 0.072)}{(0.05)^2} = 102.67$$

This gives a sample size of 100 participants was used.

3.5 Sampling Procedure

To determine the prevalence of HIV, a systematic random sampling method using EID numbers was used. To determine the feeding options and frequency of ill health, a ballot paper was used to determine the participants among the clients who attend to the clinic.

3.6 Inclusion and Exclusion Criteria

3.6.1 Inclusion Criteria

All HIV seropositive mothers willing to participate in the study

3.6.2 EXCLUSION CRITERIA

Mothers not willing to participate in the study and those less than 18 years because of Ethical issues of consent

3.7 DATA COLLECTION METHODS

Data was collected by the principle investigator himself using a principle investigator administered questionnaires to determine the feeding options chosen by mothers and also the frequency of ill health of infants. A record review tool was developed to collect relevant data from the early infant diagnosis of HIV register to determine the prevalence of HIV among HIV exposed infants.

Since EID clinic runs daily from Monday to Friday, data was collected daily for 2weeks to achieve the sample size.

3.8 DATA ANALYSIS AND PRESENTATION

The data was analyzed manually and interpreted in averages and percentages and presented on tables, Graphs and Pie charts.

3.9 DATA QUALITY CONTROL

The questionnaire was pretested in a similar population in Ishaka Adventist Hospital Bushenyi District in Western Uganda to ensure clarity of questions. Wrongly stated questions was corrected. At the end of the interview, I always checked for completeness of the questionnaire. Participants was chosen randomly to eliminate bias.

3.11 ETHICAL CONSIDERATION

I will seek approval from KIU authorities and the research committee of KIU western Campus, who in turn upon approval, granted me permission to conduct the study with an introductory letter. The letter was addressed to the medical Director Ishaka Adventist Hospital who introduced me to the in charges of the departments concerned with my study. Verbal consent was sought from mothers of HIV exposed infants to interview them and also confidentiality was strictly observed at all stages of research.

CHAPTER FOUR

STUDY FINDINGS

Presented are the findings from a sample of 100 mothers, data was analyzed in terms of percentages and frequencies and presented in frequency distribution tables, short statements, pie charts and bar graphs

4.1 DEMOGRAPHIC DATA

Table 1: AGE DISTRIBUTION OF MOTHERS

Most of respondent by age of the mothers 30(30%) were aged between 20-24years, while minority2 (2%) were aged between 40-45years.

Variable (Age in years)	Frequency	Percentages
18 – 20	28	28
21 – 24	30	30
25-29	24	24
30-34	12	12
35-39	4	4
40-45	2	2
Total	100	100

Table 2: TRIBE

Majority like Baganda of respondents 54 (54%) were Banyankole, while Batooro 20(20%) and other tribes, bagika etc were 26(26%).

Variable (Tribe)	Frequency	Percentages
Banyankole	54	54
Batooro	20	20
Others	26	26
Total	100	100

Table 3: RELIGION

Less than a half of the mothers 48(48%) were Catholics, 20(20%) were Protestants and others 2(2%) were from various religions like Jehovah's Witness and Legio Maria.

Variable (Religion)	Frequency	Percentages
Catholics	48	48
Protestants	20	20
Muslims	12	12
SDA	18	18
Others	2	2
Total	100	100

Table 4: OCCUPATION OF MOTHERS

Most mothers 54(54%) were house wives, 16(16%) were Business women, 9(9%) were peasants, 7(7%) teachers and finally others were 14(14 percent).

Variable (Occupation)	Frequency	Percentages
House wife	54	54
Business woman	16	16
Peasant	9	9
Teacher	7	7
Others	14	14
Total	100	100

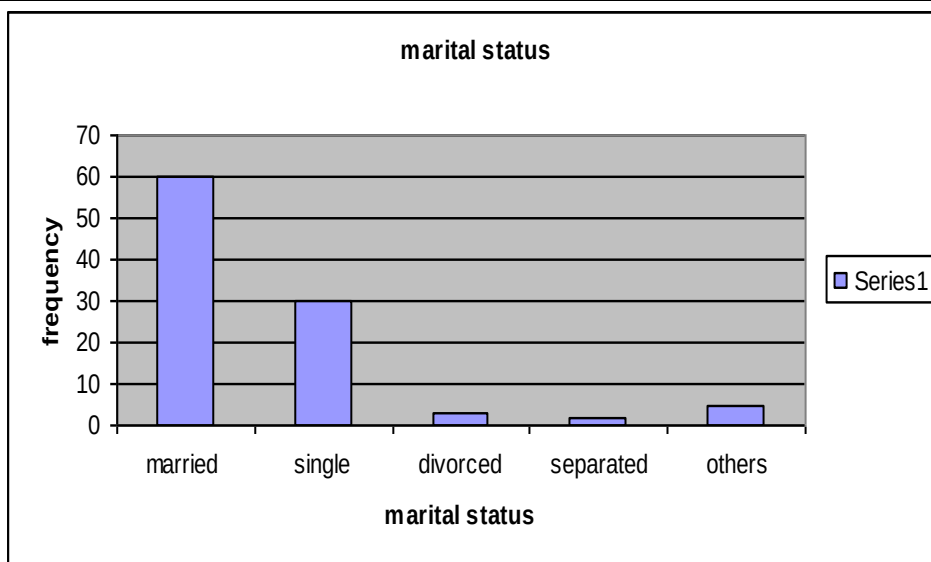


Figure 1: MARITAL STATUS

Most of the mothers 60(60%) were married while 30(30%) were single, 3(3%) were divorced, 2(2%) had separated and 5(5%) did not know their marital status.

FIGURE 2: LEVEL OF EDUCATION OF RESPONDENTS

More than half of the mothers 70(70%) had attained primary education none of the mothers had reached university level.

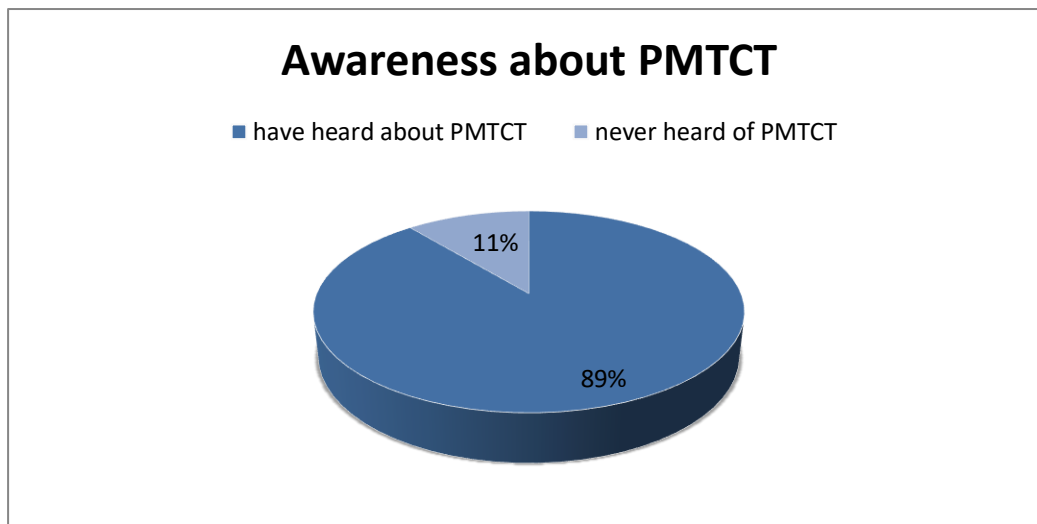
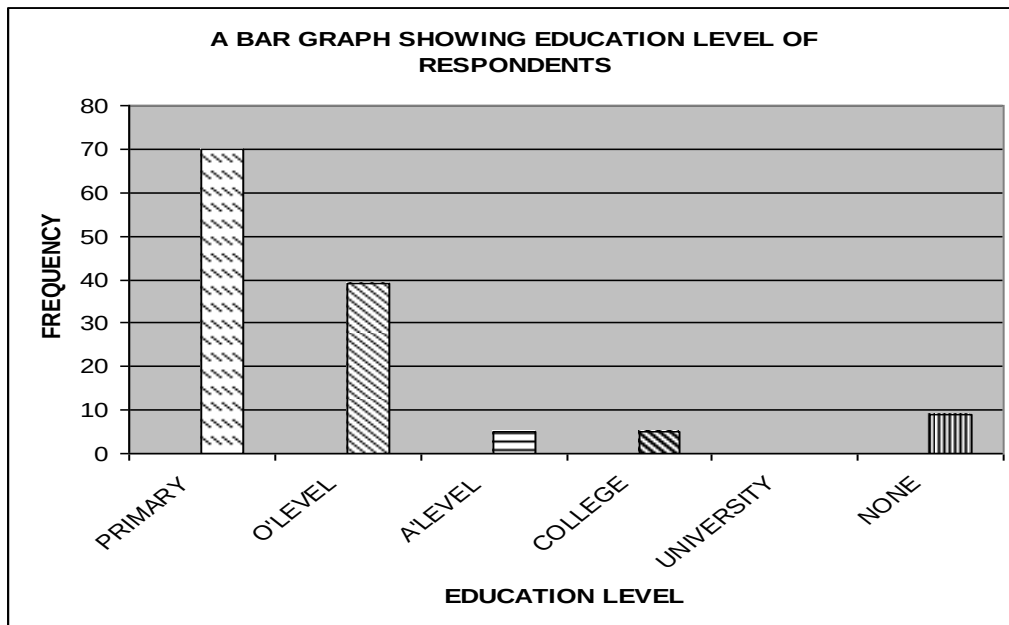


FIGURE 3: AWARENESS OF MOTHERS SEROSTATUS THOUGH PMTCT

Majority of the mothers 89(89%) had ever heard about PMTCT and their importance while minority 11(11%) had never heard about PMTCT.

FIGURE 4. PMTCT INFORMATION TO PREGNANT MOTHERS

The main source of information on PMTCT to the mothers was through the radios and televisions 30 (30%), followed by health workers 20(20%), then least by newspapers 4 (4%).

Source of information	Frequency	Percentages
Health worker	20	20
Television	30	30
Radio	30	30
News paper	4	4
Friend	16	16
Total	100	100

TABLE 5: KNOWLEDGE ON SERVICES OFFERED DURING PMTCT BY THE MOTHERS

Things involved	Frequency	Percentages
HIV Counselling and Testing to know the sero status of the pregnant mothers	51	51
Health education on safe motherhood	20	20
Attending ANC	14	14
Feeding well	13	13
Breastfeeding	2	2
Total	100	100

Majority of the mothers 51(51%) said PMTCT offers services like HIV counselling and Testing especially pregnant mothers for safe delivery after knowing your serostatus, 20 (20%) said it involves health education to pregnant mothers on safe motherhood, while minority 2(2%) said it involves breastfeeding.

TABLE 6: knowledge on option of breast feeding among HIV mothers

Most of the mothers 80 (80%) had an idea about breast feeding options among mothers who are HIV positive, 4 (4%) were confused and 16 (16%) did not know about any option.

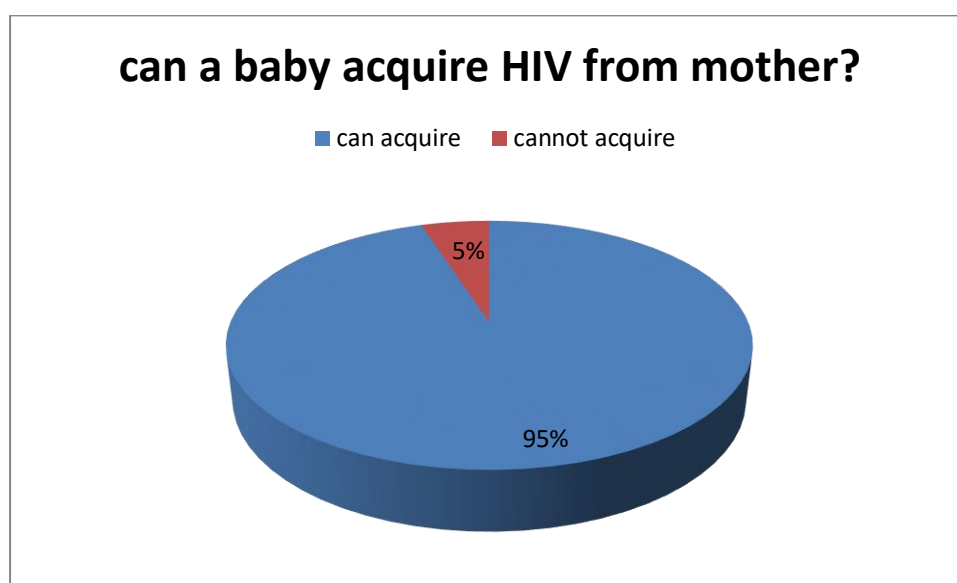
Feeding options	Frequency	Percentages
Had Idea	80	80
Don't know	16	16
Confused	4	4
Total	100	100

Table 7: Health education given to mothers at PMTCT clinics

Majority of the mothers 55 (55%) said that ARV's should be taken for PMTCT to be possible, 12(12%) said attending ANC and delivering in hospital, 17 (17 %) said feeding well, 2 (2%) said abstaining, and 2(2%) didn't know.

Things done in PMTCT	Frequency	Percentages
Taking ARV's	55	55
Attending ANC	12	12
Delivering in hospital	12	12
Feeding/eating well	17	17
Abstaining	2	2
Don't know	2	2
Total	100	100

Figure 5: knowledge on whether unborn can acquire the virus from mother



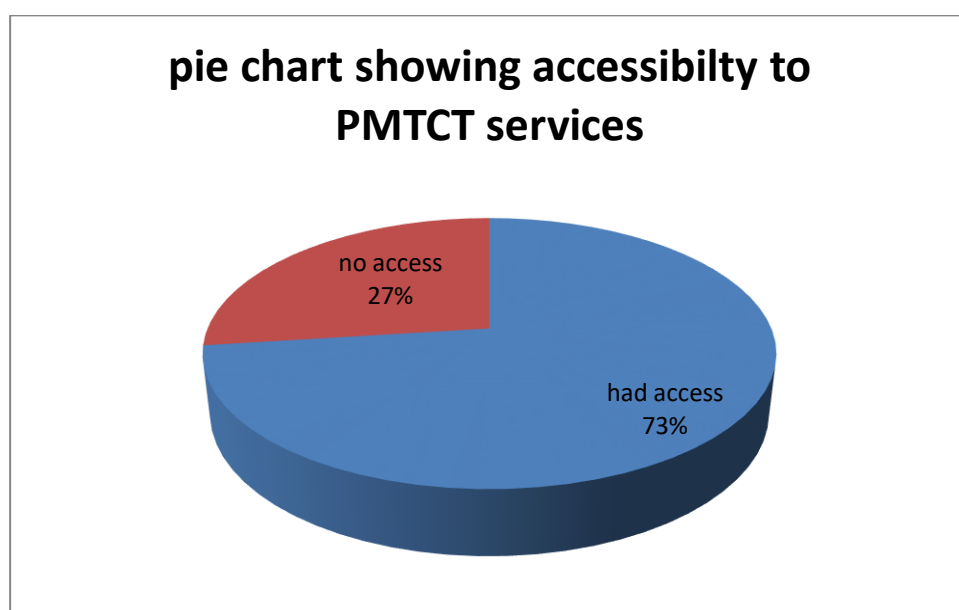
Majority 95(95%) said the unborn could acquire the virus from the mother, while a minority of 5 (5%) said the unborn could not acquire virus from infected mother. There was a high degree of knowledge among the mothers

Table 8: knowledge on when a child acquires virus

When child acquires virus	Frequency	Percentages
At birth	58	58
During breast feeding	7	7
In uterus	33	33
Don't know	2	2
TOTAL	100	100

Majority of the mothers 58 (58%) said the child acquires virus at birth, a third of the mothers 33(33%) said the child acquires virus while still in uterus, 7 (7%) said the virus is acquired during breast feeding and 2(2%) did not know.

Figure 6: Accessibility of PMTCT



Majority of the mothers 73 (73%) had PMTCT services in the nearest health unit while (27.0%) did not have PMTCT in the nearest health unit

Table 9: distance to nearest health unit

Distance in km	Frequency	Percentages
Less than 2km	4	4
3-5km	12	12
More than 5km	28	28
Don't know	56	56
Total	100	100

Majority of the mothers 56(56%) did not know the distance from their places of residence to the hospital while a minority of 4 (4%) said the distance from their residence to hospital is less than 2km.

Table 10: TRANSPORT MEANS

Transport means	Frequency	Percentages
Hired taxis	60	60
Motor bike	16	16
Walking	10	10
Bicycle	6	6
Private vehicle	2	2
Others	6	6
Total	100	100

Majority of the mothers 60(60%) travelled to hospital by means of a hired taxi while a minority of 2(2%) travelled by means of a private vehicle.

Table 11: Knowledge of mothers about the infants' ill health

Infants ill health	Frequency	Percentage
Had idea	58	58
Do not know	25	25
confused	17	17
TOTAL	100	100

Majority of the mothers (58%) had an idea about the infants ill health who are exposed to HIV,(17%)were confused and (25%) did not know about the infants ill health.

CHAPTER FIVE:

DISCUSSION OF THE FINDINGS, CONCLUSION AND RECOMMENDATION

This chapter discusses the study finding. According to the study findings in chapter four, respondents by age shows that, most of respondent by age of the mothers 30(30%) were aged between 20-24years and this is the reproductive age that is mostly exposed to the HIV positive and they transmit it during the process of delivery to their infants, while minority 2(2%) were aged between 40-45years.

Majority of respondents 54 (54%) were Banyankole, while Batooro 20(20%) and other tribes like Baganda, bagika etc were 26(26%). Hence this shows that the inhabitants or residents of the study are Banyankole who most of them are one way or another exposed to HIV and its consequences, there infants are exposed to HIV at birth unless proper preventive measures are taken. Less than a half of the mothers 48(48%) were Catholics, 20(20%) were Protestants and others 2(2%) were from various religions like Jehovah's Witness and Legio Maria therefore Christians are more exposed to HIV and there infants than any other religion.

Most mothers 54(54%) were house wives, this shows that poverty is also a factor that contributes to the prevalence of HIV to mothers and there infants because pregnant mothers who are HIV positive can not seek PMTCT services or clinics because she has no money or even can not look for ARVs, 16(16%) were Business women, 9(9%) were peasants, 7(7%) teachers and finally others were 14(14 percent).

Most of the mothers 60(60%) were married while 30(30%) were single, 3(3%) were divorced, 2(2%) had separated and 5(5%) did not know their marital status. Married mothers are likely to be exposed to HIV if there is no faithfulness and the consequences are death as a result leading to single parenthood. More than half of the mothers 70(70%) had attained

primary education none of the mothers had reached university level. Hence level of ignorance is very high and ignorance is among the factors contributing to high prevalence of HIV among mothers and their infants.

Majority of the mothers 89(89%) had ever heard about PMTCT and their importance while minority 11(11%) had never heard about PMTCT and they said how important it is to pregnant mothers before giving birth. And they said that main source of information on PMTCT to the mothers was through the radios and televisions 30 (30%), followed by health workers 20(20%), then least by newspapers 4 (4%).

Majority of the mothers 51(51%) said PMTCT offers services like HIV counselling and Testing especially pregnant mothers for safe delivery after knowing your sero status, 20 (20%) said it involves health education to pregnant mothers on safe motherhood, while minority 2(2%) said it involves breastfeeding, most of the mothers 80 (80%) had an idea about breast feeding options among mothers who are HIV positive, 4 (4%) were confused and 16 (16%) did not know about any option. Majority of the mothers 55 (55%) said that ARV's should be taken for PMTCT to be possible, 12(12%) said attending ANC and delivering in hospital, 17 (17 %) said feeding well, 2 (2%) said abstaining, and 2(2%) didn't know.

About knowledge on Transmission of HIV from mother to Child majority 95(95%) said the unborn could acquire the virus from the mother, while a minority of 5 (5%) said the unborn could not acquire virus from infected mother. There was a high degree of knowledge among the mothers. Majority of the mothers 58 (58%) said the child acquires virus at birth, a third of the mothers 33(33%) said the child acquires virus while still in uterus, 7 (7%) said the virus is acquired during breast feeding and 2(2%) did not know. They also said that PMTCT services offered are very far and it's also a contributing factor to transmission of HIV from mother to Child majority of the mothers 73 (73%) had PMTCT services in the nearest health unit while

(27.0%) did not have PMTCT in the nearest health unit, majority of the mothers 56(56%) did not know the distance from their places of residence to the hospital while a minority of 4 (4%) said the distance from their residence to hospital is less than 2km. Lastly due to their status of poverty to most of mothers they could not seek medical services because the means of travelling is costly which includes the following. Majority of the mothers 60(60%) travelled to hospital by means of a hired taxi while a minority of 2(2%) travelled by means of a private vehicle.

CONCLUSION

Majority of respondents more than 70 percent have knowledge on what is PMTCT and the advantages of PMTCT programs to pregnant mothers and they said during this time of services is when the sero status of the mother is determined and preventive measures taken.

They mention some of the advantages as;

- ✓ Prevention of transmission of HIV/AIDS to the child during delivery,
- ✓ Screening exercise to know mothers sero status.
- ✓ Starting on ARVs in case screened positive,
- ✓ regular medical check ups

But they also said that this services are not possible and it leads to mothers transmitting HIV to their infants because of not being screen on time and also not delivering from the health facility because of the following reasons like, poverty, Distance is too far to health facility, travelling means are expensive and ignorance as some of many factors.

RECOMMENDATION

-  Government should encourage health education on PMTCT
-  People should be medically checked regularly.
-  People should encourage regular Screening.
-  People should change their lifestyle to medically positive style.
-  Health facility should be brought near to people.
-  Eradicate poverty.

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APPENDICES

Appendix I: Questionnaire

DETERMINATION OF HIV PREVALENCE AMONG HIV EXPOSED INFANTS.

Introduction: I Dear respondent, the information you are to give is for research purposes and is strictly confidential. It will help the District authorities to improve on PMTCT and EID services.

DATE.....RESPONDENT

NUMBER.....

SECTION A: DEMOGRAPHIC CHARACTERISTICS OF THE INFANT

AGE OF INFANT Year

PLACE OF BIRTH

Health unit Home

MODE OF BIRTH

Caesareans section

Spontaneous vertex delivery

SECTION B: DEMOGRAPHIC CHARACTERISTICS OF RESPONDENT (MOTHER)

1. Age

2. Marital status

Single

Married

Divorced

Separated

Widowed ☐

3. Religion Catholic ☐ Muslim ☐

 Protestant ☐ Others ☐

Specify.....

4. Tribe Munyankole ☐

 Mukyiga ☐

 Mukonjo ☐

 Mutoro ☐

 Others

Specify.....

SECTION C: DETERMINING THE PREVALENCE OF HIV AMONG HIV EXPOSED INFANTS

1.Were you health educated about PMTCT services?

Yes ☐

No ☐

2.If yes,what were you taught about?

a.....

b.....

c.....

d.....

3.What was your source of information about PMTCT?

Health workers ☐

television ☐

Friends ☐

Radio ☐

News papers ☐

4.Are you aware of the services offered during PMTCT?

Yes ☐

No ☐

5.If yes,what are they?

a)HIV counseling and testing to know the sero status of the pregnant mothers.

Yes ☐

No ☐

b)Health education on safe motherhood.

Yes ☐

No ☐

c) Attending antenatal care.

Yes ☐

No ☐

d) Breastfeeding in HIV exposed infants.

Yes ☐

No ☐

e)Good nutrition during pregnancy.

Yes ☐

No ☐

6.Are you aware of things done during PMTCT?

Yes ☐

No ☐

If yes, what are they?

Taking ARVS ☐

Attending ANC ☐

Hospital delivery

Feeding/eating well

Abstaining

Donot know

7.Are you aware of when the child acquires the virus?

Yes No

If yes,when?

During breast feeding

In the uterus

Donot know

8.How many access the PMTCT services?

Yes No

If no,what could be the reasons?

.....
.....

9.What could be the distance to the nearest health unit?

Less than 2km

3-5km

More than 5km

Donot Know ☐

10.What could be the transport means to the heakth unit?

Hired tax ☐

Motorbike ☐

Walking ☐

Bicycle ☐

Private vehicle

Others

Specify.....

SECTION D: FEEDING OPTIONS SELECTED BY MOTHER

1. Were you health educated (taught) on breast feeding during Antenatal care?

Yes ☐

No ☐

2. If yes what will be you taught about breast feeding?

(a).....

(b).....

(c).....

(d).....

3. Are you aware of the different varieties of feeding HIV exposed infants?

Yes ☐

No ☐

4. If yes, what are they

a.) Exclusive breast feeding for six months and then complementary feeding from six months onwards. Yes ☐ No ☐

b.) Exclusive breast feeding for six months and then replace with other feeds ☐ No ☐

c.) Exclusive breast feeding for 12 months and then replace with other feeds Yes ☐ No ☐

d.) Use of replacement feeding by using commercial feeds which are acceptable, feasible, Affordable, sustainable and safe (Infant formula, Cow's milk, goat's milk).

Yes ☐ No ☐

e.) Mixed feeding before six months and onwards Yes ☐ No ☐

5. Of the feeding options mentioned, what do you prefer?

.....

Reason (a).....

(b).....

(c).....

6. Which feeding method are you practicing?(Refer to No.4)

Reasons (a).....

(b).....

(c).....

SECTION E: DETERMINING THE FREQUENCY OF ILL HEALTH AMONG HIV EXPOSED INFANTS.

1. Has your child fallen sick in the last two weeks?

Yes ☐

No ☐

2. If yes, how many times did he/she fall sick?

▪ Once ☐

▪ Twice ☐

▪ Thrice ☐

3. If yes, what signs and symptoms did he/she present with (tick where appropriate)

☐

▪ Fever ☐

▪ Diarrhea ☐

▪ Cough

▪ Shortness of breath ☐

▪ Convulsions ☐

▪ Vomiting ☐

▪ Mouth sores ☐

▪ Skin infection ☐

▪ Pus / discharge from Ear ☐

▪ Painful swelling on the body ☐

4. Do you associate the sickness to any cause?

Yes ☐

No ☐

5. If yes, what do you think will be the cause?

Dirty water ☐

Breast feeding ☐

Dirty milk ☐

Dirty food ☐

Bewitched ☐

Others ☐

Specify

(a).....

(b).....

(c).....

THANK YOU FOR YOUR COOPERATION

Appendix ii: INTRODUCTORY LETTER

[illegible]

[illegible]