FACTORS INFLUENCING UTILIZATION OF PREVENTION OF MOTHER TO
CHILD TRANSMISSION (PMTCT) OF HIV/AIDS IN UGANDA

BY

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Declaration

I, Meeme Milly do hereby declare to the best of my knowledge that this dissertation is my original work except where otherwise acknowledged.

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This dissertation has been submitted with the approval of my supervisors.

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Dedication

To my parents Mr Kyamuhangire Nafutali and Sr Mukasa Deborah Eunice who laid a foundation for my academic career and success in my life.

And also to the women in the reproductive age group who should take this strategy of PMTCT of great value in their life.
Acknowledgements

I do acknowledge with sincere gratitude, the support and guidance from my supervisors, Dr. Lubaale Yovani Moses and Dr. Gideon Rutaremwa. I also appreciate Mrs. Nankinga Olivia Jemba and Ms. Agaba Peninah who always guided me in analysis. My appreciation also goes to my colleague Ayanga Christine. I am indebted to my dear husband for his support through this study. Thank you so much.
Abstract

The major aim of this study was to determine factors influencing utilization of Prevention of Mother to Child Transmission (PMTCT) of HIV/AIDS in Uganda. The specific objectives were; to assess factors influencing utilization of PMTCT of HIV in Uganda and to examine the socio-economic and demographic factors influencing utilization of PMTCT.

The study used data from the 2006 Uganda Demographic Health Survey (UDHS) it conducted by the Uganda Bureau of statistics (UBOS) using a nationally representative probability sample of 9864 households in which 8531 women aged 15-49 were interviewed, of these, 5035 mothers attended ANC in the last five years with their last birth hence were selected for analysis. Data was then analyzed at univariate bivariate and multivariate methods. The multivariate analysis was carried out using logistic regression model to establish the factors associated with PMTCT utilization.

At this level of analysis, primary and secondary level of education were significantly associated to PMTCT utilization (p=0.000), central and eastern regions showed a significant association with PMTCT utilization (p=0.000). Age group 25-29 was also significantly associated to PMTCT utilization with (p=0.002), the highest wealth status showed a significant relationship (p=0.004) to the utilization of PMTCT and lastly talk about getting tested was also significantly related to PMTCT utilization.

From the study, education is a significant influencing factor in utilization of PMTCT services in Uganda. The more educated a woman the more utilization of PMTCT services. It is therefore
recommended that programmes and policies that intend to educate and inform women should be enacted and strengthened for implementation. The education programmes of Universal primary education and Universal secondary education as well as the formative action of 1.5 points given to females during admission into public institutions and university should be strengthened and well implemented to enable a large proportion of women attend school. This will help to increase on their knowledge and change attitude in the utilization of PMTCT services thus protecting and improving the lives of the newly born babies and their mothers.

The study recommends the government of Uganda to distribute services like health facilities equally in all regions of Uganda so that mothers in disadvantaged areas can access services of PMTCT thus increasing its utilization.

Testing during antenatal should be emphasized and extended at the grass root through village health teams (VHT) to counsel and test mothers who do not attend antenatal care and those who decide to deliver in their homes due to fear of rude behaviors of health workers.
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List of Abbreviations and Acronyms

AIDS   Acquired immune deficiency syndrome
ANC   Antenatal Care
ARVs   Anti Retroviral drugs
BBC   Behavior Change Communication
HIV   Human Immune Virus
IATT   Inter Agency Task Team
MTCT   Mother-to-Child-Transmission
NVP   Niverapine
PMTCT   Prevention of Mother to Child Transmission
UBOS   Uganda Bureau of Statistics
UDHS   Uganda Demographic Health Survey
UNAIDS   United Nations Joint Program on HIV/AIDS
UNFPA   United Nations Population Fund
UNHS   Uganda National Household Survey
VCT   Voluntary Counseling and Testing
WHO   World Health Organization
ZDV   Zidovudine
CHAPTER ONE

Introduction

1.1 Background to the study

Globally about 1.4 million pregnant mothers are living with HIV in low and middle countries and of these 1000 babies are infected every day during pregnancy, birth and breastfeeding. However it is only 26 percent of the women who have received HIV/AIDS testing in East and Southern Africa which is most hit by the epidemic and only half of the pregnant women were tested for the virus (UNICEF 2009). The conventional form of HIV testing in Antenatal clinics called Voluntary Counseling and Testing (VCT) approach where women are offered an HIV test, worry many women since they are stigmatized for accepting the test (Homsyet 2006). An alternative type of testing (routine), where women are told that HIV testing is a standard part of Antenatal care to opt out if they want to, makes it more acceptable. UNICEF found that switching from VCT to routine testing dramatically improved take-up of testing in PMTCT programmes. For example, at one hospital in rural Uganda, the proportion of pregnant women with documented HIV status at discharge more than doubled from 39% to 88% after routine testing was introduced (Homsyet 2006).

HIV transmission in Uganda is believed to be around 21 percent due to mother to child transmission (Uganda Aids Commission 2007). Uganda has been implementing strategies for prevention of mother to child transmission (PMTCT). It should be noted that some of the precondition for reducing mother to child transmission is to know that HIV can be transmitted
from mother to child and knowing that the use of anti retroviral drugs by the mother can reduce the risk of transmissions (UDHS 2006).

Uganda and Botswana are the two countries most successful in showing great progress in the fight against HIV/AIDS in relation to PMTCT in Africa. These countries had some of the highest rates of HIV/AIDS infection. The success story in Uganda was made possible by grassroots efforts in making treatments and education accessible. To achieve this, the numbers of PMTCT health clinics were raised significantly. This allowed the people living in rural areas to have access to PMTCT, education, counseling and testing (Avert Uganda 2008).

Retenberg (2000) indicates that in regions with high prevalence of HIV infection, the low levels of contraceptive use and high value of child bearing such as Sub-Saharan Africa, addressing fertility issues among people living with HIV is critical for prevention of unwanted pregnancies and prevention of HIV transmission of mother to child. Without such interventions the problem of mother to child transmission is expected to last for a long period of time. This is applicable to Uganda and therefore it is deemed to face serious PMTCT challenges given to her high fertility rate and the high prevalence of HIV among women of the reproductive age. National HIV prevalence among women is 8 percent Uganda HIV/AIDS sero prevalence survey 2004/05 and 67000 HIV infected women are expected to become pregnant annually. Reducing an intended pregnancy among HIV infected women by 16 percent would yield an equivalent reduction in HIV positive infant cases as would the implementation of a national Prevention of mother to child Transmissions.
1.2 Statement of the problem

In Uganda the factors influencing utilization of PMTCT of HIV/AIDS are limited by inadequate data, there is underreporting especially in villages due to poor health administration that cannot identify mother to child transmission (MTCT) as a disease. Despite this shortfal, it is necessary to examine the utilization of PMTCT, thus HIV/AIDS is likely to affect adults in the reproductive age group or distort the age structure by depleting the population in age group 15-49 years, this can also lead to increased number of children born to HIV if there is no treatment and it is estimated that around 15-30% of babies born to HIV positive women will become infected with HIV during pregnancy and delivery. A further 5-20% will become infected through breastfeeding (Jama 2000).

There has been expansion of PMTCT services worldwide where greater numbers of HIV infected mothers and their children have been provided opportunities to early intervention and care through Antenatal clinics where HIVNET 012 trial which took place in Uganda between 1997 and 1999 found that a single dose of Niverapine given to the mother at the onset of labor pains and after delivery to their newborn babies roughly halved the rate of HIV transmission. Since 2000 many babies in resource poor countries benefit from this simple intervention of PMTCT program (Guay 1999).

However, given the availability and expansion of PMTCT services, there are factors hindering utilization of these services such as HIV testing by women going for antenatal services and low utilization of antiretroviral drugs by HIV positive women identified during pregnancy (WHO 2010). This could be attributed to barriers like fear of stigma and discrimination among HIV
positive pregnant women, poor counseling and awareness services, HIV testing services, women’s refusal to take an HIV test, failure to return for follow up visits and also poor adherence to self-administered drugs (Armstrong 2002). Therefore in creating sensitive polices and action, it is important to look beyond PMTCT and the underlying causes for not utilizing it. The study will therefore examine the factors influencing utilization of prevention of mother to child transmission of HIV/AIDS in Uganda.

1.3 Objective of the study
The general objective of the study was to study factors influencing utilization of PMTCT of HIV/AIDS in Uganda.

The specific objectives of the study were to:

1. To examine the socio-economic factors influencing women’s knowledge in the utilization of PMTCT services in Uganda.

2. To study the influence of women’s demographic factors in the utilization of PMTCT services in Uganda.

1.4 Hypotheses
The following hypotheses were tested:

1 The higher the level of education for a woman the more likely to utilize PMTCT services.

2 Women in marital union are more likely to utilize PMTCT services than women who are not in a union.

3 Women who reside in urban areas are more likely to utilize PMTCT services than the rural women.

4 The higher the age of the woman, the less likely to use PMTCT services.
5 Muslim women are more likely to utilize PMTCT services than women from other religious denominations.

1.5 Justification of the Study

Uganda is a developing country with a high population growth rate of 3.2 percent resulting from high fertility levels of about 7 children per woman (UDHS 2006). However, the population has been grilled by HIV/AIDS scourge leaving at least almost every homestead ever suffered the consequence of the scourge. But what should be noted is that although people are affected with the scourge, preventive measures have been put in place in form of free service. Unfortunately, the demand for these services differs. Therefore one wonders as to why they differ. This study caused the understanding of the whys in the differences in the utilization of PMTCT services among women in Uganda.

A deeper insight into the socio-economic and demographic variables and the take up of PMTCT services relationship provides vital information about the relationship and how to set the relationship in the direction of ushering development other than underdevelopment.

This study of the underlying proximate determinant of the utilization of PMTCT services increases the ability of policy makers and planners in making informed policies and appropriate programme for the socio-economic development of the Country. This was to the fact that policy makers and planners in Uganda are limited by scarcity of data on the dynamics of the population.

The study findings will add to the stock of knowledge on the subject and thus help scholars to clearly understand the interplay of the existing relationship between socio-economic factors, the
intermediate and the utilization of PMTCT services in the societies of Uganda. In this regard, the study shall act as a reference for similar future studies.

1.6 Conceptual framework

Figure 1.1 presents the conceptual framework used to understand the relationship between the variable examined in this study.

Figure 1.1 a Conceptual framework showing socio-economic and demographic factors towards PMTCT utilization.

Socio-economic and demographic

<table>
<thead>
<tr>
<th>Socio economic and demographic factors (Predisposing factors)</th>
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</thead>
<tbody>
<tr>
<td>- Marital status</td>
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<tr>
<td>- Region</td>
</tr>
<tr>
<td>- Place of residence</td>
</tr>
<tr>
<td>- Religion</td>
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<tr>
<td>- Education</td>
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<tr>
<td>- Wealth index</td>
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<tr>
<td>- Age</td>
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<tr>
<td>- Current pregnancy</td>
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<td>- Residence</td>
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<table>
<thead>
<tr>
<th>Enabling factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Access to Health facilities</td>
</tr>
<tr>
<td>- Family income</td>
</tr>
<tr>
<td>- Health insurance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Services availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Service provision(PMTCT)</td>
</tr>
<tr>
<td>- Increased Prevention of MTCT</td>
</tr>
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</table>

Source: Andersen and Newmans (1973)
A multiplicity of studies have demonstrated that the variation of utilization behavior can be rated to age, sex, education, income and socio-economic status. In the socio demographic approach, Mckinlay pointed out that such studies are based on secondary analyses of routinely collected data. This technique has been criticized by Kitsuse and Bysellin in the recent surveys in using such data. In the recent study, however surveys have also been used to collect such data. While the relation of some socio demographic factors to utilization has remained stable, others have changed rather considerably over time. Bice and his associates present data from U.S on the National Health Survey indicating that when health status is taken in to account, differences in utilization of physician services among different income groups persist only among children and adults who experience the most severe levels of disability; race and educational level, however continue to strongly associate with utilization of health services.

The Andersen behavioral model (1973) was developed to explain the differences in access to health services in the United States of America. The model examined the influence of individual demographic characteristics and health delivery system variable on utilization pattern. It hypothesizes that the decision to seek medical help is a function of three sets of variables. These include the predisposing factors such as age, sex, marital status, education, family size, and race. The enabling factors include family income, health insurance, service availability and health level symptoms or sickness, and lastly the need to use the service factor. This model has main criticism leveled against the model. It is indirect reference to the distance, transport availability and morbidity as factors that assert considerable influence on utilization pattern. For example, education may equip knowledge and promote access to health services among women thus influencing increased provision of services such as the PMTCT which is meant for pregnant mothers with the aim of preventing infection of the newly born child. More so a woman
will be able to change her behavior from risk behavior that may lead the mother from contracting the virus.

Religion differ in view and teachings on sexual related issues, peoples religious background may determine the utilization of PMTCT. Christians who marry one woman may be able to utilize PMTCT service than the Muslim women who may not bather to use the services since they may not know who brought the disease due to polygamy or after they have done the test and found to be positive, they not disclose the results to their husbands.

Residence as a variable is one of the exogenous factors that exert immense influence on health services utilization. Maternal residence is a strong spatial determination of differential in utilization. If woman’s place of residence is near the health facility, she will be able to access the services hence PMTCT utilization.

Health insurance of a person may enable her to access better health facilities providing good services required to prevent diseases (HIV) which may lead to utilization of PMTCT

1.7 Definitions of key concepts

Knowledge: This is defined as awareness about something. In this particular study knowledge is defined as information about or the understanding of PMTC services.

Utilization: In this study, is the action of making use of available anti retroviral drugs in the prevention of mother-to-child transmission of HIV, which is usually referred to as PMTCT services.

PMTCT: These are interventions carried out to reduce the risk of HIV transmission from an infected mother to her baby during pregnancy, labor, delivery and breast feeding.
1.8 Lay out of the dissertation

The dissertation was divided into five chapters. Chapter one comprised of background to the study, statement of the problem, objectives of the study, hypotheses, justification of the study, conceptual framework and definition of key concepts. Chapter two consisted of the literature review of the women on the socio-economic characteristics and utilization of PMTCT. Chapter three presented the methodology of the study which comprised of the introduction, sources of data, study variables, data analysis which included univariate analysis, bivariate analysis and the multivariate analysis. Chapter four presented the findings of the study which showed the background characteristics of the women, relationship between PMTCT utilization and background characteristics and the determinants of PMTCT. Chapter Five gave the summary, conclusion, recommendations and suggested future research agenda.
CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter discusses the factors influencing utilization of PMTCT of HIV in Uganda and beyond, looking at both developed and developing countries. It also shows the existing literature on the background characteristics, intermediate variables and the utilization of PMTCT.

2.2 Levels of PMTCT knowledge

Mother-to-child transmission (MTCT) is when an HIV positive woman passes the virus to her baby. This can occur either during pregnancy, labor and delivery, or breastfeeding. This mode of transmission of HIV presents a major cause of morbidity and mortality among young children, particularly in developing countries with a high prevalence of HIV infection. Interventions to prevent mother-to-child transmission of HIV, according to UNAIDS (2000) includes the recent breakthroughs in antiretroviral therapy, offer immediate opportunities to: (i) save children's lives; (ii) reduce the impact of HIV on families and communities; and (iii) strengthen maternal and child health services.

The high HIV infection rate among women of reproductive age has serious implication on the Mother -to-child transmission of HIV (MTCT) through many parts of the world carrying a triple tragedy (Global Health 2003). Taking Ugandan birth rate of 52.2 per 1000 population, about 5.2% of the Ugandan population is expected to be pregnant annually and this has put them at a risk of contracting HIV and passing it on their unborn babies (HIV surveillance report 2003).

The United States Agency for International Development (USAID 2003), one of the major international donors in the field of HIV/AIDS prevention also declared PMTCT as one of the
cornerstone of its expanded response to HIV/AIDS. The agency pledged with other partners to ensure that at least 25% of HIV/AIDS infected mothers in high prevalence countries have access to the interventions to reduce HIV transmission to their infants through increasing allocation of funds for PMTCT in supply of test kits, training materials and antiretroviral drugs.

The introduction of ARVs in 1996 was a turning point for the hundreds of thousands of the people with access to sophisticated health systems. Although they cannot cure HIV/AIDS, ARVs dramatically reduced mortality and morbidity, prolonged lives and improved the quality of life of many people living with HIV/AIDS (Hammer 2002).

Following the release of results of 1998 that a short course of ZDV regimen starting from 36 weeks of pregnancy reduced the rate of transmission of HIV by 50%, (Moodley 2003), a comprehensive strategy for MTCT-prevention was developed. UNICEF obtained considerable experience with the pilot intervention projects many initiated under the umbrella of the UN Inter-Agency Task Team (IATT) on mother-to-child transmission (MTCT). The entry point to the intervention is Voluntary Counseling and Testing (VCT) of HIV followed by ZDV from 36 weeks and during labor to mothers who are HIV-infected, and counseling on infant.

Preventing mother to child transmission (PMTCT) is vital to saving the lives of millions of young children. WHO (2005) stated that “without prevention treatment, up to 40% of the children born to HIV positive women would be infected, majority through MTCT” it is believed that two-thirds are infected during and around time of delivery and one third are infected through breast feeding. In Uganda and other countries as well following a huge funding received from the donor countries, services for the prevention of mother to child transmission are freely provided
to expectant mothers who are normally diagnosed as HIV positive when pregnant during their
visit to ANC centers for antenatal services.

It is however important to note that although the services are freely provided, the demand for the
services defer among the expectant mothers and these are attributed to a number of factors that
are demographic and socio-economic. Some studies carried out reveal a number of such factors
though the concentration is on treatment for prevention of the transmission.

2.3 Socio-economic and demographic factors influencing women’s utilization of PMTCT services

A considerable number of researches have been carried out in the field of maternal health and
HIV/AIDS of which PMTCT is included. For instance Abrahams (2003) wrote about maternal
health and he observed that the poor seeking behavior of maternal health services was due to a
variety of inter-related socio-economic factors. These were educational, cultural and personal
factors including, cost of transport, late recognition/denial of pregnancy, reliance on
traditional/tribal pregnancy beliefs, lack of perceived benefits, and influence of partner and
dissatisfaction with the attitude of staff at antenatal clinics. These were observed to influence
access to information and attitudes towards antenatal care on maternal health.

2.4 Age and PMTCT utilization

The health seeking behaviors of PMTCT clients depends on decision made by them based on age
and other household factors, physical accessibility and availability of PMTCT services with
confidentiality and privacy since teenage mothers fear the un-conductive social interaction
exhibited by some health workers who condemn them. Such mothers would prefer to keep off
and avoid being stigmatized while mothers who had multi gravidas reported harsh health workers and limits utilization of PMTCT (Birtuwwan and Jackson 1997). In Myanmar-Thailand the PMTCT pilot project December 2000 observed the number of the protested counseled pregnant women in the group were 12571(70%) and 2333 (19%) pregnant women who tested for HIV,73 women were HIV positive(3%).However there was a low acceptance of VCT by young pregnant women according to the findings throughout the pilot sites(UNICEF 2002).

2.5 Region of residence and PMTCT utilization

WHO (2006) states that in regions of high income countries MTCT had been virtually eliminated resulting from effective voluntary testing and counseling, access to antiretroviral therapy, safe delivery practices, and the widespread availability and safe use of breast-milk substitutes. It was suggested that if such interventions were used worldwide, they could save the lives of thousands of children each year.

2.6 Rural-urban residence and PMTCT utilization

Rural community’s pregnancy is not seen as something requiring special care and they do not consider pregnancy related problems. Although pain and suffering is present until it interrupts them to seek help; instead they feel having many children as wealth. They only visit health institutions once during pregnancy and about seventy percent of them give birth without assistance of trained health provider and this minimize the opportunity that they could have PMTCT service (WHO 2006). Health institutions in developing countries, especially in rural areas, are staffed with less skilled personnel and competence that could not encourage service consumers and also the recruitment of lay counselors who can provide good quality counseling service with training of few weeks to
months is beloved to decrease workloads of health professionals and it should be assisted with frequent and continuous supervision (Armstrong 2002).

According to Panam (2009), the Prevention of mother-to-child transmission of HIV in Haiti, observed that the woman’s desire to return to rural areas for family support, delay to in seeking prenatal care by some of the women due to poor knowledge of conception date and time to delivery were some of the identified barriers to women’s participation in PMTCT programs in Haiti. To overcome the barriers, Panam however suggested the promotion of early presentation for care through education which would result in earlier initiation of antiretroviral therapy, and also the extension of PMTCT services through a national referral network. Panam much emphasized the need to expand testing, extend services to rural areas, and implement early HIV diagnosis to reduce infant mortality.

2.7 Education of the women and PMTCT utilization

In a related development, although most studies reveal education as a determining factor to the utilization of maternal health services among women, Elizabeth (2001) proposed the introduction of MTCT education as part of the prevention of HIV/AIDS among the adults including PMTCT education at the community level is essential to foster an environment supportive of women who face difficult decisions related to MTCT and its prevention.

She suggested that BCC focuses on the reduction of behaviors that place individuals at risk of MTCT during pregnancy, delivery, and through breastfeeding, and encouragement to see a VCT counselor or health provider for more information on how to prevent HIV/AIDS among infants and young children.
In HIV/AIDS prevention activities including PMTCT service we need to consider supportive staff. But what is happening in reality now is, concerning human resources for health; AIDS donors focus on training existing health workers rather than hiring or training new ones. In countries like Mozambique, Uganda and Zambia who are like most sub-Saharan Africa suffering from the unavailability and inequitable distribution of qualified health workers was observed. The shortage affects all cadres of clinical workers that include medical doctors, nurses, health managers and administrative workers with the most serious shortages in rural area (CGD 2008). In reality more technical staffs are needed to help manage a health program that includes staff for monitoring and evaluation and for procurement and financial management.

WHO (2006) suggested that there must have well-trained, supportive staff who take great care to ensure confidentiality. They must be backed up by effective HIV testing and counseling programmes and by good quality HIV/AIDS education, which is essential to eliminate myths and misunderstandings among pregnant women, and to counter stigma and discrimination in the wider community. Under these conditions, antiretroviral drugs have the potential to save many thousands of babies' lives.

It is possible to improve utilization of self administered drugs by working with people who attend home deliveries that could train traditional birth attendant or health extension workers who can also help to provide other service such as HIV education testing and counseling, and advice on infant feeding (Butlery’s 2002).
2.8 Women’s marital status and PMTCT utilization

There are a lot of reasons for not using PMTCT services especially among married women. It included rejection by spouses due to fear of stigma and discrimination, fear of not breastfeeding feeding, fear of congenital anomalies, interruption of checkups, home and premature delivery. All these strongly contributing to under utilization of existing service by pregnant women

However some women refuse to be tested because they fear learning that they have a life-threatening condition; because they distrust HIV tests; or because they do not expect their results to remain confidential, and fear stigma and discrimination following a positive result.

Some women who test HIV positive do not return to clinics for follow up visits, or fail to take the drugs they have been given. This can happen because they have had negative experiences interacting with clinic staff, or because they have been poorly informed about HIV transmission and how it can be prevented. Also, some women choose not to attend clinics because by doing so they might disclose their HIV positive status. In the words of a woman from Cote d'Ivoire:

"My husband might see me with the medicines, and he will want to know what they are for. That way he will find out about my [HIV positive test] result. Even the location bothers me, because everyone who comes to the clinic knows what goes on [at the programme]. As soon as a pregnant woman is seen coming here, it is known right away that she is seropositive”(WHO 2010).

2.9 Household wealth index and PMTCT utilization

UNICEF (2009) observed that despite the obvious benefits of PMTCT services such as antiretroviral drug therapy effective voluntary testing and counseling, access to antiretroviral therapy, safe delivery practices, and the widespread availability and safe use of breast-milk
substitutes and the low cost, among others, the vast majority of HIV-infected pregnant women cannot afford the drugs or they are not available. There are suggestions that encourage HIV positive women to deliver at health institution and all covered by PMTCT service including those who deliver at home should be provided with Nevirapine pill prior to delivery to minimize costs of transport to the health facilities (Stringer 2005).

2.10 Religious affiliation and PMTCT utilization

Religion affected women’s health seeking behavior among the Muslim religion were Martin-Hertz observed that 70 percent of pregnant women who after VCT; their HIV result revealed positive; did not tell their spouse; since they were afraid of bad consequences from their family especially their husband. Muslim men blame their wives bringing the virus to them (Martin-Hertz 2006).

2.11 Current pregnant status and PMTCT utilization

Stigma and discrimination is a common phenomenon related to HIV in different communities and usually has a consequence of marginalization and loss of social security. Therefore pregnant women either refuse to have VCT or remain at home instead of taking HIV test result (Armstrong 2002). They are worried about the feeling of their spouse since after giving birth also they economically depend on them to provide their off spring with basic requirement (food, shelter and clothing). Usually pregnant women are between two evils since both telling and not telling either to get tested or to tell the result has enormous consequences; hence she balance and take her own decision which could be right or wrong (Armstrong 2002).

Poor quality of care is always prominent reason not to use available PMTCT service. Among factors affecting “user friendliness” are explained on organizational quality and consumer responsiveness of health care judged by utilizes and the approach of service providers and clients
interaction. It includes staff attitude that could be result of poor training and rude behaviors, hours of operation that could inconvenient, privacy, sufficient space and conducive waiting area, well organized service delivery point and providers response are mandatory for satisfaction of service consumers, absence of skilled professional and improper utilization of time for post test counseling was identified as a reason why the women did not receive test result (Sarker 2007).

2.12 Summary

The literature reviewed that most programmes targeted women alone notwithstanding the fact that men are final decision maker at home. Literature further showed that PMTCT uptake was dependant on women’s social, demographic and economic characteristics. For example although many women have the knowledge of PMTCT and would desire to adopt the methods, they are hampered with different challenges like suspicion of infidelity by their husbands, threat of divorce if discovered, isolation by extended family members among others which hinders PMTCT utilization.
CHAPTER THREE

Methodology

3.1 Introduction

This chapter presents a description of the source of data, the methods of data analysis, variable selection.

3.2 Sources of data

The study used data from the 2006 Uganda Demographic and Health Survey (UDHS). The UDHS was conducted by Uganda Bureau of statistics (UBOS) using a nationally representative probability sample of 9864 Households selected for survey. A total of 8531 women aged 15-49 years were interviewed within the woman Questionnaire. For this study, only (5035) women who had ever been pregnant in the last five years prior to the study were considered.

3.3 Study variables

The study variables included. Utilization of PMTCT services as the dependent variable and was captured by the question:”Got test results as part of antenatal care “and the independent variables were age 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, region-northern, central, eastern and western, education included no education, primary, secondary, tertiary, religion, catholics, protestants, muslim and others, residence-rural and urban type of residence, marital status-never married, currently married and divorced/separated, household, wealth index included poor, middle, rich, current pregnant status were no or unsure and yes. The intermediate variables of talked to about MTCT included -no and yes, talk about PMTCT consisted of no and yes, talked about testing for HIV had no and yes.
3.4 Data Analysis

3.4.1 Univariate Analysis

This was the first level of analysis; the independent variables were analyzed and presented in form of frequency and percentage describing selected socio-economic and demographic characteristics of the respondents and their influence in utilization of PMTCT services.

3.4.2 Bivariate analysis

This level of analysis, the researcher tested the relationship between the dependent variable and independent variables by use of cross tabulation. Chi-square (χ²) statistic was used to establish the levels of significance between the dependent variable (utilization of PMTCT services) and the independent variables.

The general formula of chi-square test statistic is:

\[ \chi^2 = \sum_{i=1}^{r} \sum_{j=1}^{c} \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \]

Where

\[ \chi^2 = \text{chi-square. This was tested at a 95% confidence interval} \]

\[ i = 1 \cdots \cdots r \]

\[ j = 1 \cdots \cdots c \]

\[ O_{ij} = \text{observed frequency from the variables of the i}^{th} \text{ row and j}^{th} \text{ column} \]

\[ E_{ij} = \text{expected frequency assuming independence between variables of the i}^{th} \text{ row and j}^{th} \text{ column} \]

\[ r = \text{number of categories (rows) of the independent variables.} \]

\[ c = \text{number of categories (columns) of the dependent variable} \]
3.4.3 Multivariate Analysis

At the multivariate level, a binary logistic regression model was fitted to study the determinants of utilization of PMTCT. The interpretation was based on the odds ratio (ORs), and statistical significance was later at 95% confidence intervals (CIs). The odds ratios greater than one (>1) implied increase in the probability of utilizing PMTCT, while the odds ratios less than one (<1) implied reduction in probability of utilizing PMTCT and the odds ratios equal to one showed no difference.

The odds ratio is the probability of the woman to utilize PMTCT to the probability of not utilizing PMTCT, if the coefficient is positive, it means there are increased odds or probabilities in utilizing PMTCT, while a negative coefficient means there are reduced odds or probability in the utilization of PMTCT.

The model took the formula:

\[
\log \left( \frac{p_i}{1-p_i} \right) = a + b_1 x_1 + b_2 x_2 + \ldots + b_k x_k.
\]

Where \( i = 1, 2 \ldots, k \)

\( p \) = Probability of utilizing PMTCT services

\( (1 - p) \) = probability of not utilizing PMTCT services.

\( b \) = the estimated co-efficient

\( x \) = the independent variables

\( k \) = the number of independent variables

The reference categories were created to test the set of hypotheses among different variables. They include age, region, education, religion, marital status, household wealth index, women who were currently pregnant, talked about MTCT and PMTCT, women who tested for HIV virus. A category with the highest frequency was taken as reference category among different
variables during analysis. The categories for age 20-24 was the reference category, region, western region was chosen, primary education was also considered, catholic for religion, those from the highest wealth quintile were taken, those who were not pregnant, who did not talk about MTCT and its prevention, women who did not test were taken as reference categories and in arrangement they appeared fast.

3.5 limitation of the study
The use of only data from the women questionnaire to make conclusions on the utilization of PMTCT is misleading because many of them do not know their husband attitude towards PMTCT. Therefore in measuring the utilization of PMTCT it is important to involve men rather than women alone.
CHAPTER FOUR

Findings of the study

4.1 Introduction

This chapter presents the findings of the study. It begins with the distribution of the respondents by background characteristics and the proximate factors of knowledge of PMTCT; the next part presents the cross tabulation of the dependent and independent variables. Lastly, the determinants of PMTCT using a binary logistic regression model.

4.2 Background characteristics of the women (Mothers)

The background characteristics considered in this study were age, marital status, level of education, region of residence and rural-urban residence. Also the household wealth index, current pregnancy status, talked to about MTCT and PMTCT and getting tested were analyzed.

4.2.1 Distribution of mothers by age

Age is a crucial factor because different age groups have different demands and characteristics in terms of behavior. This study focused on women in the reproductive age bracket 15-49 years. Age was categorized into seven age groups as shown in Table 4.1. The results in the Table 4.1 shows that 57.9 percent of the respondents were less than 30 years of age, and only (9.3%) were aged above 40 years. This shows that majority of the respondents are in the most reproductive age group of 19-29 years.
4.2.2 Distribution of mothers by marital status

In the 2006 UDHS there was a question asking about the marital status of the respondents. The results indicate that 83.0 percent of the women reported as currently married. The study also shows that of the total number of women who had ever given birth, atleast 95.6 percent had ever been in marital union. Less than one in twenty of the women who were considered in the study had never been married (4.4%).

4.2.3 Distribution of mothers by region

The distribution of women by region shows that the Northern and Central had a representation of less than one-quarter though Western and Eastern regions reported representation of 27.5 percent and 25.5 percent respectively. Generally the study shows a fair distribution of the respondents according to regions.

4.2.4 Distribution of mothers by educational level

Education was one of the selected socio-economic variables which in most studies has been found to be associated with PMTCT utilization. Table 4.1 shows that less than one quarter (15.7%) of the women in the study had attained post-primary education. This implies a low level of education among the study population and thus it is anticipated to influence the findings of the study since it influences the attitudes and perception of women towards seeking maternal health services provided at the health facility. The majority of women had primary education (62.7%); this is expected due to the introduction of universal primary education however they dropped as they went to secondary level because they could not afford paying school fees which was not free.
4.2.5 Distribution of mothers by religion

Religion of mothers is presented in Table 4.1, the proportion of Catholics constituted the highest at (43.9%) followed by Protestants (34.1%) making Christians account for about 78 percent of the respondents and Muslims with (11.3%). There was a negligible representation by other religious affiliation.

4.2.6 Distribution of mothers by residence

Residence as considered in this study refers to rural and urban types of residences. From Table 4.1 the proportion of mothers in terms of types of residence reflects the general Ugandan population. The results show that 86.7 percent of the respondents resided in rural areas, while 13.3 percent lived in urban. This can be explained by the fact that the largest proportion of Ugandan population is rural. This proportion is similar to that reported during the 2002 Uganda population and housing census (2002).

4.2.7 Distribution of mothers by household wealth index

Table 4.1 further shows the distribution of women according to their wealth status. 42.9 percent of the women lived in households classified as poor, unlike (19.6%) and (37.5%) in middle and rich quintile respectively. The finding show that most women live in rural areas justifies the result that most of them belonged to the poorest wealth quintile.
Table 4.1: Percentage distribution of women by selected variables by PMTCT utilization

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-19</td>
<td>371</td>
<td>7.4</td>
</tr>
<tr>
<td>20-24</td>
<td>1315</td>
<td>26.1</td>
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<tr>
<td>25-29</td>
<td>1231</td>
<td>24.4</td>
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<tr>
<td>30-34</td>
<td>1007</td>
<td>20.0</td>
</tr>
<tr>
<td>35-39</td>
<td>644</td>
<td>12.8</td>
</tr>
<tr>
<td>40-44</td>
<td>351</td>
<td>7.0</td>
</tr>
<tr>
<td>45-49</td>
<td>115</td>
<td>2.3</td>
</tr>
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<td></td>
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</tr>
<tr>
<td>Currently married</td>
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</tr>
<tr>
<td>Divorced/Separated</td>
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<td>12.6</td>
</tr>
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<td><strong>Education</strong></td>
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<td></td>
</tr>
<tr>
<td>No education</td>
<td>1087</td>
<td>21.6</td>
</tr>
<tr>
<td>Primary</td>
<td>3156</td>
<td>62.7</td>
</tr>
<tr>
<td>Secondary</td>
<td>648</td>
<td>12.9</td>
</tr>
<tr>
<td>Higher</td>
<td>143</td>
<td>2.8</td>
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<td><strong>Region</strong></td>
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<tr>
<td>Central</td>
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<td>Eastern</td>
<td>1265</td>
<td>25.5</td>
</tr>
<tr>
<td>Western</td>
<td>1387</td>
<td>27.5</td>
</tr>
<tr>
<td><strong>Residence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>668</td>
<td>13.3</td>
</tr>
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<td>Rural</td>
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<td><strong>Religion</strong></td>
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<td></td>
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<td>42.9</td>
</tr>
<tr>
<td>Protestant</td>
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<td>34.1</td>
</tr>
<tr>
<td>Muslim</td>
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<td>11.3</td>
</tr>
<tr>
<td>Other</td>
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<td>10.7</td>
</tr>
<tr>
<td><strong>Household wealth index</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>2162</td>
<td>42.9</td>
</tr>
<tr>
<td>Middle</td>
<td>985</td>
<td>19.6</td>
</tr>
<tr>
<td>Rich</td>
<td>1889</td>
<td>37.5</td>
</tr>
<tr>
<td><strong>Current pregnant status</strong></td>
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<td></td>
</tr>
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<th>Variables</th>
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<td>2695</td>
<td>53.5</td>
</tr>
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<td>46.5</td>
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<td><strong>Talk about PMTCT</strong></td>
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</tr>
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</tr>
<tr>
<td><strong>Talk about getting Tested</strong></td>
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<td></td>
</tr>
<tr>
<td>No</td>
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<td>57.6</td>
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<tr>
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<td>2133</td>
<td>42.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5035</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.2.8 Distribution of mothers by current pregnant status

In the 2006 UDHS, current pregnant status was a variable studied. 84.1 percent of the women reported not pregnant while (15.9%) were pregnant. This low proportion of pregnant women could be because of modern family planning methods where women have opted to space their births.

4.2.9 Distribution of mothers by those who talked about mother to child transmission

Table 4.1 shows more women (53.5%) did not talk about MTCT compared to 46.5 percent women who talked about MTCT. This could be attributed to the fact that there is more knowledge of PMTCT in Uganda but few mothers attend ANC checkup (Elizabeth 2001).

4.2.10 Distribution of mothers who talked about Prevention of mother to child transmission

Table 4.1 shows that women who never talked about prevention of mother to child transmission were more compared to women who talked about mother to child transmission. There was quiet a small difference between the two categories (ranging from 44.2% for those women who talked
about prevention of mother to child transmission to 55.8 percent who did not talk about prevention of mother to child transmission).

4.2.11 Distribution of mothers who tested for HIV/AIDS

Results in Table 4.1 show that HIV testing among mothers is still less with only 42.4 percent women testing. However the current policy supporting compulsory testing of all expecting mothers as it is the starting point for the provision of PMTCT services increases the intake of mothers using PMTCT services (Homsyet 2006).

4.3 Relationship between PMTCT utilization and background characteristics

The following were the background characteristics which influenced utilization of PMTCT. They include: age, marital status, region, residence, religion, household wealth index, current pregnant status, talked to about MTCT and PMTCT, tested for HIV and their utilization.

4.3.1 Age and utilization of PMTCT

Results in the Table 4.2 shows that HIV testing during ANC among women was above 75 percent in all age groups with the highest proportion of (85.8%) among 45-49 and the least 77.5 percent in age group 20-24. A study by USAID (2003) shows that the younger women are the most affected category in terms of having inadequate knowledge and access to quality health care. The results were not significantly associated to PMTCT utilization.

4.3.2 Residence and utilization of PMTCT

Results displayed in Table 4.2 shows that 90.3% of the women in urban areas had an HIV test compared to 78.8 percent of the rural women. This result suggests that more urban women carry out HIV tests than their rural counterpart. The reason may be lack of testing service places
women go for ANC in the rural areas. This difference was statistically significant \( (p=0.000) \)

4.3.3 Education and utilization of PMTCT

The results for HIV testing during ANC show that the higher education of women, the higher the proportion that tests for HIV. For example among those with no education only 72.3 percent tested for HIV. This rises to 90.1 percent among those with higher education. The relationship was found to be statistically significant.

4.3.4 Religion and utilization of PMTCT

Results in Table 4.2 showed that Muslim women utilized PMTCT (86.9%) compared to Christian ranging from (80.8% and 79.3%) and women from other religion were (85.9%). There was no significant relationship between religion and PMTCT utilization.

4.3.5 Household wealth index and utilization of PMTCT

Results in Table 4.2 show that the rich utilized PMTCT services (85.4%) compared to 71.9 percent women in middle quintile. Despite the fact that different women in their respective quintile utilize PMTCT. The chi-square results show that there is a significant relationship between wealth index and PMTCT utilization \( (p=0.000) \).
Table 4.1: PMTCT Utilization by women’s knowledge, socio-economic and demographic characteristics

<table>
<thead>
<tr>
<th>Independent and interdependent variables</th>
<th>Frequency</th>
<th>Utilization of PMTCT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No (%)</td>
<td>Yes (%)</td>
</tr>
<tr>
<td>Age</td>
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<td>30-34</td>
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<td>35-39</td>
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<td>df = 6</td>
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<tr>
<td>Currently married</td>
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<td>18.1</td>
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<td>Divorced/separated</td>
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<td>17.9</td>
</tr>
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<td>χ² = 1.0</td>
<td>df = 2</td>
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<tr>
<td>Higher</td>
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<tr>
<td>χ² = 18.9</td>
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<td>p = 0.000</td>
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<tr>
<td>Region</td>
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<td>Central</td>
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<td>Western</td>
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<td>31.1</td>
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<td>χ² = 57.3</td>
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Table 4.2: continued

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<tr>
<td></td>
<td>No (%)</td>
<td>Yes (%)</td>
<td></td>
<td></td>
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<tr>
<td>Household wealth Index</td>
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<td>Poor</td>
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<td>Rich</td>
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<td>80.6</td>
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**4.3.6 Region and utilization of PMTCT**

According to results in Table 4.2 more women from Central (90.6%) utilized PMTCT compared to women from Western region (68.9%). There was also a reduction in number of women who utilized PMTCT among other regions of Northern and Eastern compared to the Central (85% and 76.7%). The difference in the utilization of PMTCT was significant with the region (p=0.000).
4.3.7 Marital status and utilization of PMTCT

Table 4.2 shows women divorced/separated and the currently married utilizing PMTCT more compared to never married women. It ranged from (82.1 % to 81.9 %) among the separated/divorced and the currently married women. It was lower (77.0%) among the never married. There was no significant relationship between PMTCT utilization and marital status.

4.3.8 Current pregnant status and utilization of PMTCT

Table 4.2 shows 927 women who utilized PMTCT compared to 209 women who did not utilize PMTCT. The relationship was found not to be statistically significant.

4.3.9 Talked to about mother -to- child transmission of HIV/AIDS and utilization of PMTCT.

Table 4.2 shows 83.3 percent women who talked about MTCT utilized PMTCT compared to (73.0%) to those who did not talk to about MTCT. The results show that there is a significant relationship between PMTCT utilization and the knowledge of mother to child transmission of HIV (p =0.001).

4.3.10 Prevention of MTCT and utilization of PMTCT

Findings from the Table 4.2 indicate that women who talked about prevention of MTCT utilized more PMTCT compared to those women who did not talk about how to prevent MTCT. The percentage of utilization was 83.8 percent compared to 73.0 percent women who did not talk about prevention of mother to child transmission. There was a significant relationship between utilization of PMTCT services and prevention of MTCT (p=0.000).
4.3.11 Women who tested for HIV and utilization of PMTCT

Table 4.2 shows women who tested for HIV during antenatal checkup (82.1%) were more likely to have utilized PMTCT compared to 77.7 percent who did not test for HIV during antenatal. This could be because some women refuse to be tested because they fear learning that they have a life-threatening condition; which distrusts HIV tests; or because they do not expect their results to remain confidential, and fear stigma and discrimination following a positive result. In the words of a woman from Cote d'Ivoire: "My husband might see me with the medicines, and he will want to know what they are for. That way he will find out about my [HIV positive test] status. Even the location bothers me, because everyone who comes to the clinic knows what goes on [at the programme]. As soon as a pregnant woman is seen coming here, it's known right away that she is seropositive." (WHO, 2010) The results were statistically not significant (p =0.076).

4.4 Determinants of prevention of mother to child transmission (PMTCT)

This section presents the results of the logistic regression on the determinants of utilization of PMTC in Table 4.3 .A model was run using a binary logistic regression. All variables whether significant or not at bivariate were entered in the logistic regression model .Residence was found constant due to multi-colinearity possibly with central region thus removed from analysis. The model tested the influence of background factors and the proximate determinants on the dependent variable. The results of the logistic regression are displayed in Table 4.3.

4.4.1 Age as determinant of PMTCT

Age was the first variable considered in the logistic regression analysis. Those aged 20-24 were taken as the reference category because they had the highest proportion of utilization of PMTCT at bivariate level. The results in multivariate analysis are similar to those of the
bivariate in that all age groups indicated negative coefficients, hence less likely to utilize PMTCT compared to those aged 20-24. However it should be noted that all these differences were not statistically significant.

### 4.4.2 Region as determinant of PMTCT

Table 4.3 displays data on region of residence for women in the utilization of PMTCT. Western region was used as a reference category. The results of the coefficients of women utilizing PMTCT were positive implying that there were more odds of women utilizing PMTCT in the Central, Eastern and Northern regions than the Western region. The odds of women utilizing PMTCT services were high among the Central and Eastern at 54 percent and 78 percent odds compared to women in Western region. There was almost no difference in PMTCT utilization among the women in Western and the Northern region. The results for Central and Eastern regions in the utilization of PMTCT among women were statistically significant.

### 4.4.3 Education as determinant of PMTCT

The Table 4.3 displays data on the utilization of PMTCT according to their education background. As the woman’s level of education increases, the likelihood of PMTCT utilization increases compared to primary education. Having no education reduces the odds of utilizing PMTCT by 81%; while having secondary education increases the odds of PMTCT utilization by 64% and 49% for tertiary education. There was a significant relationship of PMTCT utilization between secondary and tertiary education.
Table 4.2: Determinants of utilization of prevention of mother to child transmission (Logistic regression)

| Category                        | Coefficients | Odds ratio | P>|z|
|---------------------------------|--------------|------------|-----|
| **Age**                         |              |            |     |
| 20-24                           | 0.000        | 1.000      | -   |
| 15-19                           | -0.382       | 0.682      | 0.021|
| 25-29                           | -0.537       | 0.584      | 0.002|
| 30-34                           | -0.334       | 0.716      | 0.058|
| 35-39                           | -0.457       | 0.633      | 0.021|
| 40-44                           | 0.297        | 0.743      | 0.206|
| 45-49                           | -0.590       | 0.554      | 0.167|
| **Marital status**              |              |            |     |
| Currently married               | 0.000        | 1.000      | -   |
| Never married                   | -0.384       | 0.681      | 0.059|
| Divorced/separated              | -0.124       | 0.883      | 0.342|
| **Education**                   |              |            |     |
| Primary                         | 0.000        | 1.000      | -   |
| No education                    | -0.206       | 0.814      | 0.113|
| Secondary                       | 0.497        | 1.645      | 0.000|
| Tertiary                        | 0.916        | 2.499      | 0.000|
| **Region**                      |              |            |     |
| Western                         | 0.000        | 1.000      | -   |
| Central                         | -0.606       | 0.545      | 0.000|
| Eastern                         | 0.581        | 1.789      | 0.000|
| Northern                        | 0.239        | 1.270      | 0.061|
| **Religion**                    |              |            |     |
| Catholic                        | 0.000        | 1.000      | -   |
| Protestant                      | 0.220        | 1.246      | 0.032|
| Muslim                          | 0.210        | 1.233      | 0.141|
| Others                          | 0.056        | 1.058      | 0.714|
| **Household wealth index**      |              |            |     |
| Poor                            | 0.000        | 1.000      | -   |
| Middle                          | 0.027        | 1.028      | 0.841|
| Rich                            | 0.356        | 1.427      | 0.004|
| **Current pregnant status**     |              |            |     |
| No                              | 0.000        | 1.000      | -   |
| Yes                             | -0.283       | 0.754      | 0.033|
| **Talk about MTCT**             |              |            |     |
| No                              | 0.000        | 1.000      | -   |
| Yes                             | -0.239       | 0.788      | 0.160|
| **Talk about PMTCT**            |              |            |     |
| No                              | 0.000        | 1.000      | -   |
| Yes                             | -0.190       | 0.827      | 0.253|
| **Talk about Testing for HIV**  |              |            |     |
| No                              | 0.000        | 1.000      | -   |
| Yes                             | -3.195       | 0.041      | 0.000|
4.4.4 Religion as determinant of PMTCT

Religion was displayed in Table 4.3. Catholic region was used as a reference category because the catholic had the highest frequency of 433 in category coding. Protestants had 24 percent increased odds of utilizing PMTCT while Muslim had 23% increased odds of utilizing PMTCT. The religion which showed a difference from the rest was the other religion 7% increased odds of utilizing PMTCT compared to the catholic religion.

4.4.5 Marital status as determinant of PMTCT

Table 4.3 also displays data on marital status of women. The never married women and divorced/separated women showed 68 percent and 88 percent odds less likely to utilize PMTCT compared to the currently married women. The study was statistically not significant to PMTCT utilization.

4.4.6 Household wealth index as determinant of PMTCT

Data on women according to their household wealth status is shown in the Table 4.3. The poor quintile was used as a reference category. The results show that the rich women had 42 percent more odds of utilizing PMTCT compared to the poor quintile. The middle class had 02 % more odds of utilizing PMTCT compared to the poor quintile. Women from the highest wealth index showed a significant relationship of PMTCT utilization (p=0.004).

4.4.7 Current pregnant status as determinant of PMTCT

Table 4.3 also displayed data on current pregnant status. The results in the logistic regression showed that women who were pregnant had 75 percent odds of utilizing PMTCT than women
who were not pregnant. There is no significant relationship between current pregnant status and utilization of PMTCT.

4.4.8 Talked about mother to child transmission as determinant of PMTCT

Data on how HIV is transmitted from mother to child was displayed in the Table 4.3. Women who talked about how the virus is spread during ANC had 78 percent more odds of utilizing PMTCT than women who did not talk about MTCT. This could be because of many source of information like media which always talks about how the virus is spread. The results shows no significant relationship between utilization of PMTCT and how mother to child is spread.

4.4.9 Prevention of mother to child transmission of HIV as determinant of PMTCT

The Table 4.3 displays data of women on how to prevent the transmission of the virus to their unborn children during antenatal care. The results in the logistic regression showed that there were 82 percent less odds of women who utilized PMTCT than women who did not know how the virus can be prevented from being transmitted to baby.

4.4.10 Tested for HIV during ANC as determinant of PMTCT

Testing for HIV was also considered in the Table 4.3. Women who tested during ANC had 0.4 percent more odds of utilizing PMTCT compared to those women who never tested for HIV during ANC. There was a significant relationship between HIV testing and PMTCT utilization.

4.4.11 Summary

In the results presented both at bivariate and multivariate analysis, it was found that variables like education, region and talk about getting tested had significant relationship to PMTCT utilization. Marital status of the woman did explain the relationship between PMTCT utilization.
CHAPTER FIVE

Summary, Conclusion, Recommendations

5.1 Introduction

In this chapter a summary of findings, conclusion and recommendation for policy and research agendas are presented. The socio-economic and demographic characteristics used in analysis were age, marital status, education, region, religion, wealth index, residence, currently pregnant status, talked to about MTCT and PMTCT, tested for HIV during ANC and their utilization of PMTCT got by the question “Got test results as part of antenatal care”. The multivariate level of analysis was used.

5.2 Summary of findings

The purpose of this chapter is to emphasize the importance of factors that were found to be significant in the utilization of PMTCT and suggest possible intervention that can increase the use of the strategy. The logistic regression shows some variable are significantly associated to PMTCT utilization. These include secondary and tertiary education, central and eastern region, age groups 25-29 years, the highest wealth index and lastly those who tested as part of antenatal care.

5.3 Conclusion

The overall conclusions are based on the objectives of the study and the hypothesis. These are economic and demographic factors influencing utilization of PMTCT services in Uganda. These include education, region, residence, age, religion, wealth index, talk about MTCT, talk about PMTCT and talk getting tested. The study tested that women with secondary and tertiary are
more likely to utilize PMTCT. this was hypothesized right because women who are educated know the importance of bearing a healthy baby who is not HIV infected.

The results reveal that women’s region of residence was an influential factor associated to PMTCT utilization. Women who resided in eastern and central region were significantly associated to PMTCT and this is because these regions have many health facilities which are equipped with service delivery and can easily be accessed.

The highest wealth status was also significantly associated to PMTCT utilization and this is in line with the Andersen behavioral model were the enabling factors such as health insurance and family income can lead one to access services at any cost which will lead to increased utilization of PMTCT.

A woman’s age as hypothesized was also factor to consider, women in age group 25-29 were significantly associated to PMTCT utilization and this could be because mothers in this cohort have a high fertility rate and they are knowledgeable to the service provided to them.

Getting tested as part of antenatal care was significantly associated to PMTCT utilization. This is true because Homsyet 2006 found that switching from voluntary counseling and testing to routine testing as standard part of antenatal care to opt out makes it more acceptable than before and this has reduced the stigma pregnant had before the introduction of routine counseling and testing. Other factors that were not significantly associated to PMTCT as hypothesized were religion, marital status and residence.
5.4 Implications of study Findings

The number of women who utilizes PMTCT continues to rise between age group 25-29. People in this age group are the ones who are in the reproductive age group and their fertility levels are high. This finding has a serious implication on the population and for policy makers.

Following research findings, it is evident that a person’s region of residence determines whether she is able to utilize PMTCT. When a person is in the central, this person has all facilities she can go to for services than a woman who is in northern where most villages are sparsely located with poor services in those health facilities and this limits her utilization of the services due to the geographical location of the area thus infecting the babies since they do not know their sero status.

There will be increased babies born to HIV positive women especially those in the rural areas who have not utilized PMTCT strategy. This can also lead to increased dependent ratio since the mothers who are infected die and no one to look after these children. Thus a burden to the government.

5.5 Recommendations for policy and programmes

Following the discussion of the main findings of the study and their implications, it is necessary to suggest polices that would help to increase PMTCT utilization.

There is urgent need for government to put enough resources in educating the masses about Mother to child transmission and its impact to slow down the transmission. Currently it is mostly Nongovernmental Organizations’ putting effort into studying the situation. Emphasis should be
placed in villages since most Ugandan population reside in rural area and educate the masses on the importance of going for ANC checkup while pregnant.

It is also recommended that intervention program be taken beyond more creation of awareness to include mechanisms for coping with the disease within the family and the society at large. There is need of social counseling and psycho social support and community education is needed to reduce the level of blame and shame to those already sick.

A study should be carried in the Northern region at large. This area was also considered in the study of 2006 Uganda demographic Health Survey but was not fully covered since they selected a sample and other areas were left out. Most NGOs concentrated in the region after the war but did not tackle different cultural values and practices which differ in other regions in this study.

Future strategies to cope with the disease should involve women in planning, implementation and monitoring. If they are to succeed since women are not only the majority at receiving end but also at the front in coping with AIDS scourge at the household level.

5.6 Suggested Future Research Agenda

This research was based on a number of factors that influence utilization of PMTCT, the results proved that age group 25-29, Central and Eastern region, Secondary and tertiary education, women from highest wealth index, and talk about getting tested were important factors in determining PMTCT utilization. The other factors considered were current pregnant status, talk about Mother to child Transmission and PMTCT and religion.

More factors than those studied should be investigated in order to have a wider knowledge on PMTCT utilization. One important factor that was not covered in the study was male
involvement in PMTCT of HIV/AIDS. This variable perhaps influences women to utilize PMTCT since men are the bread winners in a home; most women first get permission if they want to go to the hospital and also transport to take them to service centers.
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