

**ANTENATAL MOTHERS' PRACTICES FOR  
PREVENTING MOTHER-TO-CHILD HIV  
TRANSMISSION**

by

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the degree of

**MASTER OF ARTS IN HEALTH STUDIES**

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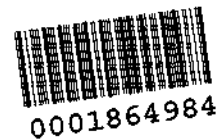
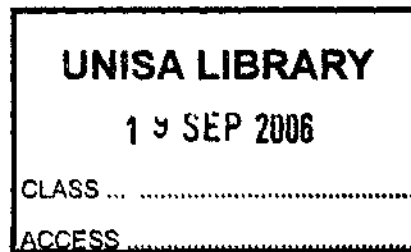
**JOINT SUPERVISOR: Dr JH ROOS**

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## DEDICATION

I dedicate this dissertation to my husband Chengetai Chiyonivoni  
Thank you for giving me psychological, moral and financial support. You  
spent your time generously in doing typographic work. May the Lord  
continue to give you strength and wisdom.

*Isaiah 40:31 "But they that wait upon the Lord shall renew their strength,  
they shall mount up with wings as eagles, they shall run and not be weary  
and they shall walk and not faint".*



Student number 3156-761-4

### **DECLARATION**

I declare that **Antenatal mothers' practices for preventing mother-to-child HIV transmission** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I declare that permission to undertake the dissertation was granted by the office of the medical superintendent of United Bulawayo Hospitals.

C.Chivonivoni

..20.10.7.106

SIGNATURE

DATE

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## **ANTENATAL MOTHERS' PRACTICES FOR PREVENTING MOTHER-TO-CHILD HIV TRANSMISSION**

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### **ABSTRACT**

Research and media reports indicate that in developing countries mother to child transmission (MTCT) of HIV/AIDS is responsible for 5-10% of all new HIV infections. Only 25-33% of children borne to HIV positive mothers are HIV positive. HIV positive mothers can transmit HIV to their babies during pregnancy, childbirth and breastfeeding. Anti-retroviral (ARV) drugs are effective in reducing the risk of MTCT of HIV/AIDS.

A quantitative descriptive design was used and fifty structured interviews were conducted with pregnant women in the Buluwayo area of Zimbabwe. These pregnant women required more information about MTCT of HIV/AIDS. A positive relationship was identified between knowledge, attitudes and practices of the prevention of MTCT of HIV/AIDS.

#### **Key Concepts**

Antenatal care; antiretroviral drugs; prevention of mother to child transmission of HIV/AIDS; Nevirapine; voluntary counseling and testing.

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## CHAPTER 1

### INTRODUCTION TO AND BACKGROUND OF THE STUDY

#### 1.1 INTRODUCTION

“In 1998 it was estimated that HIV/AIDS kills approximately two million people in Sub-Saharan Africa (SSA)” (Southern Africa HIV/AIDS action 2000:1). The issue of HIV/AIDS should be viewed as a priority. “Without fighting HIV/AIDS, there is no hope for Africa’s development” (Action for Southern Africa 23 October 2002,). “In South Africa about 1:8 maternal deaths are directly linked to being HIV positive” (HIV/AIDS Link 1992:2). It has been estimated that two million children lose their parents each year due to HIV/AIDS in Southern Africa (MOHCW 2005:4). These children are at risk of poverty, neglect and early death. Grandparents and older children are left to look after the younger ones. These children often lack support systems and resources to meet their basic needs.

“Around 570 000 children aged fourteen or younger, most of them from SSA, became HIV positive in 1999, almost all from mother to child transmission (MTCT) of HIV/AIDS” (Bang 2000:5). In developing countries, MTCT is responsible for 5-10% of all new HIV infections. Most children borne to HIV positive mothers are not born HIV positive. However, one quarter to one third are HIV positive (Southern Africa HIV/AIDS action 1999:1) “The rate of vertical transmission from mothers to newborn infants has been estimated to range from 35 to 50%” (MOHCW 2002:10). Mothers can transmit HIV/AIDS to their babies during pregnancy, childbirth and through breastfeeding. MTCT can be reduced by promoting safe sex before and during pregnancy, during breastfeeding and by providing antiretroviral (ARV) drugs before and during childbirth. “Use of Nevirapine in the prevention of parent to child transmission (PPTCT) of HIV/AIDS during labour and a single oral dose to the infant within 72 hours of birth reduces HIV transmission by about 50%” (Women and AIDS Support Network 2002:3).



In Zimbabwe, AIDS was first diagnosed in 1985 (MOHCW 1999:1). Then AIDS affected few people. However, more than 20 years later in 2006, AIDS moved from being an individual's problem to being everyone's problem because it has touched the lives of every family in Zimbabwe. PPTCT of HIV/AIDS is one of the key HIV/AIDS prevention strategies in Zimbabwe's national response to the HIV/AIDS epidemic. This study focuses on the antenatal mothers' practices of utilising PPTCT of HIV/AIDS at one hospital in Bulawayo, Zimbabwe.

## **1.2 BACKGROUND TO THIS STUDY**

Bulawayo is the second largest city in Zimbabwe after Harare, which is the largest and capital city of Zimbabwe. Bulawayo city is in the Bulawayo Metropolitan Province, which lies between Matabeleland North and Matabeleland South Provinces. This government hospital caters for patients from the Bulawayo Metropolitan Province, Matabeleland South Province and parts of the Midlands Provinces.

Patients in Zimbabwe no longer observe the referral system from Primary Health Care (PHC) clinics to secondary hospitals and then to tertiary hospitals. This is mainly due to the effects of the patients' charter, which states that, "the patient has the right to seek treatment at any health institution falling under the Government of Zimbabwe" (Patients Charter 1999:1). Patients prefer to seek treatment at central hospitals where they can get specialised health care.

The Government of Zimbabwe has made significant progress in introducing interventions to reduce MTCT of HIV infection. "Individuals and couples considering marriage or bearing children should have access to accurate information about HIV infection and pregnancy, and Voluntary Counselling and Testing (VCT)" (MOHCW 1999:10). This is done so that mothers of newborn babies can adopt interventions to reduce the risk of MTCT of HIV/AIDS.

The hospital in Bulawayo where this study was conducted, offers such services. Hence this study was conducted to explore, describe and explain the antenatal mothers' practices

for preventing MTCT of HIV/AIDS. In Zimbabwe the key elements of the interventions into the health delivery system include," prevention of transmission of HIV from an infected mother to the infant through

- VCT to all pregnant women
- offering antiretroviral regimens
- Counselling and support for safe infant feeding
- Follow up of the infected mother child and family" (MOHCW 2002:7)

During 2000, a German pharmaceutical company, Boehringer Ingelheim, made donations of Nevirapine to 29 countries, including Zimbabwe (Women and Aids Support Network 2002). The donations, which would last five years, were intended to reduce MTCT of HIV/AIDS. A single dose of 200mg Nevirapine is administered to the pregnant woman when she is in established labour. A single dose of 2mg/kg bodyweight is administered to the newborn baby within 72 hours of birth. A consistent supply of formula infant feeding powder is provided to mothers who are HIV+ve and who opt to bottle feed their babies. Health care services in Bulawayo provide Nevirapine but some pregnant women are unwilling to use these services thereby exposing their newborn babies to increased risks of MTC of HIV. This is evidenced by statistics in table 1.1.

**Table 1.1. HIV statistics: ANC clinic at the hospital participating in this study: January-October 2005**

Deliveries at participating hospital					Deliveries outside health facilities	HIV Tests and PPTCT					
Month	Booked	Referred	Unbooked	Total		Agreed to be counselled	Refused to be tested	Volunteered and tested for HIV	Tested +ve	Tested -ve	C/sections for PPTCT of HIV/AIDS
Jan	117	143	23	283	10	82	10	72	15	57	1
Feb	114	148	25	286	18	88	20	68	28	40	1
March	115	117	20	252	18	97	23	74	19	55	5
April	111	137	31	279	16	91	26	65	10	55	5
May	97	147	27	271	11	73	16	57	13	44	8
June	98	149	34	281	18	105	24	81	20	61	5
July	63	147	18	288	18	83	14	69	12	57	4
Aug	58	138	22	218	15	99	17	82	13	69	3
Sept	89	165	30	284	22	79	11	68	10	58	4
Oct	60	127	18	205	13	78	21	57	12	45	5

The statistics in table 1.1 reveal that fewer than half of the women agreed to be counselled, even fewer agreed to be tested for HIV/AIDS after counselling. Very few of the HIV positive women opted for caesarean sections. All those who were HIV positive and agreeable to PPTCT were given Nevirapine. Their babies were given Nevirapine within 72 hours of birth.

Transmission of HIV in some infants is being reduced but the majority of women and their infants are not reached by Zimbabwe's PPTCT of HIV/AIDS programme. Fewer facilities have staff trained and equipped to provide counselling, HIV testing and treatment. "There are still HIV positive women delivering at home annually who are excluded from maternity services" (Berer 1999:39).

"In Zimbabwe, Nevirapine is the recommended drug for PMTCT in the majority of HIV infected pregnant women (MOHCW 2002:47). A single dose of 200mg Nevirapine is given when the woman is in labour. A single dose is given to the baby 48-72 hours after birth. After delivery, the couple is referred to the opportunistic infection clinic for ARV drugs so that the mother's life is extended and orphanhood is delayed. The baby will receive ARV drugs if needed."

Nevirapine is simple to use. The pregnant mother can take the medication if she wants to deliver at home. Safety studies in USA and one trial study in Uganda have shown no serious side effects with a single dose (MOHCW 2002:47). The benefits of Nevirapine outweigh the side effects. Nevirapine works by reducing the maternal viral load to a very low level thereby reducing the chances of transmission to the baby (MOHCW 2002:47).

### **1.3 PROBLEM STATEMENT**

HIV presents an enormous challenge to safe motherhood. Zimbabwe has one of the world's highest HIV infection rates (MOHCW 2002:6). This translates to an estimated 50 000 infants infected annually. One of the important breakthroughs in the prevention of HIV/AIDS over the past decade has been the demonstration that the use of ARV drugs

during pregnancy in HIV infected mothers can substantially lower the rate of MTCT of HIV (MOHCW 2002:6).

In October 2000, the World Health Organization (WHO) recommended that MTC interventions were based on VCT and that ARV drugs be integrated into all Maternal Child Health (MCH) programmes (MOHCW 2002:6). Zimbabwe's 1999 HIV/AIDS policy highlights "PMTCT of HIV as one of the key strategies for fighting the HIV epidemic" (MOHCW 2002:6). To translate this commitment further, using experience from the PMTCT pilot project, the Government of Zimbabwe has introduced PMTCT interventions into the routine health delivery system. "These core interventions include providing:

- VCT to pregnant women
- ARVs to willing HIV positive mothers
- safe obstetrical practices
- artificial infant feeding
- education and counselling" (MOHCW 2002:6)

A 2001 sentinel surveillance survey among pregnant women attending ANCs revealed that HIV seroprevalence among this group remains high at about 30% (MOHCW 2003:7). Transmission of HIV from an infected parent to the baby is the major cause of HIV infection in children. In the absence of preventive measures, the risk of a baby acquiring infection from the mother through pregnancy, labour and delivery or breastfeeding remains high. "Nevirapine is a antiretroviral drug that helps to reduce parent-child-transmission (PTCT) of HIV by about 50%. . . Out of 600 000 Zimbabwean women who give birth annually, 200 000 are HIV positive and 30% of them transmit the virus to their babies. This means that about 60 000 babies are infected at birth", (Women and AIDS support network 2002). Thus, probably more than 60 000 babies could be saved through the use of Nevirapine annually. The Government of Zimbabwe and families could then focus on other investments rather than paying medical bills for an ailing infected mother with an infected baby.

It is against this background that the researcher sought to investigate the practices of antenatal mothers in relation to PPTCT of HIV/AIDS

#### **1.4 PURPOSE OF THE RESEARCH**

The aim of this study was to investigate pregnant women's knowledge and attitudes about PPTCT of HIV/AIDS and their behaviours.

#### **1.5 OBJECTIVES OF THE RESEARCH**

The study was guided by the following objectives:

- To identify the knowledge pregnant women have about PPTCT of HIV/AIDS.
- To determine the attitudes pregnant women have towards PTCT of HIV/AIDS.
- To identify practices adopted by pregnant women in relation to PPTCT of HIV/AIDS.
- To determine the relationship, if any, between knowledge and attitudes of pregnant women and their practices in relation to PPTCT of HIV/AIDS.
- To identify factors, if any, preventing women from accepting PPTCT.
- To design health education sessions addressing women's possible lack of knowledge and/or fears in order to help pregnant women to make informed decisions about PPTCT.

#### **1.6 SIGNIFICANCE OF THE RESEARCH**

It is envisaged that the results of the study may provide information and support for clinical decisions for nursing and midwifery approaches that may be effective in motivating more pregnant women to make use of VCT for HIV/AIDS and PPTC by using Nevirapine. Policy makers may use the results to reformulate policies on PPTCT of HIV/AIDS in Zimbabwe.

The results of the study should assist the MOHCW to achieve its goals of proving quality health care through training appropriately skilled health personnel, updating and upgrading their skills and competences in order to strengthen the current PPTCT of HIV/AIDS

programmes in Zimbabwe. The study might reaffirm the need for the formal training programmes for PPTCT of HIV/AIDS in training hospitals

## 1.7 THEORETICAL FRAMEWORK OF THE STUDY

Brink (1999:29) stated, “A model is often described as a symbolic depiction of reality. It provides a schematic representation of some relationships among phenomena and uses symbols or diagrams to represent an idea.” If the research is undertaken in a context of a theoretical framework, it will help to organise the study, examine a problem, gather and analyse data. The Health Belief Model (HBM) provided the framework for this study. “The model is developed to provide a framework to explain why some people take specific actions to avoid illness, while others fail to protect themselves” (Dennill, King, Lock & Swanepoel 1999:156).

The HBM asserts that the motivation for people to take action to promote health or prevent disease is based on:

- how strongly they believe that they are susceptible to the disease in question
- whether the disease would have serious effects on their lives if they should contract it
- the suggested health intervention is of value
- whether the effectiveness of the treatment is worth the cost and
- which barriers people must overcome to institute and maintain specific behaviours

According to Dennill et al (1999:156), the model is divided into three major components.”

- the individual’s perceptions about health
- the modifying factors which include demographic, socio-psychological, and structural variables
- the benefits of taking preventive measures.

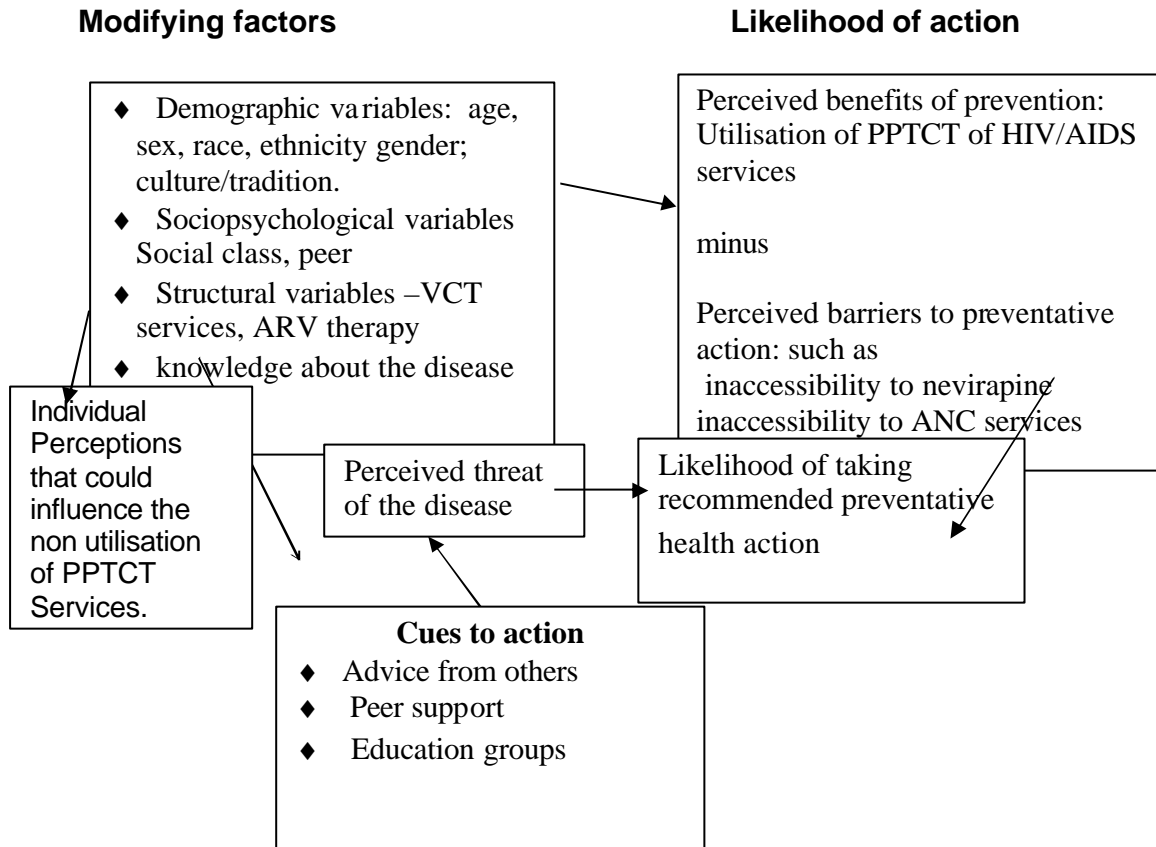
The components of the HBM and their possible influences on women's decisions as to whether or not to utilise PPTC interventions will be discussed in detail in chapter 2.

Stanhope and Lancaster (2000:252) state: "The Health Belief Model is beneficial in assessing health protection or disease prevention behaviors. It is also useful in organizing information about clients' views on the state of health and what factors may influence them to change their behaviour. The Health Belief Model when used appropriately provides organised assessment data about clients' abilities and motivation to change their health status. Health education programs can be developed to better fit the needs of clients".

Consequently if this research project could identify some misconceptions, or reasons, why women fail to utilise PPTCT services in Bulawayo, then measures could be instituted to address these misconceptions. This could help save babies' lives in Bulawayo and possibly throughout Zimbabwe, as well as in many African countries facing similar challenges in implementing PPTC services.



## The Health Belief Model



**Figure 1.1 The Health Belief Model's components**

Source: Coofair (1991:72 in Dennill et al 1999:157)

## **1.8 OUTLINE OF THE RESEARCH DESIGN AND METHODOLOGY**

The research design and methodology will only be briefly discussed in this chapter. Chapter 3 provides more detailed information about the research design, population and sample, settings, methods of data collection, data analysis processes, and ethical considerations

### **1.8.1 Research design**

In this study, a non-experimental research design, using the quantitative research approach that is descriptive and exploratory in nature, guided the research process.

### **1.8.2 Population**

This refers to the pregnant mothers attending antenatal clinics (ANC) at the hospital participating in this study and booked to deliver their babies at this hospital.

### **1.8.3 Sampling design and sample size**

Convenient sampling, a non-probability method of sample selection, was used to identify the 50 pregnant women who participated in this study by agreeing to be interviewed by the researcher.

### **1.8.4 Research setting**

The data were collected at one participating government hospital in Bulawayo, Zimbabwe.

### **1.8.5 Research instrument**

The researcher collected data from the participants during individual face-to-face interviews using structured interview schedules.

### **1.8.6 Data collection**

The data were collected during individual face-to-face interviews lasting 30-40 minutes.

### **1.8.7 Data analysis**

These analyses were used to generate graphs and figures using Microsoft Excel 2000.

### **1.8.8 Ethical issues**

Ethical issues were taken into consideration to protect the women who participated in this study. Self-determination of each potential participant was ensured by the provision of verbal information about the nature and purpose study.

The participants were given opportunities to give voluntary consent to participate in the study, or to refuse participation without incurring any negative consequences whatsoever. The participants had the freedom to withdraw from the study if and when they wished, or to refuse to answer any specific question.

Ensuring the anonymity and confidentiality regarding information provided by the participants enhanced the participants' rights to privacy. This means that there was no name and no label on the completed interview schedules. Participants remained anonymous in reports and publications of the study. Only figures and statistics would be provided but no woman's name would be mentioned. The completed interview schedules were simply numbered from 01 to 50 for data capturing purposes. Since the interviews were conducted by the same researcher, there was no risk of interviewing the same woman twice even though no names were recorded.

## **1.9 LIMITATIONS OF THE STUDY**

The study was conducted at one government hospital in Bulawayo, Zimbabwe. This implies that the research results might not be generalisable to pregnant women's PPTCT

practices in other parts of the country, or to other pregnant women attending ANC at other hospitals. The main languages spoken by the women attending this ANC are Shona, Ndebele and English. The researcher could communicate in all three languages. However, the interviews were conducted in English, as most Zimbabweans of child bearing age are conversant in English. Where any language difficulties arose, the interviewer would obtain expert help as described in chapter 3 of this dissertation.

### **1.10 ABBREVIATIONS USED THROUGHOUT THE DISSERTATION**

As a number of terms are used repeatedly in this dissertation, a complete list of abbreviations and their terms are supplied to ensure that the readers have ready access to any abbreviation.

AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal clinic
ARV	Antiretroviral
FP	Family planning
HBM	Health Belief Model
HIV	Human Immune Deficiency Virus
HIV-ve	HIV negative (not infected with the Human Immune Deficiency Virus)
HIV+ve	HIV positive (infected with the Human Immune Deficiency Virus)
IEC	Information Education and Communication
LSCS	Lower section caesarean section
MCH	Maternal child health
MOHCW	Ministry of Health and Child Welfare (of Zimbabwe)
MSF	Medecins Sans Frontieres (Medicine without Borders)
MTC	Mother to child
MTCT	Mother to child transmission
PLWHA	People living with HIV/AIDS
PMTCT	Prevention of mother to child transmission
PTC	Parent to child
PTCT	Parent to child transmission

PPTCT	Prevention of parent to child transmission.
RSA	Republic of South Africa
SPSS	Statistical Package for Social Sciences
SSA	Sub Saharan Africa
STD	Sexually transmitted disease
STI	Sexually transmitted infection
TBA	Traditional birth attendants
UK	United Kingdom
UN	United Nations
UNAIDS	Joint United Nations Program on HIV/AIDS
UNISA	University of South Africa
USA	United States of America
VCT	Voluntary counselling and testing (for HIV)
WHO	World Health Organization

### 1.11 DEFINITIONS USED IN THE DISSERTATION

For the purpose of research the following terms were used

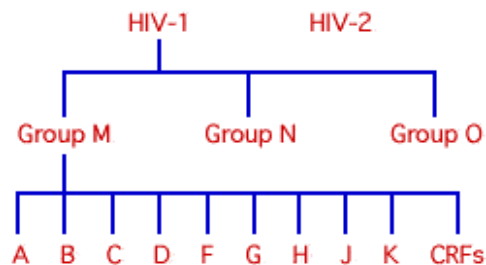
**Acquired Immuno deficiency syndrome (AIDS)** is an infectious disease caused by the Human Acquired Virus (HIV). The virus affects and destroys the immune system and the people become more prone to opportunist infections and other conditions (Lindsey 2001:4).

**Antenatal care** is health care and education provided during pregnancy. It aims at ensuring that the mother and foetus are in good health and that any problems during pregnancy are recognised early and treated appropriately or referred promptly for further management (MOHCW 2001:25).

**Cessation of breastfeeding:** Completely stopping breastfeeding including suckling (Newell 2004:v).

**Exclusive breastfeeding:** an infant receives only breast milk and no other liquids or solids not even water with the exception of drops of syrups consisting of vitamins, mineral supplements or medicines (Newell 2004:v). According to Newell (2004:15) "Exclusive breastfeeding for the recommended six months is rare, it is supplemented with water or other drinks or feeds.

**Human immuno deficiency virus:** is the virus that causes AIDS. There are two types of HIV; Type 1 is the most common found worldwide. Type 2 is found in West Africa and is rare (Facts on HIV/AIDS for nurses and midwives 2000:1).



This diagram illustrates the different levels of HIV classification. Each type is divided into groups, and each group is divided into sub type and CRFs.

The strains of HIV -1 can be classified (Types of HIV, 2006)

**Infant formula** is a breast milk substitute formulated industrially in accordance with applicable codex alimentations standards to satisfy the nutritional requirements of infants during the first months of life up to the introduction of complimentary foods (Newell 2004:v).

**Mother to child transmission (MTC)** involves transmission of HIV to a child from an HIV infected woman during pregnancy, delivery, or breastfeeding. The term is used here because the immediate source of the child's infection is the mother. The use of this term implies no blame. The term parent to child transmission can be used (Newell 2004:vi).

**Nevirapine:** is an antiretroviral drug commonly used either to treat HIV infections or as prophylaxis, alone or in combination with other drugs to prevent mother to child transmission (Newell 2004:vi).

**Safe motherhood:** is a provision of high quality maternal health services during pregnancy, delivery and in the postpartum period to ensure optimum health of the mother and the infant (MOHCW 2001:23).

**Traditional birth attendant:** is a person who assists the pregnant woman during childbirth and has acquired the skills by delivering babies she or through apprenticeship to other traditional birth attendants (WHO 1992:4).

**Voluntary counselling and testing (VCT)** is an HIV preventive intervention normally initiated by the client and entered into by the client's free will. It provides the opportunity for the client to confidentially explore and understand his or her HIV risks and learn his or her test results (MOHCW 2002:21).

## **1.12 ORGANISATION OF THE RESEARCH REPORT**

This dissertation comprises five chapters. Chapter 1 presents some background information about the study and provides a rationale for conducting the research. Chapter 2 explores literature relevant to the PPTCT globally, in Africa and in Zimbabwe. In chapter 3 the research methodology adopted to conduct the research will be addressed.

The analysis and discussion of the research results are portrayed in chapter 4. Finally, chapter 5 contains the conclusions, limitations and recommendations, based on the research results. A bibliography, listing all the references used throughout the text, in alphabetical order is also included. Annexures containing the letters requesting and granting permission to conduct the study and the research instrument as well as a map of Zimbabwe are also included.

### **1.13 CONCLUSION**

In this chapter background information was provided about the importance for conducting this research. The research problem, population, sample, sampling procedure and some ethical issues were addressed. The next chapter will review literature relevant to PPTC of HIV/AIDS.



## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

A literature review of empirical and theoretical literature sources on antenatal mothers' practices for PMTCT of HIV/AIDS was carried out to identify baseline data on what is known about this topic.

The literature review revealed that although there was considerable literature on PPTCT of HIV/AIDS, there was very limited literature available pertaining to the antenatal mothers' practices for PMTCT of HIV/AIDS. No documented studies were found pertaining to the phenomenon of interest in Zimbabwe.

#### **2.2 PURPOSE OF LITERATURE REVIEW**

“Scientific research is not an activity of isolated hermits who ignore others' findings, rather, it is a collective effort of many researchers who share their results with one another and who pursue knowledge as a community” (Neuman 1997:89).

A literature review minimises the possibility of duplication and increases the probability that the new study makes a distinctive contribution. The findings from previous studies form the basis for comparison when interpreting the findings from a current study. The purpose of the literature review in this study was to identify, scrutinise, summarise and integrate previous work conducted locally, regionally and internationally on PPTCT of HIV/AIDS.

#### **2.3 SCOPE OF THE LITERATURE REVIEW**

The situation, which is the focus of the study, is the antenatal mothers' practices for PMTCT of HIV/AIDS.

### **2.3.1 The characteristics of the phenomenon of MTCT OF HIV/AIDS**

PPTCT of HIV/AIDS is a priority set by UNAIDS and most SSA MOHs. “PTCT of HIV/AIDS is the major cause of HIV/AIDS infection in children” (MOHCW 2002:7). Thus effective implementation of prevention programmes to reduce MTC transmission of HIV offers hope for newborn babies, even if their mothers are HIV+ve.

“One of the criticisms of PTCT programmes is that it will necessarily increase the number of orphans in a country already overwhelmed by their unmet needs” (MSF 2001:1). The child’s right to life supersedes other considerations.

The subject will be addressed as:

- PPTCT of HIV/AIDS in Zimbabwe
- PPTCT of HIV/AIDS globally

#### **2.3.1.1 PPCT of HIV/AIDS in Zimbabwe**

The HIV/AIDS epidemic has caused serious health, social and economic problems in Zimbabwe and the entire world. The impact of PPTCT of HIV/AIDS is devastating and long lasting. “Zimbabwe has one of the World’s highest HIV infection rates” (MOHCW 2002:6). An estimated 25% of the adult population between 15-45 years are infected with HIV.

Despite the high level of knowledge on HIV transmission through IEC campaigns and access to condoms, the rate of unfaithful partners and inconsistent use of condoms continue to add new HIV+ve cases to this epidemic.

“Data from the 2001 National Sentinel Survey of Antenatal Mothers showed that HIV seroprevalence among this group is still very high. Based on this background, PTCT of HIV/AIDS, a rate of 15-45% was estimated, and that 12% of infants in Zimbabwe were infected with HIV. This translates to an estimated 50 000 infants infected annually” (MOHCW 2002:6).

According to New Ziana (2005:1), “One of Zimbabwe’s plans to reduce child mortality is by providing more drugs for PPTCT of HIV/AIDS and to strengthen the health delivery system to achieve the target by 2015”

One of Zimbabwe’s important breakthroughs in PPTCT of HIV/AIDS over the past decade has been the use of ARV drugs during pregnancy by HIV infected mothers which can substantially lower the rate of MTCT of HIV/AIDS. In October 2000, the WHO recommended that PTCT interventions based on VCT and ARV drugs should be integrated into all MCH programmes (MOHCW 2002:6).

Zimbabwe is committed to the fight against HIV/AIDS. This commitment is shown in the 1999 HIV/AIDS policy. “The policy highlights PPTCT of HIV/AIDS as one of the key strategies of fighting the epidemic” (MOHCW 2002:6).

“The Government of Zimbabwe introduced PPTCT interventions into the routine health delivery system in 1999” (MOHCW 1999: iv). The core interventions include VCT of pregnant women and ARV drugs during pregnancy for HIV +ve mothers. These interventions can substantially lower the rate of PTCT of HIV/AIDS. “PPTCT as implemented in the City of Bulawayo addresses prevention, treatment and care aspects related to HIV/AIDS” (Chikandi, Kamuchedzera & Tinarwo 2004:2).

According to Zimbabwe’s Minister of Health “People, especially pregnant mothers, should not fear going for HIV testing and counselling. This is important as people will automatically change their lifestyle to suit their status” (New Ziana 2005:1).

Hence this study was conducted to determine whether or not the knowledge and attitudes of pregnant women in relation to PPTCT of HIV/AIDS influenced their practices. “Infants of HIV infected mothers are at greater risk of becoming infected during child birth” (MOHCW 2002:9). Caesarean sections have shown to reduce PTCT of HIV/AIDS (MOHCW 2002:31). Episiotomies and spontaneous or induced rupture of membranes increase the risk of transmission, hence limiting these interventions should reduce MTCT of HIV/AIDS (MSF2001:3).

However, due to shortages of facilities and resources, HIV+ve women in Zimbabwe cannot be offered the choice to deliver their babies by caesarean section. Most HIV+ve mothers deliver their babies vaginally in Zimbabwe (see table 1.1).

“One of the most beneficial attributes of breast milk is that it protects against common childhood diseases. However, it has been established that breastfeeding is a source of PTCT of HIV/AIDS” (WHO 2004: 5). This implies that if HIV+ve mothers breastfeed their HIV negative babies, these babies might also become HIV+ve.

“About 70% of post natal transmissions occur within the first 4-6 months” (MOCHW 2002:10). Most of the women in Zimbabwe are in low income settings and cannot afford artificial infant feeding. Counselling on infant feeding, providing the necessary information on all feeding options, weighing all the advantages and disadvantages of each option is carried out during antenatal visits. In Zimbabwe, HIV+ve mothers get free infant formula until the baby is six months old. The mother brings the baby for weighing and physical examination when she needs another supply of infant formula.

“Social and cultural pressure towards breastfeeding can force women to refrain from modified infant feeding” (MSF 2001:4). “The risk of transmission by an infected mother occurring before or during birth without interventions to reduce transmissions is 15-25%. Breastfeeding by an infected mother increases the risk by 5-20% to a total of 20-45%” (Newell 2004:1)“

In Zimbabwe the following PPTCT indicators are monitored:

- Number of antenatal mothers
- Number of women who are HIV+ve
- Number of women who receive nevirapine
- Number of babies who receive nevirapine

The data are aggregated at district, provincial and national level. “This data is necessary for assessing achievements and shortfalls in PPTCT of HIV/AIDS programme

implementation, identifying problems and taking corrective measures, comparing the level of achievements between project sites” (MOHCW 2002:56).

Workshops on PPTCT have been conducted for health personnel so as to equip them with skills and knowledge.

### **2.3.1.2 PPTCT of HIV/AIDS globally**

According to WHO, “In 1998, it was estimated that 2,4 million HIV infected women delivered babies each year, resulting in 600 000 infants being infected with HIV annually. With 1600 infants becoming infected with HIV each day, HIV/AIDS is now one of the world's leading causes of death among children. In Africa, HIV infection has increased infant mortality by 75% and childhood mortality by 100%” (HIV/Antiretroviral Newsletter 1999:1)

Information collected in a number of antenatal clinics in major urban centres in Botswana, Rwanda and Malawi between 1996 and 1998 found that more than 30 in every 100 pregnant women were HIV+ve (Rosser 2000:4).

Asia is experiencing a rapidly growing epidemic; the seroprevalence rates range between 1% and 5% (WHO 2004:8). “ARV drugs administered during pregnancy, labour, delivery and to the newborn babies reduce the risk of PTCT by 67%” (Lindsay 2001:10).

The use of ARV drugs has become standard practice in both developed and some developing countries (Berer 1999:871). The risk of transmission can be reduced to under 2% by a combination of antiretroviral prophylaxis during pregnancy and delivery and to the neonate with elective Caesarean section and avoidance of breastfeeding (Newell 2001:1)

The ANC services should be acceptable, affordable, accessible and effective to deal with reproductive health problems and needs of antenatal mothers. According to Ugandan AIDS activist Mille Katana, “PPTCT has opened grounds for people to get tested, as there is now the possibility of saving their babies” (Kubatana Trust of Zimbabwe 2003:5).

In most SSA countries, the majority of HIV+ve women do not know and have little chance of testing their serostatus. In situations where the serostatus can be determined, the cost of the necessary drugs, breast milk substitutes and the means to manage the interventions are beyond the current capacities of many countries.

Nevirapine as a single dose does not prolong the life of the mother but is effective in reducing transmission of HIV to the infant. “The question of the baby’s survival after the death of the mother still remains unanswered” (Piot & Coll-Seck 1997:870).

### **2.3.2 Theoretical framework**

Brink (1999:29) stated, “a model is often described as a symbolic depiction of reality.” It provides a schematic representation of some relationships among the phenomena. The HBM was discussed in chapter 1. The study was based on the HBM. The major tenets of the HBM were highlighted in section 1.6 and figure 1.1 of this dissertation.

## **2.4 LITERATURE REVIEW ABOUT ANTENATAL WOMEN’S PPTCT OF HIV/AIDS PRACTICES**

In this section, the researcher discussed aspects from the literature pertaining to the antenatal mothers’ practices for PPTCT of HIV/AIDS. The discussion was based on the HBM. The literature was reviewed under the following headings:

- Individual perceptions of antenatal mothers that could influence the non utilisation of services which provide PPTCT of HIV/AIDS
- Modifying factors that could influence antenatal mothers’ non utilisation of PPTCT of HIV/AIDS services
- Social psychological issues, social values, beliefs and practices of antenatal mothers in relation to PPTCT of HIV/AIDS
- Cultural/traditional factors
- Economic factors
- Barriers to effective health action

- Likelihood of taking recommended preventive health actions

#### **2.4.1 Individual perceptions of antenatal mothers that could influence the non-utilisation of services that provides PPTCT of HIV/AIDS**

Some pregnant mothers might perceive PPTCT of HIV/AIDS to be irrelevant or even harmful and these perceptions could result in the babies contracting HIV. “One study in Harare showed an overall transmission rate of over 40%. This means that four in ten children are infected with HIV and face a 2–3 years average life span, bombarded with recurrent infections and saddled with health care and economic burdens” (MSF 2002:4).

The psychological impact on families and communities is also to be considered. Women in the childbearing ages should therefore be knowledgeable about PPTCT of HIV/AIDS to enable them to make informed decisions about their own as well as their babies’ futures. Adequate information about PPTCT of HIV/AIDS could help women to realise that effective utilisation of PPTCT of HIV/AIDS services can successfully reduce the transmission rate and hence reduce infant morbidity and mortality rates.

However, pregnant women require knowledge to be able to make informed decisions and to evaluate their attitudes towards and beliefs about PPTCT of HIV/AIDS.

#### **2.4.2 Modifying factors that could influence antenatal mothers’ non-utilisation of PPTCT of HIV/AIDS services**

The modifying factors that could influence antenatal mothers’ non-utilisation of PPTCT of HIV/AIDS services include demographic factors, such as age, gender, and educational status.

##### **2.4.2.1 Age**

The age of a woman may sometimes influence the decision to deliver at a health institution or at home. Some women might opt to deliver their babies at home due to mistrust of

health providers, or fears of receiving poor quality care or financial costs of delivery services.

The women who cannot afford ANC services are delivered by the TBAs. The TBA might not be equipped with knowledge of PPTCT of HIV/AIDS. "It is estimated that 60-80% of births in developing countries occur outside modern health care facilities"(WHO 2000:1). The majority of these births are attended to by untrained persons (TBAs) who do not have the knowledge about PPTCT of HIV/AIDS. Pregnant mothers who are HIV +ve and prefer to deliver at home are given nevirapine. They are instructed to take the nevirapine when they are in established labour. They are also given the dose for the baby, which should be given within 72 hours of birth. These women and their babies are encouraged to come to the hospital or any other health facility for follow-up visits.

The TBAs need to be educated about PPTCT of HIV/AIDS so that they encourage women who deliver at home to go for medical follow-up visits.

#### **2.4.2.2 Marital status**

Married couples may be governed by customs and beliefs. "In most societies in Africa where the cultural pressure to have children is extremely high, the number of married pregnant women with HIV who would choose abortion would also likely to be low" (Jackson 2002:150). In a number of cases, "Marriages are frequently entered into only after pregnancy has been achieved" (Kiereni 1990:375). Such practices increase the incidence of PTCT of HIV/AIDS in communities adhering to these cultural values.

In Zimbabwe, termination of pregnancy is permitted within legally defined conditions. The Termination of Pregnancy Act of 1967 stipulates that the legal conditions for the termination of pregnancies prior to 28 weeks' gestation in Zimbabwe are:

- Where pregnancy results from rape or incest.
- Where there is substantial threat to the woman's health or life if the pregnancy is continued.



- Where it is known that the foetus has a serious medical condition or malformation for example HIV infections” (MOHCW 2001:79).

HIV+ve women receive information about surgical sterilisation. “Tubal ligation can be performed within two days post partum or after six weeks and any time when the client is not pregnant” (MOHCW 2001:109). In the Shona culture, the husband has the right to consent to or to refuse surgical sterilisation of his wife.

### **2.4.2.3 Educational status**

“There is a correlation in developing countries between low female literacy rates and high infant morbidity and mortality rates” (Dennil et al 1999:12). Literacy can empower a mother by enabling her to make informed choices that enhance both her own and her child’s health. Pamphlets and posters with information on HIV/AIDS and PPTCT of HIV/AIDS issues are only useful when read and understood by antenatal mothers. Poverty, lack of education and inadequate family support could contribute to a lack of adequate prenatal care, which might account for some of the negative health outcomes for antenatal mothers and their children.

The structured interview schedule, used in this study, asked questions about age, marital status and educational levels to find out whether or not these biographic aspects are correlated with mothers’ knowledge, attitudes and behaviours concerning PPTCT of HIV/AIDS.

Lack of education could impede antenatal mothers’ comprehension of important information. Literate women are able to understand and interpret information given in health education programs during ANC visits. Persons’ levels of education affect their ability to make informed decisions and could impact negatively on their awareness of their rights and choices, affecting not only their own but also their children’s future. If the mothers’ levels of education are known, then health education could be designed to be at appropriate levels. Mothers’ levels of education are recorded on their antenatal records so that effective health education could be planned and provided accordingly.

#### **2.4.2.4 Gender**

In many developing countries, women are subordinates and often victims of men's decisions in a patriarchal society. In many SSA countries, women are still brought up to be subservient to men especially in matters concerning sexual relationships. "Even when a woman wants to protect herself, she is confronted by an entrenched culture of male dominance that renders her powerless" (Van Rensburg, Friedman, Ngwena, Pelsler, Steyn, Booyens & Adendorff 2002:29).

In many cultures, women are not recognised and treated as equals of men, they cannot make decisions even concerning their health (Jackson 2002:93). There is low female autonomy and control of decision making. "It is generally believed that when a man marries and pays lobola for a woman, he now owns her" (Ndlovu 1997:21). The lobola issue has a dehumanising effect upon the women, reducing them to the status of being men's possessions. Women cannot make decisions concerning sexual intercourse. They engage in unprotected sex and increase the risk of HIV transmission to their unborn babies. Similar conditions continue to prevail in Zimbabwe where men are the decision makers, rendering women powerless to insist on the usage of condoms or to refuse sexual intercourse. At least the opportunity to utilise PMTCT programmes could afford the newborn baby a better chance of survival. This can only happen if the mother is knowledgeable about this service and opts to utilise it as well as to practise artificial feeding of the infant. Men should be educated about HIV/AIDS and PPTCT. Since the man is the major, if not the sole decision maker, it is rather futile to provide health education to women only who are powerless to make and/or implement health related decisions.

#### **2.4.2.5 Cultural beliefs**

Culture refers to "the way of life of the members of society or groups within society" (Giddens 1997:18). Some of the cultural practices increase the risk of PTCT of HIV/AIDS. However, according to Banda (2006:3) "there is no culture that is perfect". The African Marriages Act of Zimbabwe enables a man to have more than one wife. "Men's right to have more than one wife is interpreted as their right to have sex with as many women as

they wish without obligations of fidelity or family responsibility. Almost all women are seen as sexually available regardless of age or status” (Goercke 2004:14). This increases the risk of PTCT of HIV.

Ancestral spirits are central to both Ndebele and Shona cultures in Zimbabwe. When illness or any bad thing happens to an individual, members of those cultures assume that it is the result of unappeased ancestors. This mode of thought may be quite damaging to PPTCT of HIV/AIDS intervention efforts. There is the danger that intangible ancestral spirits might become the scapegoat for irresponsible behaviour. Such behaviour puts women and men at the risk of contracting HIV/AIDS and even passing it on to their babies. “Those who believe that sexually transmitted diseases result from unappeased ancestors rather than unsafe sexual practices also seem to be rejecting that this disease is blood borne and primarily spread through sexual intercourse” (Goercke 2004:14).

“Traditional healers may even resort to desperate measures to cure these individuals, such as encouraging them to sleep with virgins” (Goercke 2004:14). Such advice would increase PTCT of HIV/AIDS and make them victims of such practices – imposing negatively on PPTCT of HIV/AIDS services.

In Zimbabwe, mainly in Shona and Ndebele cultures, it is believed that there are no natural deaths. The premature death from HIV/AIDS of a baby maybe explained and understood by traditionalists as bewitchment. The “Witchcraft Suppression Act” in Zimbabwe makes it illegal to accuse another person of being a witch. Consequently, witchcraft is not discussed in public.

The inheritance ceremony enables a widow to wed the brother of the deceased provided the widow is still young. Should the husband have died of AIDS, it is likely that the widow will also have the disease. The young woman may want to prove her womanhood by having a baby. The inheritance ceremony can lead to the transmission of HIV/AIDS from one relative to another and to the baby.

“Traditional Shona men frequently associate condom use with promiscuous behaviour”(Goercke 2004:18). Many Shona men believe that condoms should be used solely with commercial sex workers and casual partners. Such men therefore refuse to use condoms with their wives. If men fail to use condoms or fail to use them correctly, in such situations, they put their partners, and if pregnant, their babies at high risk of contracting HIV/AIDS.

ANC services should not only reach women, but also their partners, so that they have knowledge on PPTCT about HIV/AIDS.

“Traditionally, in Shona and Ndebele cultures, men and women abstain from sex towards the end of pregnancy until the baby is born”(Women's health and HIV/AIDS 2001:4). Men may seek casual sexual relationships during that time and become HIV infected. When they resume sexual relationships with their wives, HIV may pass to their babies during breastfeeding.

Banda (2006:1) states “In most African customs, women are told never to refuse having sex with their husbands regardless of the number of other partners he may have and even when he is suspected of having HIV/AIDS or other sexually transmitted diseases”. Such cultural practices fuel PTCT of HIV/AIDS in Zimbabwe.

#### **2.4.2.6 Religious beliefs**

Religious teachings on health care seeking, and sexual behaviour have an important role on PPTCT of HIV/AIDS. Some churches insist on the one man, one wife policy. This teaching reduces the risk of PPTCT. In contrast, there are other churches, which support polygamy. This increases the risk of PPTCT of HIV/AIDS.

### **2.4.3 Social psychological issues, social values, beliefs and practices influencing decision-making about practices of antenatal women in relation to PPTCT of HIV/AIDS**

Some beliefs are beneficial while others are not. Antenatal mothers are influenced by socio-psychological variables in deciding whether or not to utilise the PPTCT of HIV/AIDS services possibly allowing their individual perceptions to be greatly influenced by their peers' influence and expectations.

Women in the child bearing ages should be educated about the reproductive health service delivery guidelines so that they know the truth and not necessarily be influenced by their peers. "The purposes of the guidelines are to:

- Offer comprehensive Family Planning (FP) services including client counselling and STI/HIV risk management.
- Providing information and services for prevention and early management of STIs.
- Contribute to the reduction of HIV/AIDS transmission through information, education and communication (IEC) aimed at behaviour change and through the distribution of condoms.
- Provide adolescent friendly reproductive health information and services.
- Participate in the reduction of violence against women.
- Offer quality and comprehensive reproductive health services" (MOHCW 2001: xvi).

Provision of reproductive health information will enable antenatal mothers to make informed decisions. The services provided should be acceptable, accessible and effective to deal with reproductive health problems and needs of antenatal mothers.

### **2.4.4 Economic factors**

"There is failure to respect a woman's right to equal access to education and employment opportunities, thus reinforcing women's dependence upon men" (Lindsay 2001:10). This increases the risks of PPTCT of HIV/AIDS since women cannot make decisions.

The status of women in African societies varies from culture to culture. Women of inferior status cannot and do not make decisions affecting their own lives. “Therefore, uneducated poor women, who are dependent on their husbands for their livelihood, cannot oppose their husbands’ wishes concerning the number of children, being at risk of losing their only source of financial support for themselves and their children” (Jackson 2002:150).

Poverty forces girls to marry at a young age before they acquire knowledge about sexually transmitted diseases. Women lack economic opportunities such as employment and education. This makes it difficult for them to say “no” to sex. This contributes to PTCT of HIV/AIDS.

#### **2.4.5 Structural variables**

In terms of the HBM, lack of knowledge is a major structural variable affecting the practices of antenatal mothers in relation to PPTCT of HIV/AIDS. Antenatal mothers need knowledge on VCT services, in order to make informed decisions and take action to use these services effectively.

##### **2.4.5.1 VCT services**

If the pregnant women know about the transmission of HIV to their babies, more of them might opt for VCT, which has been integrated into ANC services. VCT plays a major role in PPTCT of HIV/AIDS.

“In Botswana MTCT programme reported that uptake of VCT by pregnant women was under 50%. One factor was the low involvement of men” (Jackson 2002:148). In a Rwandan study, of 1223 women, screened for HIV, 70% at post-test counselling said they wanted their partners to be tested but only 8% of partners came forward for testing. In one of the clinics in Zimbabwe, only 30 (5.0%) out of 600 women had managed to bring in their partners” (Jackson 2002:148). The ANC should become more men-friendly, if it hopes to reach and influence the major decision-makers in Zimbabwean communities. The benefits of VCT in ANC include:

- Knowledge of a negative result can reinforce safer sex practices.
- Women diagnosed with HIV can encourage their partners to be counselled and tested.
- Knowing their HIV status enables women and their partners to make more informed choices related to breast feeding and future pregnancies.
- Widespread access to VCT can help normalise the perception of HIV in the community.
- Knowledge of their HIV +ve status can enable women to access peer support.
- A woman (and her family) who knows she is HIV infected can be encouraged to enter into the continuum of care in order to seek early medical treatment and care of opportunistic infections for herself and her child(ren) and also be linked to other health and social services and resources.

Access to VCT is important in ANC since there are ways to prevent transmission such as a termination of a pregnancy; administering ARVs; modifying midwifery and obstetrical practices (by increasing LSCSs and avoiding episiotomies); and by modifying infant feeding" (Lindsay 2001:10).

#### **2.4.5.2 ARV therapy**

A recent study showed that the administration of ARV drugs during pregnancy, labour and to the newborn reduced the risk of PTCT by 67% (MOHCW 2000:20). Nevirapine is a cheap ARV drug, which is on the essential drug list of the WHO.

"Nevirapine is a non-nucleoside analogue HIV reverse transcriptase inhibitor. It has several beneficial characteristics such as being a prophylactic agent against HIV infection" (Tabi & Frimpong 2003:246). Nevirapine crosses the placenta and is safe to use for MTCT of HIV. "Studies have demonstrated that Nevirapine is 47% more effective than Zidovudine (ZDV) in decreasing HIV transmission" (Tabi & Frimpong 2003:247).

Although effective in PPTCT of HIV/AIDS prevention, "it is important to insist that ARV medicines are not a cure for AIDS" (Usheche & Cabezas 2005:1).

Disadvantages of using Nevirapine include that its use causes resistance in the mother if used as a single dose in HIV management. The drug reduces the transmission of the HIV to the baby but does not benefit the mother. Nevirapine as a single drug cannot be used in HIV management.

#### **2.4.5.3 *Modifying midwifery and obstetrical practices***

“About 60% of HIV transmissions from MTCT occur around the time of labour and delivery” (MOHCW 2000:1). Several factors have been associated with such transmission, including the mode of delivery. “Vaginal deliveries are more likely to increase the risk of PTCT while elective caesarean sections have been shown to reduce PTCT” (MOHCW 2002:31). “This practice cannot be performed routinely for HIV +ve women worldwide, some cases may merit a lowered threshold for caesarean sections” (MOHCW 2002:31).

“Caesarean sections are not available to the vast majority of women worldwide” (Fact sheets on HIV/AIDS 2001:10). In Zimbabwe, elective caesarean sections are not routinely offered to HIV +ve women. This is due to the availability of very few doctors and limited hospital facilities.

“Rupture of membranes for more than four hours has been associated with an increased risk of HIV transmission to the newborn baby” (Fact sheets on HIV/AIDS 2001:6). Pregnant women with prolonged rupture of the membranes should be commenced on antibiotics to prevent infections (but antibiotics will have no impact on MTCT).

Artificial rupture of membranes should be practised in cases of foetal distress or abnormal progress in labour. However, in the case of HIV +ve women, caesarean sections should be performed rather than to risk the life of the mother and the chances of MTCT.

“The use of chlorhexidine 0,25% to cleanse the birth canal after each vaginal examination and during labour and delivery has been shown to be effective in reducing PTCT of HIV/AIDS” (Fact sheets on HIV/AIDS 2001:6). “Another possible intervention is washing the baby in chlorhexidine after delivery” (Wilkinson 1997:221).



“Other risk factors that may contribute to vertical transmission include the amount of virus within vaginal secretions” (Tabi & Frimpong 2003:246). Education of TBAs plays an important role in the delivery of many babies worldwide. UNAIDS (2001:104) states that, “In Nigeria, 20% of mothers have access to ANC. The distribution of professional midwives is often inadequate”. Educating the TBAs about HIV prevention, use of ARV and STI treatments should be done. They should be encouraged to avoid traditional practices that may increase the risk of HIV transmission such as vaginal herbal potions, scarification and cutting the umbilical cord of the baby with a used blade as it increases the risk of HIV transmission to the baby.

#### ***2.4.5.4 Modifying infant feeding***

“Approximately one third of infants who are infected through PTCT are infected through breast milk” (MOHCW 2000:5). Where alternatives such as replacement feeding exist, HIV +ve mothers should avoid breastfeeding their infants. Most of the women in Zimbabwe are in low income settings and cannot afford the modified infant feeding. Social and cultural pressures towards breastfeeding can enforce women to refrain from modified infant feeding (MSF 2001:4).

Although women should have a right to choose not to breastfeed, this is not the case in SSA, including Zimbabwe. Cultural pressures may force HIV+ve mothers to breastfeed their babies.

For HIV -ve mothers, breastfeeding still remains the best option provided they practise “safe sex” and remain HIV negative. They therefore also need health education about their responsibilities when they breastfeed their babies.

The HIV+ve woman who breastfeeds her baby should be supported in her feeding choice and be given information as how to make this as safe as possible (MOHCW 2002:44). Exclusive breastfeeding should be encouraged for mothers with unknown HIV status. Exclusive breastfeeding remains the best infant feeding choice in many SSA countries

where safe water supplies and dependable means of boiling water are not necessarily available and where many women cannot afford to buy formula feeds for their babies.

If an HIV +ve mother opts to bottle-feed the baby, specific instructions on how to prepare the formula are given at the ANC and will be reinforced before discharge from the hospital/clinic after the delivery of the baby. The woman should not be tempted to use unsuitable breast milk substitutes on the grounds that she cannot afford a suitable type. Monitoring the baby is essential so as to detect any early signs of failure to thrive.

“Stopping breastfeeding early or changing to replacement feeding should be discussed with the mother” (MOHCW 2002:44). If the mother is HIV+ve, the couple may choose other options of feeding to reduce the risk of HIV transmission to the infant. “The risk of illness or death from replacement feeding should be less than the risk of HIV transmission” (MOHCW 2002:44).

#### **2.4.6 Variables affecting antenatal mothers’ practices in relation to PPTCT of HIV/AIDS**

Perceived benefits and barriers have an impact on antenatal mothers’ practices to initiate and maintain the utilisation of services to reduce transmission of HIV to their babies. The likelihood for accepting MTCT will increase if the mothers perceive the expected benefits to outweigh the expected disadvantages.

##### **2.4.6.1 Perceived benefits of utilising PPTCT of HIV services**

Antenatal mothers should be informed about the benefits of using PPTCT of HIV services. “There is solid evidence that the efficacy of Nevirapine preventing PTCT varies between 40 – 50% according to breastfeeding patterns” (MSF 2000:8). Complementary interventions on delivery care, safety standards and stressed ANC IEC could further lower the overall efficacy.

“Knowledge that the baby will be at a high risk of infection if the pregnant woman becomes infected during pregnancy or lactation can be a strong motivator to use condoms” (Pelser 2000:143). This requires that ANC services reach women and if possible their partners. In the SSA countries, shortages of qualified health personnel such as doctors, midwives and laboratory personnel might impede the provision of effective ANC services and PPTCT of HIV/AIDS programmes.

#### ***2.4.6.2 Perceived barriers to the utilisation of PPTCT of HIV services***

Very often the major barriers antenatal mothers encounter that influence their own non-utilisation of PPTCT or HIV services are accessibility, acceptability and affordability of services and staff attitudes.

Where resources are limited, the option of using replacement feeding may be unavailable and inaccessible especially in the rural areas. “Many families cannot afford this added expense. Many communities do not have safe water supplies, have limited resources to provide sterile feeding equipment and have no methods of refrigeration” (Fact sheets on HIV/AIDS 2001:10). The mother is educated on the safe preparation of replacement feeds, cleaning of utensils and methods of sterilisation and safe storage of supplies and equipment.

Nevirapine offers a more optimistic and realistic alternative ARV for developing countries. “Many countries are in the process of developing guidelines and an effective infrastructure to support the programme” (Lindsay 2001:10). “In Zimbabwe Nevirapine is handled as a dangerous drug for the purpose of security. This creates bottlenecks in the procurement, distribution and use” (MOHCW 2002:25). There are no qualified pharmacists at the rural health centres; pregnant women have to go to the district hospitals for PPTCT of HIV/AIDS programmes. Due to high transport costs, many pregnant mothers end up not accessing nevirapine.

#### *2.4.6.2.1 Accessibility, acceptability and affordability of ANC services*

Access to ANC services for antenatal mothers also affect the practices and utilisation of PPTCT of HIV/AIDS services. Distances to the nearest clinics and expensive transport fees sometimes prevent antenatal women from travelling to health care services for ANC.

In Zimbabwe, ANC services are expensive. Many pregnant women cannot afford the services. Booking fees are Z\$156 000 (US\$1.56). Normal vaginal delivery is Z\$1 400 000 (US\$14). A Caesarean section is Z\$3 300 000 (US\$33). “Lack of privacy in developing countries’ ANC settings may make it difficult to maintain confidentiality with HIV results. Any woman who does not breastfeed may be marked as HIV +ve and if she does not wish to reveal her HIV status to her husband, family, community she will need to use excuses such as breast pain or insufficient milk” (Piot & Coll-Seck 1997:870).

“To avoid the stigma of being known as HIV+ve, women may refuse to be tested for HIV or might not return for the results or might refuse to take ARV drugs” (MOHCW 2002:7). Stigmatisation can be improved by involving people living with HIV/AIDS (PLWHA) in various prevention programmes, as discussed in the following section.

#### *2.4.6.2.2 Various prevention programmes*

Peer support and education groups would benefit pregnant teenagers who may fear attending ANC because of stigma and discrimination. Behavioural change is most likely to occur if peers educate and support each other. Experienced and trained midwives should be equitably distributed to all health centres. In order to improve accessibility of services, ANC should be operational during weekends. ANC services should be provided in a respectful, non judgemental and unbiased way.

#### 2.4.6.2.3 *Family planning*

“Another way of reducing PTCT is making effective family planning methods available to HIV +ve couples including barrier methods, sterilisation and termination of pregnancies where necessary,” (Women and Aids Support Network 2001:5).

In many cultures, a woman’s sexual identity is defined by her reproductive ability. “Childbearing is seen as a woman’s obligation and motherhood elevates a woman’s status and enhances self esteem” (Tabi & Frimpong 2003:245). Adequate contraceptive counselling and education about safe sexual practices should be reinforced to couples.

However, surgical sterilisations might be hard to accept by women who see motherhood as a way of elevating her social status within her community. According to Berer (2003:163) “Condoms are used as a first line method of protection against unwanted pregnancy”.

Although non barrier methods protect women against pregnancy more effectively than condoms, they provide no protection against STIs or HIV”. Although, “Zimbabwe has one of the best family planning programs in Africa,” (Mattson 1998:237). Cultural beliefs still make family planning unacceptable to most women. The practice increases PTCT of HIV/AIDS rates. Men should be involved in family planning programmes.

#### 2.4.6.2.4 *Staff attitudes*

“Evidence from Harare and elsewhere shows that midwives feel they do not have much to offer women with HIV, and they need to be convinced that counselling and testing are valuable” (Jackson 2002:155). The service providers should adopt positive attitudes towards the PPTCT programme and be able to give quality care and psychological support to the clients. Pregnant HIV +ve women might be more agreeable to use PMTCT if they perceive the nurses and midwives at the ANCs to be supportive and non-judgmental and always to treat persons’ HIV results in strictly confidential and respectful ways.

## **2.5 CONCLUSION**

This chapter focused on a literature review of the most recent research conducted on PPTCT of HIV/AIDS globally, in SSA and in Zimbabwe. The phenomenon of interest was outlined. Factors that influence the knowledge, attitudes and behaviours of pregnant women in relation to PPTCT of HIV/AIDS were presented.

From the literature review on the empirical and theoretical sources, it is apparent that antenatal mothers' practices for PPTCT of HIV/AIDS are gaining more recognition, hence the need for more research on the subject.

Chapter 3 will focus on the research methodology, which was used in this study.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.1 INTRODUCTION**

In this chapter the research design is discussed in terms of methods, population, research instrument, sample, and data collection procedures as they pertain to this research. The selected research design enabled the researcher to achieve the purpose of the study, which was:

- To investigate pregnant women's knowledge and attitudes towards PPTCT of HIV/AIDS.

The study was guided by the following objectives:

- To identify the knowledge pregnant women have on PPTCT of HIV/AIDS and their behaviours.
- To determine the attitudes pregnant women have towards PTCT of HIV/AIDS.
- To establish practices adopted by pregnant women in relation to PPTCT of HIV/AIDS.
- To determine the relationship, if any, between knowledge and attitudes of pregnant women and their practices in relation to PPTCT of HIV/AIDS.
- To identify factors, if any, preventing women from accepting PPTCT.
- To design health education sessions addressing women's possible lack of knowledge and/or fears in order to help pregnant women to make informed decisions about PPTCT.

## **3.2 RESEARCH DESIGN**

The following section contains the definition of a research design as well as the selection of a design, rationale for the choice and description of the concepts used in the design.

### **3.2.1 Definition of a research design**

Polit and Hungler (1999:36) state that “a research design is an overall plan for obtaining answers to questions being studied and handling difficulties encountered during the research”.

### **3.2.2 Selected design**

The study was based on a non-experimental quantitative research design, which was exploratory and descriptive in nature (see description of terms and application in section 3.2.4).

### **3.2.3 Rationale for the choice of research design**

The researcher chose a non-experimental quantitative research design for a number of reasons mainly that:

- There is limited literature to describe the practices of antenatal mothers in relation to PPTCT of HIV/AIDS, especially in Zimbabwe.
- The design is suitable for the study purpose of exploring and describing the phenomenon because what is known requires more in depth descriptions.

### **3.2.4 Description of the concepts used in the selected design**

In the following section, the description of the concepts and their application in this research as used in the research report, are given.



### **3.2.4.1 Non-experimental**

“The study is carried out in natural settings and phenomena are observed as they occur” (Brink 1999:108). The major purpose of non-experimental research is to describe phenomena and explore the relationship between variables. Data can be collected without making any changes or introducing any treatments. Non-experimental research is suitable for the study of human beings in the following ways:

- Human characteristics are inherently not subject to experimental manipulation for example health beliefs and opinions. In this study, in order to describe the practices of the pregnant women in relation to PPTCT of HIV/AIDS, a non-manipulative approach was appropriate.
- Due to ethical considerations, the manipulation of any human variables is not morally acceptable because of the potential for physical or mental harm to the participants because no manipulation of any person was done. However, the possibility that some mental stress might have been created by participating in this study could not be excluded. The interviewer was sensitive to this possibility and provided factual information to every interviewee enabling her to make better informed decisions.
- Research constraints such as available time, personnel, type of participants and funding make a non-experimental approach more feasible than an experimental one, especially where people need to participate in research.

In this study the researcher required only that participants answer questions during individual structured interviews regarding their knowledge and practices regarding PPTCT of HIV/AIDS. Participants were not at any time subjected to any testing. They could discontinue their participation at any stage and they could refuse to answer any specific question(s) without incurring any negative consequences whatsoever.

### **3.2.4.2 Quantitative research**

“The quantitative researcher believes that the best or only way of measuring properties of phenomena, the attitudes of individuals towards certain topics is through quantitative measurement” (Babbie & Mouton 2001:49). Numbers are assigned to perceived quantities

of things. In this study the researcher was measuring the knowledge and attitudes of pregnant women in relation to PPTCT of HIV/AIDS.

#### **3.2.4.3 Exploratory**

“Exploratory research aims at exploring the dimensions of a phenomenon in the way in which it is manifested and other related factors (Polit & Hungler 1997:17). The exploratory element in the design assisted the researcher to meet the study purpose of exploring the phenomenon under study. In the study the researcher explored the literature, the natural setting of the antenatal mothers and their practices in relation to PPTCT of HIV/AIDS. This assisted the researcher to shed light on the current status of PPTCT of HIV/AIDS in Bulawayo about which little was known and no literature addressing this phenomenon in Bulawayo could be traced.

#### **3.2.4.4 Descriptive**

“The descriptive element in the design offered a complete description of the phenomenon within a given population, without attempting causality or manipulation of variables or phenomena (Polit & Hungler 1999:16).

The descriptive research design also assisted the researcher to achieve the research objectives of describing the practices of antenatal mothers in relation to PPTCT of HIV/AIDS. Results may indicate the percentage of antenatal women who hold particular views. “Descriptive designs provide descriptions of variables in order to answer the research question” (Brink 1999:109).

### **3.3 RESEARCH METHOD**

This section discusses the methodology, population and sample, including the study population, sampling procedure, number of participants, the setting and ethical considerations.

### **3.3.1 Definition of the term “methodology”**

“Methodology refers to the steps, procedures and strategies for gathering and analysing the data in a research investigation (Polit & Hungler 1999:707). In this research, the methodology of quantitative research studies has been used to guide the researcher in conducting this study.

### **3.3.2 The research population**

“The population is the total group of persons that meets the designated set of criteria established by the researcher” (Burns & Grove 1997:293). It can also be regarded as a census, or a complete list, of all the persons who belong to a specific group of people. In this study, the population would comprise all HIV positive women in Bulawayo who were pregnant and/or who delivered their babies during the data collection phase of this study that was from July 2005 till August 2005.

Polit and Hungler (1999:710) define the target population as the entire set of individuals having some common characteristics. The target population for this study comprised the pregnant women who attended ANC at the participating hospital and who were booked to deliver their babies at this hospital.

### **3.3.3 Criteria for selection**

A good informant is one who is willing and able to critically examine the experience and her response to the situation as well as being willing to share the experience with the interviewer. The non-probability sampling process for this study was guided by the following criteria:

- The participants had to be pregnant.
- The participants had to be registered at the participating Government hospital’s ANC.
- The participants had to be willing to participate in the study and give verbal informed consent.

- The participants had to attend the ANC on days when the researcher was conducting interviews.

### **3.3.4 The sample and the sampling process**

“The sample refers to the small portion of the population that the researchers are studying in the particular site or setting” (Burns & Grove 1997:293). The sample for this research project comprised 145 pregnant women.

Sampling refers to “the process of selecting a number of individuals from the delineated target population in such a way that the individuals in the sample represent as nearly as possible the characteristics of the whole population” (Dempsey & Dempsey 1995:80).

In this research, a non-probability approach was used. “Non- probability sampling is a process in which a sample is selected from elements or members of a population through non- random methods which include convenience” (Brink 1999:212).

The convenience sampling approach was also used in this research. Convenience sampling is described by Brink (1999:207) as “a type of non- probability sampling that involves the selection of the most readily available people or objects for a study”.

#### **3.3.4.1 Sampling procedure**

Sampling of the participants for this study was done as follows:

The researcher sought the assistance of the nurse in charge of the ANC to identify potential participants. The researcher was interested in pregnant women who attended the ANC and were booked to deliver their babies at the participating hospital.

- The nurse in charge had a booking register of antenatal mothers' names. The other information in the register included the age, parity, number of pregnancies, past obstetric history, whether or not the pregnant mother had been referred from another health centre. The participants' HIV status was not known.

- The potential participants were then identified according to the criteria described in section 3.3.3.
- Each potential participant was then approached personally. The purpose of the research was explained and each woman was asked if she would be willing to participate in the research.
- The researcher then interviewed the pregnant women who had volunteered to participate in the research.

Convenience sampling assisted the researcher in conducting interviews with 50 participants who met the sampling criteria, as specified in section 3.3.3. Convenience sampling is cheap and quick (Neuman 1997:204). "Use of this method is justified on grounds of feasibility" (Babbie & Mouton 2001: 166). As it could not be predetermined whether or not specific pregnant women would be willing to be interviewed about PPTCT of HIV/AIDS, a random sample could not be drawn, even if a census of all pregnant women might have been available – which was not the case.

#### **3.3.4.2 *The number of participants***

Brink (1999:141) states that "there are no hard and fast rules that can be applied to the determination of sample size. However, both scientific and pragmatic factors influencing sample size must be considered when deciding on the number of subjects to be included in the study". It is often stated that the larger the sample, the better. "While it is often desirable to have a large sample in quantitative studies, evidence exists that this holds up to a certain point ..." (Brink 1999:142). Fifty pregnant women participated in the study. A sample of 50 was considered adequate due to time constraints. In addition due to fuel shortages in Zimbabwe at the time of data collection, very few women attended ANC clinics. A larger sample would therefore have taken much longer.

#### **3.3.4.3 *Setting***

The setting refers to the place where the research data were collected. The study was conducted at one government hospital, in Bulawayo, the second largest city in Zimbabwe. The researcher planned to conduct this research at this hospital because this facility offers

PPTCT programs. Being a referral government hospital, this institution would ensure more comprehensive and representative practices of antenatal mothers in relation to PPTCT of HIV/AIDS than non-referral hospitals' ANCs could provide.

### **3.4 DATA COLLECTION TECHNIQUES**

Brink (1999:150) states, "there are a variety of data collection techniques. The techniques used most frequently by nurses are observation, self report and physiological methods". In this study the researcher used the self-report method of data collection.

#### **3.4.1 The research instrument**

The data collection instrument was the structured interview during which the same questions were asked from each participant. "Structured interviews are formalised so that all respondents hear the same question in the same order and in the same manner" (Brink 1999:158). The instrument used for data collection in a structured interview is the interview schedule. "The interview schedule must be presented to each respondent in exactly the same way" (Brink 1999:158). This assists the researcher to control the interview within the perspective of the study and collect similar types of data from all the participants. This is done to minimise the role and influence of the interviewer and to enable a more objective comparison of results.

#### **3.4.2 Discussion of the instrument**

The following discussion presents the structure, development and motivation of the instrument.

##### **3.4.2.1 *Structure of the instrument***

The structured interview schedule used in this research comprised four sections.

*Section A:*

Comprised questions relating to biographic data including age, religion, marital status, level of education, number of children, employment status and place of residence.

The information was useful in determining whether or not the above mentioned biographical factors had any influence in the pregnant mother's practices in relation to PPTCT of HIV/AIDS.

*Section B:*

Comprised questions relating to the knowledge of PPTCT of HIV/AIDS.

*Section C:*

Comprised questions relating to attitudes of pregnant women towards PPTCT of HIV/AIDS. Questions in this section included the mode of delivery, infant feeding and use of ARV drugs.

*Section D:*

Comprised questions relating to practices of pregnant women in relation to PPTCT of HIV/AIDS.

A sample of the interview schedule is attached (see Annexure C).

### **3.4.2.2 Development of the instrument**

The following aspects were considered during the development of the instrument.

- The demographic data had fill in questions.
- The development of questions on the interview schedule was guided by the study problem, purpose and research objectives, as well as by information obtained during the literature review.

- Some of the questions were constructed as open-ended questions, allowing pregnant mothers to express their practices in relation to PPTCT of HIV/AIDS in their own words.
- The questions on the interview guide were arranged in a logical sequence to allow for flow of thought during data collection.

The language of communication was English because most, if not all, women in the childbearing age group would have had at least primary education. The interviewer was fluent in the local languages (Shona and Ndebele) spoken in the Bulawayo area and could interpret any question which an interviewee might not understand. However, this was not required as all the interviewed women could speak and understand English.

### **3.4.3 Motivation for the use of the structured interview schedule as a research instrument**

The interview as a method of data collection was chosen for the following reasons:

The structured interview was suitable for this study because it provides straightforward factual information. "Interviews are frequently used in exploratory and descriptive research. They can also be useful in ascertaining values, attitudes, beliefs and experiences" (Brink 1999:157). Interviews are the most direct method of obtaining facts from the respondents. The individualised interview method assisted the researcher to collect data on each participant's practices on PPTCT of HIV/AIDS.

"The presence of an interviewer also generally decreases the number of "do not know" and "no" answers" (Babbie & Mouton 2001:250). Use an interview method is time consuming. The decision to use this method of data collection was also influenced by the following factors:

- "Responses can be obtained from a wide range of subjects" (Brink 1999:153).
- There is less chance of misinterpretation of questions by the participant.
- In depth responses can be obtained.



- Questions may be clarified by the interviewer if they are misunderstood.

### **3.5 VALIDITY**

“Validity refers to the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration” (Mouton 2001:122). Validity is classified as internal and external validity.

The instrument’s validity can be regarded as “whether an instrument accurately measures what it is supposed to measure given the context in which it is applied” (Brink 1999:167). Several factors could influence the internal and external validity of the measuring instrument and the structured interview schedule used in this study.

#### **3.5.1 Internal validity**

This concept indicates the extent to which the factors identified as knowledge and/or attitudes of ANC mothers towards PPTCT of HIV/AIDS truly reflect what hinders good practice of PPTCT of HIV/AIDS rather than being attributable to extraneous or chance variables, not necessarily indicating practices of antenatal mothers in relation to PPTCT of HIV/AIDS.

##### **3.5.1.1 Threats to internal validity**

The occurrence of an event, which is unrelated to the study, but which can affect the result of a study, poses a possible threat to the internal validity of the data. The most important threats to the internal validity of the study were factors related to the history of the participants’ practises in relation to PPTCT, the selection processes of the women who were interviewed. Several factors in this study have been identified such as lack of knowledge, negative attitudes and lack of education. These factors are said to hinder good practices of antenatal mothers in relation to PPTCT of HIV/AIDS. Threats to internal validity history will be admission by the participants in this study that these factors were practices of antenatal mothers in relation to PPTCT of HIV/AIDS. The history in Zimbabwe is that Nevirapine and infant formula are freely available. The participants might shift the blame of

not utilising PPTCT services by blaming the health services providers instead of their negative attitudes towards the programme. The results obtained from practices of PPTCT of HIV/AIDS should thus be viewed with caution.

The process involved in the selection of participants to be involved in the study and the type of group selected might influence the results obtained and therefore the validity might be compromised. The selection of a group of pregnant women who were booked to participate in a study to describe their practices of PPTCT of HIV/AIDS might have compromised the internal validity of this study. Some women in this selected group of participants might feel guilty about being pregnant, or to deliver an HIV positive baby in the face of freely available PPTCT services. This might lead to an exaggeration of the practices of antenatal mothers in relation to PPTCT of HIV/AIDS. If, for example practices of antenatal mothers were studied in a group of antenatal mothers on the PPTCT of HIV programme or women attending antenatal care, the results might have been different because it was a different group that was selected and not because of differences in the practices of antenatal mothers in relation to PPTCT of HIV/AIDS. If some practices, that prevented pregnant women from using the PPTCT programme, could be identified and addressed effectively the number of babies born with HIV might decline.

### **3.5.1.2 External validity**

“External validity is the degree to which study results can be generalised to other people and other research settings” (Brink 1999:209).

#### **3.5.1.2.1 Threats to external validity**

The external validity of a research project can be threatened by the Hawthorne effect, the type of sampling method selected, the validity of the research instrument (structured interview schedule in this case) and the predictive value of the research instrument.

“The Hawthorne effect is the behaviour displayed by participants just because they are aware that they are involved in a study” (Polit & Hungler 1999:252). Being aware that they are involved in a study of practices of antenatal mothers in relation to PPTCT of HIV/AIDS,

the pregnant mothers might have given answers to please the interviewer, instead of providing information about their real life experiences. This type of threat to external validity was minimised by carefully explaining the purpose of the research and of the interview to each participant and not pressuring any one to provide any response. Each interviewee was requested to be as honest as possible.

The type of sampling method used affects the ability to generalise the research results to the entire population, thereby threatening the external validity of the results. A non-probability sampling method was used in this study, and a convenient sample of 50 pregnant mothers was obtained. Since the sample was a convenient one, the results obtained have to be viewed with caution. Using a convenience sample rather than studying the entire population or a truly random sample might have compromised external validity.

According to Brink (1999:215) validity refers to "... the ability of an instrument to measure the variable that it is intended to measure". There are three major classifications estimating the validity of the data-collecting instrument: the self-evident measures, pragmatic measures and construct validity. In this study the validity of the measuring instrument was observed by adhering to the characteristics of all three measures.

#### *Self evident measures*

Self-evident measures refer to the extent to which the instrument measures what it is supposed to measure, which is classified as face and content validity." Face validity is not technically a form of validity since it does not refer to what an instrument actually measures but rather to what it appears to measure. It appears relevant to those who will complete or administer it" (De Vos, Strydom, Fouche & Delpont 2002:167).

The instrument was constructed so that it could measure the attributes to be studied which were the attitudes, knowledge and practices of pregnant women in relation to PPTCT of HIV/AIDS. In ensuring face validity, the interview schedule was subjectively assessed for presentation and the relevance of the questions. The interview tool was analysed by doctors and nurses administering the nevirapine in order to check whether or not the questions were relevant, unambiguous and clear. The supervisor and the joint supervisor

further critically evaluated the interview schedule and suggestions made were implemented. The statistician also reviewed the interview schedule and suggested ways in which the coding of the data could be facilitated.

Content validity is the extent to which the content of the instrument appears to comprehensively examine the scope it is intended to measure. A thorough literature review was done on practices of antenatal mothers in relation to PPTCT of HIV/AIDS. Several studies implied that usage of PPTCT services is impeded by some factors, which hinder pregnant women from using the services. The factors include lack of knowledge, poor socio economic status, cultural and religious factors.

Information obtained during the literature review helped to set the study's research questions. The interview schedule has been designed to provide answers to these questions. The interview schedule's content had a section on the demographic information of the participants, questions on the knowledge about PPTCT of HIV/AIDS, questions on attitude towards PPTCT of HIV/AIDS and questions on practices of PPTCT of HIV/AIDS. This section helped to include relevant content guiding the achievement of the objectives of the study, which were highlighted in section 3.1 of this dissertation.

#### *Pragmatic measures*

Pragmatic measures are means of establishing validity by concentrating on the practical value of the tool through concurrent and predictive validity. This is achieved by predicting future changes in the key concepts by specifying the assumptions underlying this study, which are:

- Poor or no knowledge on how PPTCT of HIV/AIDS can lead to poor or lack of use of PPTCT of HIV services.
- Women's gender, poor social economic status, cultural and religious beliefs and lack of education results in poor use of PPTCT of HIV/AIDS services.
- Inadequate or poor counselling on PPTCT of HIV/AIDS can negatively influence PPTCT practices

- Shortage of resources and negative attitudes of health care professionals can hinder effective use of PPTCT of HIV/AIDS services.

These predictions implied that if more pregnant women in Bulawayo metropolitan province would utilise PPTCT of HIV/AIDS services, after addressing the problem, the number of babies born with HIV would decline.

### **3.6 RELIABILITY**

“Reliability is the degree of consistency with which the instrument measures an attribute” (Polit & Hungler 1999:255). It further refers to “the extent to which independent administration of the same instrument yields the same results under comparable conditions” (De Vos 1998:85). The less variation the instrument produces in repeated measurement of an attribute the higher the reliability. There is also a relationship between reliability and validity. “An instrument which is not valid cannot possibly be reliable” (Polit & Hungler 1999:250). In ensuring reliability in this study the responses obtained through the interview schedule were split into equal halves, they were scored independently. The other techniques that are used to ensure validity were not possible in this study due to the nature and sensitivity of the concept of practices of PPTCT of HIV/ADS. These techniques are stability, internal consistency and equivalence (Polit & Hungler 1999:200).

### **3.7 ETHICAL CONSIDERATIONS**

“Nurses face ethical dilemmas in their daily duties as do researchers when humans are used as study participants in a research investigation. Care must be exercised that rights of those individuals are protected” (Polit & Hungler 1999:132-134).

#### **3.7.1 Principles of research ethics**

Research ethics observed in this study are in accordance with those stated by Polit and Hungler (1999:153) namely the principles of beneficence, of respect for human dignity and justice.

The principle of beneficence includes freedom from harm, freedom from exploitation and the risk benefit ratio with regard to the freedom from harm. No physical harm was caused by participating in the study. Psychological discomfort might have resulted from the nature of the questions asked. Each participant received information on PPTCT of HIV/AIDS during the interview. This enhanced knowledge might have enabled each participant to make better informed decisions in the future about PPTCT.

The risk implied the anticipated psychological discomfort resulting from the questions asked. The benefit was the body of knowledge that highlighted the benefits of utilising PPTCT of HIV/AIDS services. The main benefit was the potential reduction in the babies born with HIV. This would, in turn, lead to health resources being channelled to other uses rather than to the treatment of babies with HIV/AIDS.

The principle of justice encompasses the right to fair treatment and the right to privacy. Participants were tactfully treated by respecting their beliefs, habits, culture and lifestyle. An opportunity was provided for each participant to ask questions and to air her feelings.

### **3.7.2 Consent for conducting the research**

Permission to carry out the study was obtained from the medical superintendent and the matron of the hospital that participated in this research. Verbal informed consent was obtained from each participant after explaining the purpose of the research. Responses from the participants were treated anonymously and confidentially. No participant was paid any remuneration and those women who declined to participate suffered no harmful consequences whatsoever.

The informed consent form was constructed by the researcher and incorporated the ethical consideration of voluntary consideration of voluntary participation and freedom to withdraw from participation. For full disclosure of the study (see Annexure B).

### **3.7.3 Full disclosure of the purpose of the study**

In order to ensure that the participants were well informed about their role in the study, there was full disclosure of the study by the researcher. This involved the explanation of the process and the purpose of the study. This enhanced the self determination of each potential subject

### **3.7.4 Voluntary participation**

There was no coercion of the participants. Participants voluntarily took part in the study after giving informed consent verbally or in writing. The participants had freedom of withdrawal from participation in the study if and when they wished to do so.

### **3.7.5 Anonymity and confidentiality**

Ensuring anonymity and confidentiality regarding the information provided, enhanced the participants' rights to privacy. Confidentiality is an important issue when dealing with anonymity requirements.

The researcher ensured privacy during data collection. The participants' names were not recorded on the interview schedules' response sheets. Code numbers were used, for example 01/w. The identity of the participants was not revealed in reports and publications of the study. The completed interview schedules were kept by the researcher alone. These documents were kept locked up and only the researcher and the statistician had access to these documents. As soon as the research report had been accepted, these documents would be destroyed by the researcher.

## **3.8 SUMMARY**

This chapter dealt with the research methodology that was followed in this study addressing the population, sample procedure, data collection instrument and data collection procedure. Measures were adhered to in order to enhance the validity and

reliability of the research results. Ethical concerns that could have impacted on the survey were addressed.

The following chapter presents the analysis and discussion of the data obtained from conducting 50 structured interviews with pregnant women in relation to their practices of PPTCT of HIV/AIDS. The pregnant mothers were booked at the participating hospital and its ANC during July and August 2005. The purpose of this study was to investigate pregnant mothers' practices in relation to PPTCT of HIV/AIDS. If factors inhibiting the effective use of PPTCT of HIV/AIDS could be identified and addressed then there will be a reduction in the transmission of PTCT of HIV/AIDS- enhancing the quality of life of the babies concerned and affecting costs for the health care authorities concerned with PPTCT of HIV/AIDS services in Zimbabwe.



## **CHAPTER 4**

### **ANALYSIS AND DISCUSSION OF RESEARCH RESULTS**

#### **4.1 INTRODUCTION**

In the previous chapter data collection methods and preparation for data analysis were discussed. This chapter presents the findings of the study in tables as well as graphs and narrative format. The results are presented under the following headings, individual perceptions, modifying factors and variables affecting the likelihood of taking action as specified in the guidelines of the HBM, as discussed in chapter 2.

#### **4.2 INDIVIDUAL PERCEPTIONS**

The participants responded to various questions in order to determine their perceptions towards PPTCT of HIV/AIDS.

##### **4.2.1 Pregnant women's attitudes towards PPTCT of HIV/AIDS**

Participants responded to various questions, which sought information on the attitudes that the participants had on PPTCT of HIV/AIDS. The pregnant women were asked whether they wanted to be tested for HIV/AIDS, whether they wanted to know their results and whom they wanted to tell about their results and why. The responses to the questions are indicated in table 4.1. The relevant aspects are discussed individually

and will refer to the figures and percentages in table 4.1. In the following discussions, the total number of participants was 50, unless otherwise indicated. This is the case because the researcher personally conducted all the structured interviews and obtained replies to most questions.

**Table 4.1 Attitudes of pregnant women towards PPTCT of HIV/AIDS**

<b>Responses (n=50)</b>	<b>n</b>	<b>%</b>
Pregnant women who would want to be tested for HIV/AIDS	27	54
Pregnant women who were not willing to be tested	14	28
pregnant women who were not sure	9	18
Pregnant women who wanted to know their results	26	54
Pregnant women who did not want to know their results	1	2
Pregnant women who would tell someone	23	46
Pregnant women who would not tell anyone	4	8
Pregnant women who would tell their husbands	18	36
Pregnant women who would tell their parents or siblings	9	18
Pregnant women who discuss PPTCT as a couple	31	62
Pregnant women who discuss PPTCT as a couple	31	62
Couples who do not discuss PPTCT of HIV/AIDS	19	38
HIV+ve women should breast feed their babies	22	44
HIV+ve women who would not breast feed their babies	28	56

#### **4.2.1.1 Whether or not the participants wanted to be tested**

Of the participants 54% (n=27) wanted to be tested for HIV/AIDS, 28% (n=14) participants were not willing to be tested, and 18% (n=9) participants were not sure whether they would or would not want to be tested. In Zimbabwe, although VCT is becoming increasingly available, many people are still very reluctant to be tested. “This reluctance is the result of barriers to VCT which are stigma, gender inequalities and lack of perceived benefits” (Southern Africa HIV/AIDS action 2002:2).

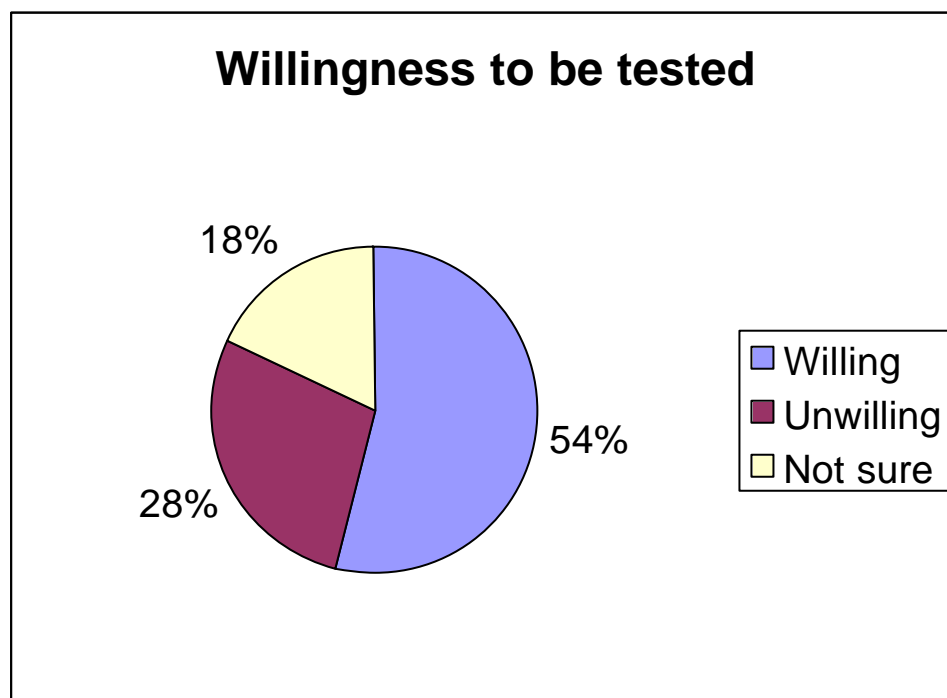


Figure 4.1 Willingness to be tested

#### **4.2.1.2. Pregnant women's desire to know their HIV test results**

Of the 27 participants who were willing to be tested, the majority (96%; n=26) wanted to know their HIV test results, while only 4% (n=1) did not want to know the results.

If found negative, the participants expressed some fear, as it could be that they might be in the "window period" therefore would need another test after 3–6 months. They indicated that they would practise safe sex and modify any risk behaviours and encourage their spouses/partners to go for VCT.

The participating pregnant women expressed that they would experience social rejection, discrimination and their husbands would blame them for bringing the disease into their homes. Some of the women wanted to seek permission from their husbands to use VCT and PPTCT of HIV services. On asking further probing questions, some of the women did not see any benefit in knowing their HIV results and felt that it was better not to know their HIV status. The negative attitude towards VCT might limit the potential benefit of the PPTCT of HIV/AIDS programs in Zimbabwe. "The Millennium Development Goals seek to eliminate any gender disparity" (Goercke 2004:61). The gender disparity hindered the success of the PPTCT programs.

Despite the high level of knowledge on HIV transmission through intense IEC campaigns and the reasonable access to condoms, the rates of unfaithful partners, higher in men

Allow continued epidemic growth (MSF 2001:2). “Only 5% of the estimated infected persons know their status while the rest fear facing the fact and fate, a problem compounded by lack of family and community support” (MSF 2001:2).

There are benefits and risks of a pregnant woman knowing her HIV status.

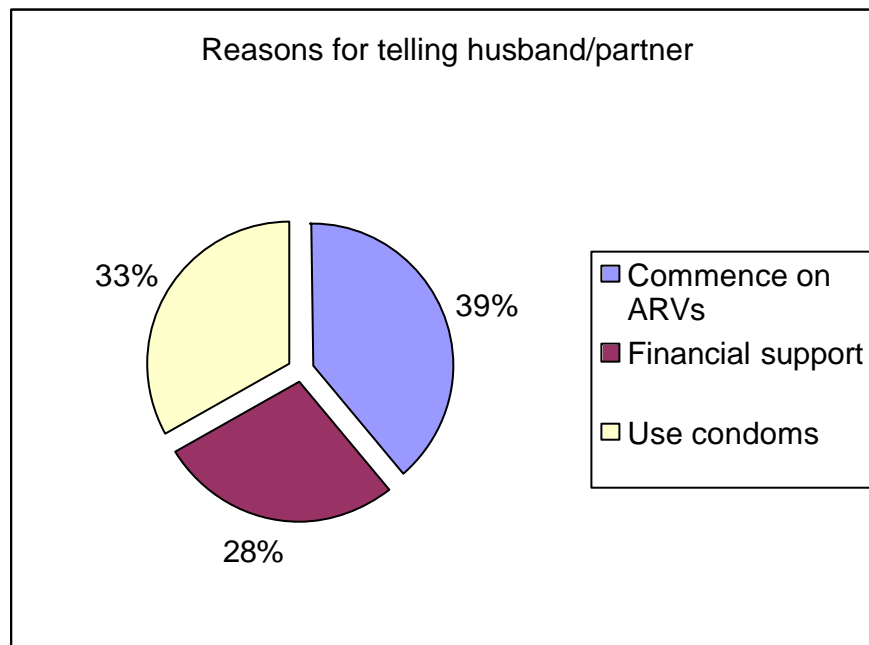
- The benefits being that the pregnant woman can take measures available to her to keep herself healthy as long as possible.
- Informed decision whether to abort or continue the pregnancy and be commenced on ARV drugs.
- Tell her sexual partner that she is HIV positive so that he can be tested also.
- Take appropriate steps to reduce the risk of transmission to the baby.

The risks reportedly included that:

- The family might blame her and react violently and even make her leave the home.
- Stigma and discrimination might be experienced from neighbours and friends.
- Anxiety and depression of the pregnant woman might result from a lack of support.

#### 4.2.1.3 Persons the participants would inform if they were HIV positive

As indicated in table 4.1, out of the 27 participants willing to be tested, 85% (n=23) said that they would tell someone while 15% (n=4) would not tell anyone about their HIV+ve results. Out of the 23 participants who would tell someone about their HIV+ve results, 78% (n=18) participants would tell their husbands or partners, while 39% (n=9) would tell their parents and siblings.



**Figure 4.2 Reasons for telling husbands/partners**

The 18 (67%) participants (out of the 27 who were willing to be tested) who said they would tell their husbands about their HIV+ve status stated that they would do so in

order to live positively with the disease by adopting the following behaviours (as portrayed in figure 4.2):

- 33% (n=6) said they would use condoms to prevent re-infecting one another.
- 28% (n=5) said that husbands support their wives financially, implying that the husbands should know about conditions affecting their wives' health.
- 39% (n=7) said that they could be commenced on ARV drugs.

The reasons given by the 9 (33%) participants who would tell their parents and siblings were:

- 3 (33%) said that parents should know because when they are ill, husbands refuse responsibility and always send them back to their parents to take care of them
- 4 (45%) said that husbands would blame them for having brought the disease into the family
- 2 (22%) said that their parents and siblings are more sympathetic and more caring than their husbands.

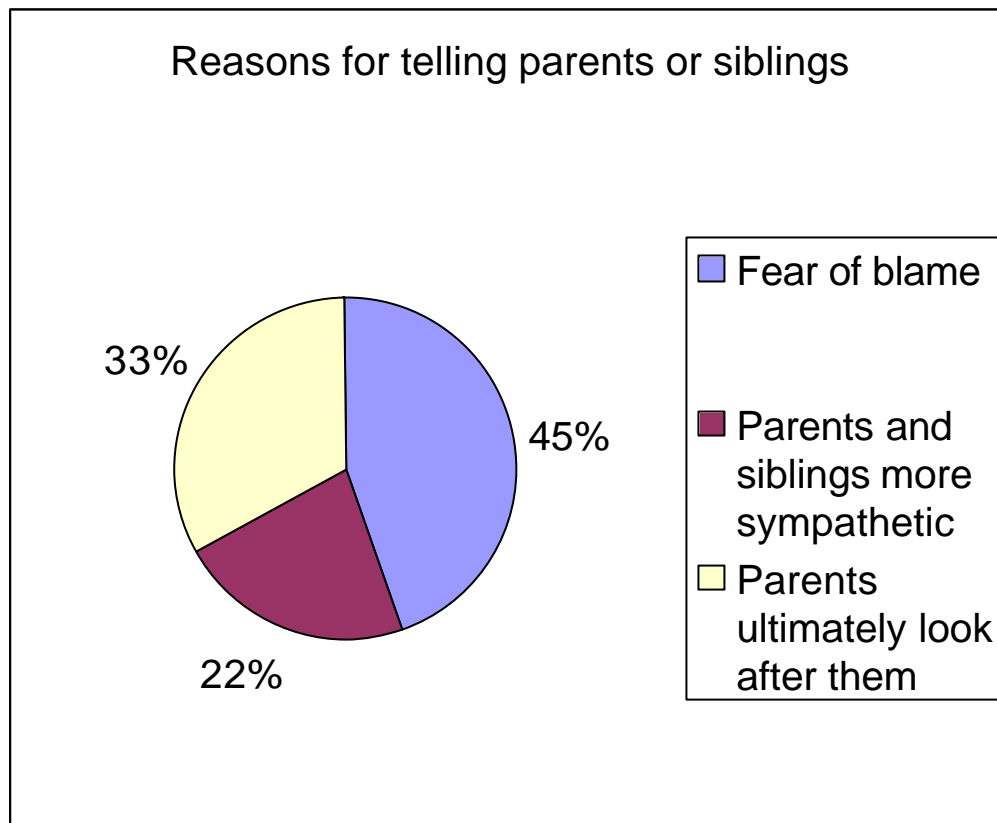


Figure 4.3 Reasons for telling parents/siblings

#### 4.2.1.4 Couples' discussions of PPTCT of HIV/AIDS

As many as 62% (n=31) of participants discussed PPTCT of HIV/AIDS with their husbands/partners, compared to 38% (n=19) who did not discuss this issue with their husbands/partners.

Of the 19 women who did not discuss the topic with their husbands,

- 32% (n=6) expressed fears of being labelled as having "loose morals".



- 42% (n=8) stated that some men do not want women to initiate discussions especially those that are sexually related.
- 26% (n=5) stated that men react violently to HIV/AIDS topics. “Society/couples need to accept that avoiding addressing difficult subjects such as sexuality and sexual relationships will only fuel the epidemic of PTCT of HIV/AIDS” (MOHCW 1999:32).

“In the Botswana PPTCT programme, the uptake of VCT by pregnant women was under 50%, one key factor was the low involvement of men” (Jackson 2002:48). There should be early access to quality ANC from trained health workers, and active involvement of the spouses and the entire community. “In Zimbabwe, 30 out of more than 600 women had managed to bring in their partners for VCT” (Jackson 2002:148).

#### **4.2.1.5 Pregnant women’s perceptions about breastfeeding by HIV +ve mothers**

In response to the question as to whether or not HIV +ve mothers should breastfeed their babies, 44% (n=22) indicated that they would breastfeed their babies because breast milk is best for babies. As many as 45% (n=10) of these 22 respondents stated that they would exclusively breastfeed for six months then wean the baby to prevent HIV infection to the baby while 55% (n=12) said they would breastfeed for more than one year.

As many as 55% (n=12) of the participating women indicated that they were too poor to afford transport money to go to the hospital to get infant formula and would thus be forced to breastfeed their babies. Of the participants 28 (56%) knew that HIV+ve mothers should not breastfeed their babies because breast milk increases the risk of transmission of HIV to the babies. Knowledge alone did not enable these women to use formula feeds for their babies and to avoid breastfeeding.

“Once a woman has made a decision about which method of infant feeding is best for herself and her baby, she should be given support and advice so that she can do this as safely as possible” (Southern Africa HIV/AIDS action 2002:12). Breastfeeding is a known way of MTCT of HIV/AIDS. “The WHO and MOHCW recommend formula feeding on an individual basis and according to accessibility and hygiene conditions” (MSF 2001:4).

#### 4.2.1.6 Knowledge of PPTCT of HIV/AIDS

**Table 4.2 Pregnant women’s knowledge about PPTCT of HIV/AIDS (n=50)**

What do you understand by the term PPTCT	Frequency	Percentage
Pregnant women with knowledge	31	62
Pregnant women without knowledge	19	38
Sources of information about PPTCT		
Health centres	16	32
New start centres	2	4
Mass media	32	64

The pregnant women were asked if they knew what PPTCT of HIV/AIDS meant. As many as 62% (n=31) of the women said that it means prevention of parent to child transmission of HIV/AIDS. HIV is transmitted from the mother to the baby during pregnancy, at childbirth and/or during breastfeeding. Of the women, 38% (n=19) did not know what PPTCT of HIV/AIDS meant. Among the 38% (n=19) women who did not know what PTCT of HIV meant 68% (n=13) were from the rural areas, 32% (n=6) were from urban areas. More information on PPTCT of HIV/AIDS was needed by pregnant women, especially by those living in rural areas. Poverty contributed to the lack of knowledge. Most of the rural pregnant women did not have access to mass media. This is a serious shortcoming as 64% (n=32) of the women learned about PPTCT from the radio, while only 32% (n=16) learned about PPTCT from health centres. As all the pregnant women who participated in this study, attended ANC at a government hospital, all of them should have been informed about PPTCT at the ANC clinic.

The health personnel used visual-aids, video cassettes, pamphlets and they gave health education talks at every antenatal visit. Only 2 (4%) got the information on PPTCT of HIV/AIDS from New Start Centres, which offer VCT services, falling under the Population Services International, a non government organisation (NGO)..

Mass media informed many women (64%; n=32) about PPTCT, "The mass media channels are an important force for influencing public opinion and stimulating debate and creating awareness of PPTCT of HIV/AIDS" (MOHCW 1999:33). Radio messages are

broadcasted in all major languages of Zimbabwe namely English, Shona, Ndebele and Shangani. This was to reach pregnant women of different language groups.

Judged by the results of this investigation, radio broadcasts appeared to be successful in bringing PPTCT messages to many pregnant women in Zimbabwe. The health centres/health personnel provided health education about PPTCT of HIV/AIDS to only 32% (n=16) pregnant women. Information and education about PPTCT of HIV/AIDS should be accurate, clear and the pregnant women should understand the information given. This was an unexpected finding as all participants attended ANC, health personnel should have provided PPTCT information to all these women, not only to 32% of them. Health education on PPTCT of HIV/AIDS can be done individually or in groups. The health personnel should maintain positive attitudes towards the PPTCT of HIV/AIDS programme. "A person's health behaviour depends on knowledge, beliefs, values and attitudes" (Bouwer, Herselman, Lock & Zeelie 1997:63). With more knowledge, the health behaviour of pregnant women towards PPTCT of HIV/AIDS might become more positive.

#### **4.3 MODIFYING FACTORS**

The following section discusses the modifying factors of pregnant women's attitudes and practices towards PPTCT of HIV/AIDS, according to the answers provided in response to the relevant questions of the structured interview schedule.

### **4.3.1 Demographic data**

The demographic data were collected and analysed in order to ascertain the background of the respondents, so that their responses can be contextualised within the background of who the participating pregnant women actually were. Questions were asked in relation to age, marital status, parity, level of education, employment status and place of residence. This data were sought in order to describe and ascertain if it would have any relationship with the knowledge, attitudes and practices of antenatal women in relation to PPTCT of HIV/AIDS. Unless otherwise indicated the number of pregnant women who responded to questions in this section of the structured interview was fifty (n=50).

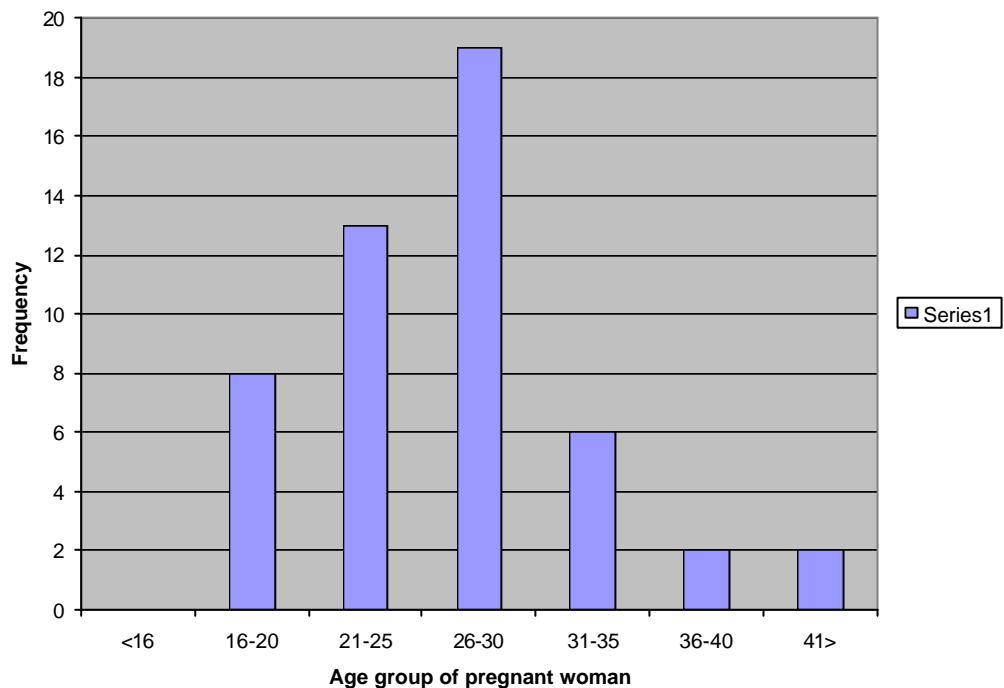
#### **4.3.1.1 Age**

Table 4.3 and Figure 4.4 show the distribution of the ages of the participants. The modal age was 26–30 years of age with a frequency of 38% (n=19) followed by the 21–25 years with a frequency of 26% (n=13), making the data approximately a bimodal distribution. No woman was 15 or younger and there were only 2 (4%) women who were older than 40. This finding merely indicates that women aged 40 and older might not deliver their babies at hospitals or clinics, and might thus not attend ANC. It is possible that women in this older age group use the services of traditional birth attendants rather than ANC, clinics or hospitals. The implication is that women, who use the services of traditional birth attendants, might not have opportunities to use PPTCT of HIV/AIDS services. “Younger women and mothers with fewer children are more likely to deliver in a health institution than

older women who are associated with a greater likelihood of being delivered at home” (ZDHS 1999:118).

**Table 4.3 Ages of the pregnant women**

Age group/years	Frequency	Percentage	Cumulative Percentage
15 or younger	0	0	0
16-20	8	16	16
21-25	13	26	42
26-30	19	38	80
31-35	6	12	92
36-40	2	4	96
40>	2	4	100



**Figure 4.4 Age distribution of pregnant women**

The majority of pregnant women (80%; n=40) were younger than 31 years of age and could thus bear more children in their lives. Zimbabwe’s Census (2002:10) stipulates that

women of the childbearing ages are between 15–49 years of age. All the participants were within the child bearing ages, hence the need for the antenatal mothers to receive more knowledge about PPTCT of HIV/AIDS at ANC services. According to WHO/UNFPA and UNICEF (2000:5), “age specific rates of sexually transmitted disease are highest among 15–30 years old. This is mainly due to failure to involve women in existing health promotional activities.”

They needed to know about HIV/AIDS and PPTCT, for their sake of the current and potential future pregnancies. More information on caesarean sections was needed since caesarean sections can reduce the risk of MTCT (MOHCW 2002:31) and these women could still bear a number of future children. Pregnant women with completed families or HIV positive mothers were encouraged to consider surgical sterilisations. In Zimbabwe both partners are counselled on permanent contraceptive methods. The husband might not give consent for utilising a permanent method such as surgical sterilisation.

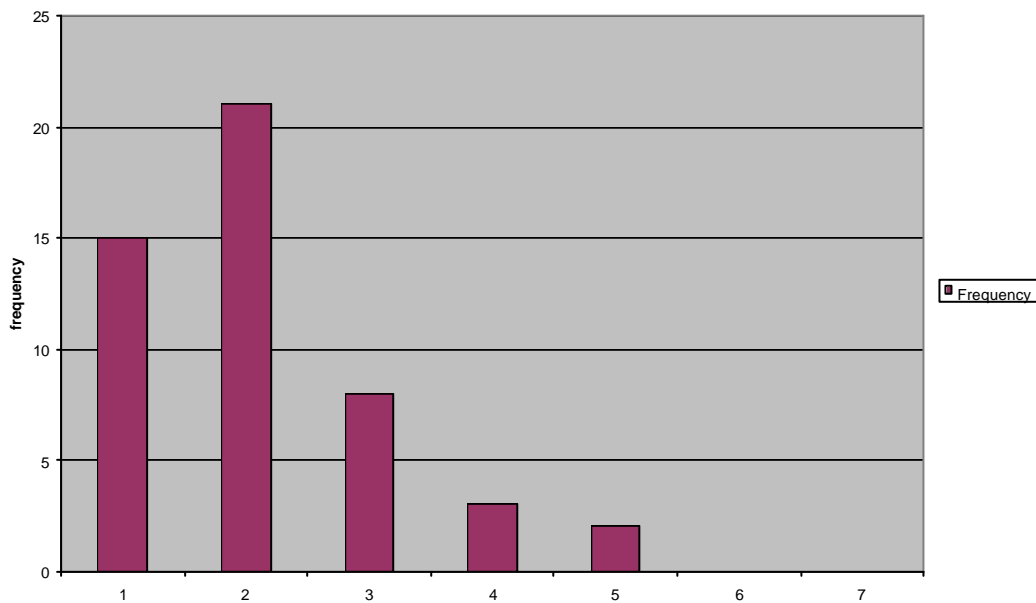
They needed health education on PPTCT of HIV/AIDS: the mode of transmission to the baby, the benefits of VCT, obstetrical care, different infant feeding options and the importance of follow up visits to the post natal clinic as well as to the baby clinics. “Child bearing is a very important event for every Zimbabwean. Yet the desire of the couple with HIV infection to have children need to be balanced with the possibility of having an infected baby who has a high risk of dying within the first five years of life” (MOHCW 1999:10).

### 4.3.1.2 Parity

Table 4.4 and Figure 4.5 show the distribution of parity. The modal class is that of mothers with 1 child with a frequency of 42% (n=21), followed by pregnant women who were carrying the first pregnancy with a frequency of 30% (n=15), and those with 2 children with a frequency of 16% (n=8).

**Table 4.4 The number of children the pregnant women had**

Number of children	Frequency	Percentage	Cumulative percentage
0	15	30	30
1	21	42	72
2	8	16	88
3	3	6	94
4	2	4	98
5	1	2	100
6	0	0	



**Figure 4.5 The number of children pregnant women had**



There was only one (2%) pregnant woman with five children and none had 6 children or more. On average, these women had two children.

“Women are frequently the ones targeted by family planning programmes, yet it is men who often make decisions of family size” (Jackson 2002:158). Changing women’s behaviour and attitudes will therefore not reduce the number of children a woman has until men’s attitudes and behaviour are changed too. MOHCW (2001:91) states that, “The main goal of family planning is to improve the quality of life and reproductive health by empowering individuals and couples to exercise their rights to safe sexuality and to decide whether and when to have children and how many.”

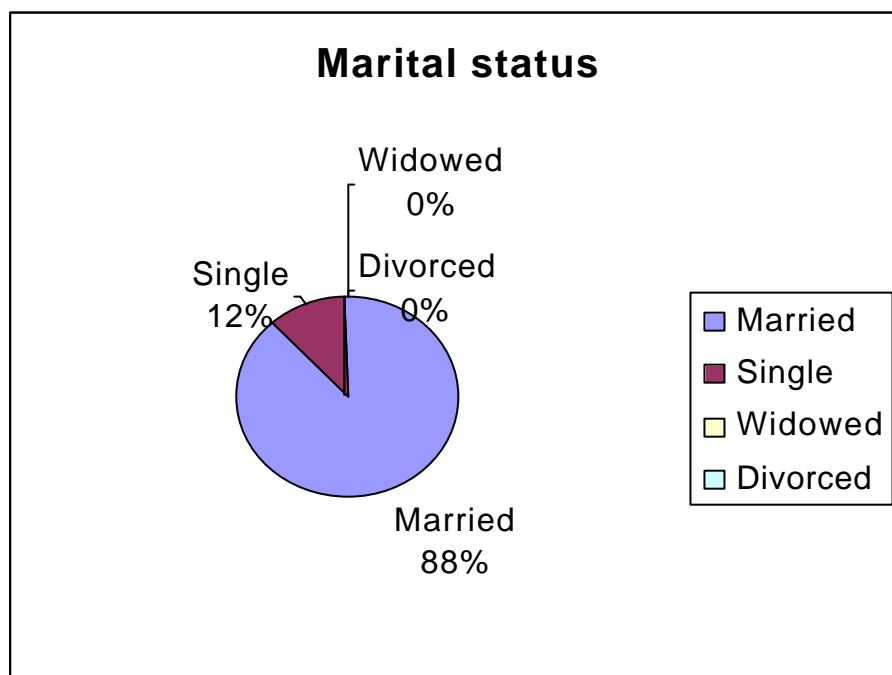
In many cultures, womanhood is proved by how many children a woman has. “One objective of the family planning programme is to promote dual protection in family planning and therefore reduce STI/HIV/AIDS” (MOHCW 2001:91). The objective can only be achieved if both men and women are health educated so that they make informed decisions.

#### **4.3.1.3 Marital status**

Tables 4.5 and Figure 4.6 show the distribution of the participants’ marital status, indicating that 44 women (88%) were married and 6 women (12%) were single. None of the pregnant women was divorced or widowed.

**Table 4.5 Marital status of the pregnant women**

Marital Status	Frequency	Percentage	Cumulative Percentage
Married	44	88	88
Single	6	12	100
Widowed	0	0	
Divorced	0	0	

**Figure 4.6 Marital status of pregnant women**

The finding that no woman was a widow might be surprising, viewed against the prevalence of AIDS in Zimbabwe. In Bulawayo, some cultural and religious practices support polygamy, and even some “indigenous Christian adherents accept polygamous practices” (Goercke 2004:350). Thus even if a woman had been widowed, but had a subsequent relationship with another man, she might have indicated her marital status as “married” and not as “widowed”. “It is traditional practice in the Shona culture that if a

woman's husband dies, then the deceased husband's brother 'inherits' the widow", (Goercke 2004:17). This traditional Shona practice might explain why no woman reported herself to be widowed. The issue of polygamy could fuel PTCT of HIV/AIDS, because this implies that every wife of a specific man is exposed to the possibility of getting HIV/AIDS not only from him, but also from all his other wives/sexual contacts and all these women's male sex partners. This situation is aggravated by the continued practice of men paying a bridal price ("lobola") for their wives. This practice generally implies that the man must pay a large sum of money or a number of cattle to the woman's family so that she becomes part of his family by marrying him. Having paid for his wife, the man regards her as a possession, like any other possession he bought and paid for. In return for his financial investment in his wife, the man expects her to obey his demands and to bear a large number of children. A wife could be seen as a financial investment who works in the fields and keeps the household running while she bears and raises a large number of children. Children can produce some work in and around the house and even in the fields or in the family businesses. While sons would carry forward the family name to future generations, the lobola earned from the daughters' future husbands would make the investment in the wife worth paying the 'lobola'. According to Ndlovu (1997:20) "It is generally believed that when a man marries and pays lobola for a woman, he owns her". He even makes decisions as to whether or not she should seek medical advice.

Against this background it is understandable that Zimbabwean women would fear using VCT services and would hesitate to use PPTCT of HIV/AIDS services even if they knew that they were HIV+ve. MOHCW (1999:10) states that "women and couples considering pregnancy should seek voluntary testing and counselling for HIV". An estimated 38% of the couples were often unwilling to openly discuss issues concerning sexuality. This inhibits

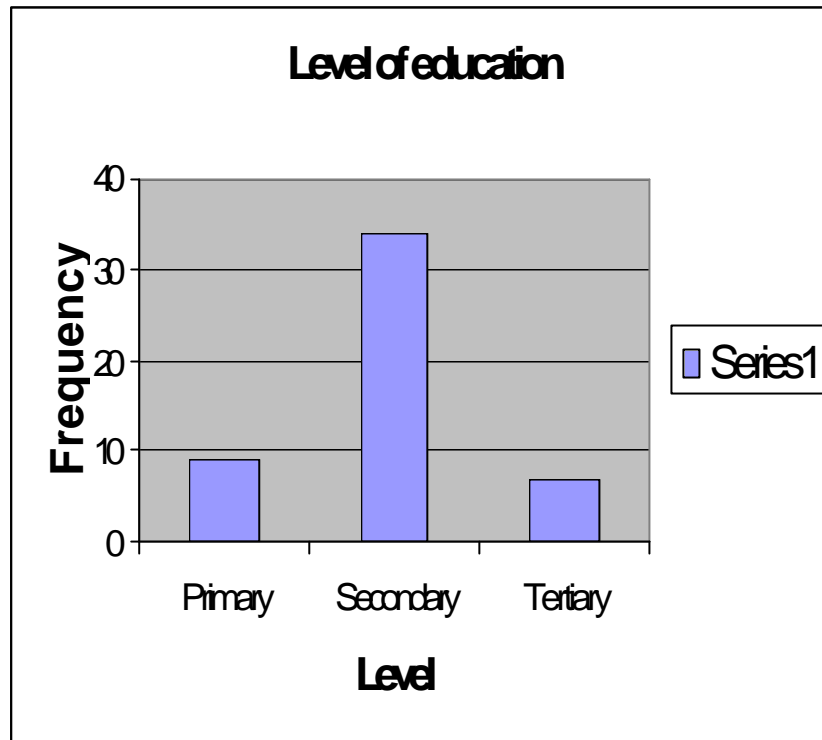
the uptake of PPTCT programmes in Bulawayo Zimbabwe though some husbands are starting to accompany their pregnant wives for ANC and participate actively in health education about PPTCT of HIV/AIDS.

#### 4.3.1.4 Participants' education levels

Table 4.6 and Figure 4.7 show the distribution of the participating pregnant women's education levels. The collected data showed that 68% (n=34) of these women had gone as far as secondary education, while 18% (n=9) had gone as far as primary level and 14% (n=7) of the pregnant women had gone as far as tertiary education.

**Table 4.6 Participants' education levels**

Level	Frequency	Percentage	Cumulative Percentage
Primary	9	18	18
Secondary	34	68	86
Tertiary	7	14	100



**Fig 4.7 Level of education of pregnant women**

“The net enrolment ratio in Bulawayo for females is 79.0% for primary education and 66.5% for secondary education” (ZDHS 1999:11). Enrolment in urban areas is higher than in rural areas. Generally educational attainment is slightly higher for males than for females with 63% of the women having attained higher education. The fact that only 18% (n=9) of the women who participated in this study did not progress beyond the primary school level, indicates that the majority of the women (82%; n=41) would be able to understand the rationale for using PPTCT of HIV/AIDS services.

The government of Zimbabwe has instituted a Gender Ministry and formulated a gender policy in order to enhance the educational status of women in society. Women with a higher standard of education are able to comprehend the functions of the immune system and thus the impact of HIV/AIDS on the human body and how the HIV is transmitted to the

baby during pregnancy, at childbirth and during breastfeeding. Understanding these aspects could pose challenges for women with primary school or no education.

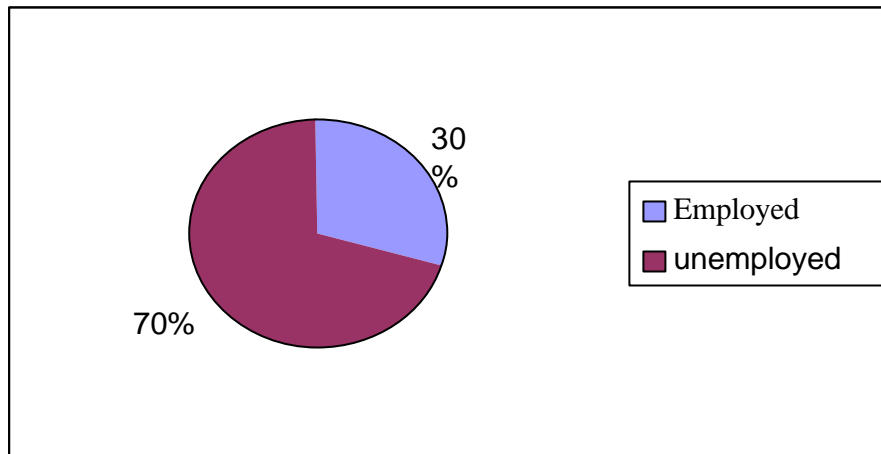
A literate woman can comprehend information from pamphlets on PPTCT of HIV/AIDS and has a wider understanding of health issues, which empowers her to make better-informed decisions. “There is a marked association between the mother’s level of education and the place of delivery, women with more education are less likely than lesser educated women to deliver at home” (ZDHS 1999:118). The pregnant women that deliver at home do not get information on PPTCT of HIV/AIDS and might not have access to PPTCT of HIV/AIDS services.

#### 4.3.1.5 Employment status

Table 4.7 and Figure 4.8 show the distribution of employment status. The majority of women 70% (n=35) were unemployed against 30% (n=15) who were employed.

**Table 4.7 Employment status of pregnant women**

Status	Frequency	Percentages
Employed	15	30
Unemployed	35	70



**Fig 4.8 Employment status of pregnant women**

The distribution of employed women varies by level of education, with women with a secondary or higher education being much more likely to be employed than women who are not as educated (ZDHS 1999:118). However, in this study, 82% (n=41) of the participating pregnant women had reportedly attained secondary and tertiary educational levels, yet only 30% (n=15) were employed. This high level of unemployment could be attributed to the financial hardships Zimbabwe faced during the data collection phase of this study (during July and August 2005).

Even those few women who were employed might be unable to decide how to use their money in Zimbabwe. "Information on who decides how to use the cash earned by employed women can be used as a measure of the status of women" (Van Rensburg et al 2002:29). Indeed 11% of employed women who participated in that study, reported that their husbands/partners decided how their earnings would be used. "There is a failure to respect women's rights to equal access to education and employment opportunities, thus reinforcing their dependence upon men. In the developing societies of Southern Africa in

particular, women face a greater risk of HIV infection than men because of diminished socio economic status which compromises their ability to choose safer and healthier life styles” (Van Rensburg et al 2002:29). Of the employed women 10% were not willing to be tested for HIV/AIDS as they feared losing their jobs if they disclosed their status.

#### **4.3.1.6. Residential area**

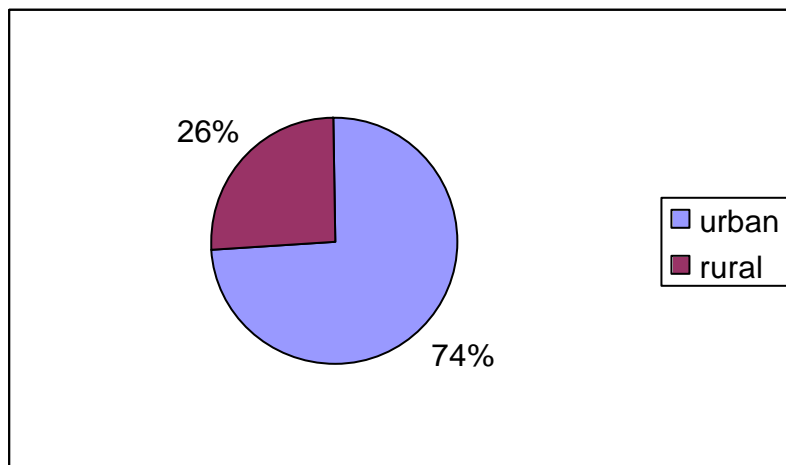
Table 4.8 and Figure 4.9 show the distribution of the participating pregnant women’s residential areas. Most women came from the urban areas, 37 (74%) against 13 (26%) from the rural areas. This could be attributed to the fact that the research site was a hospital in Bulawayo, an urban area. “Place of delivery varies greatly by urban-rural residence; urban women are more likely to deliver in a health facility than rural women” (ZDHS 1999:112). The lack of money for transport is the dominant factor for many patients who live far away from hospitals or clinics (Bouwer et al 1997:39). As Zimbabwe experienced severe fuel shortages during 2005, while the data for this study were gathered, transport might have been unavailable, or unusually expensive at that time. If the pregnant women do not have money for transport, they cannot adhere to their follow-up ANC consultations. Some of the pregnant women might use traditional birth attendants (TBAs) who are more accessible and affordable than hospitals or clinics in Zimbabwe. The TBAs do not have comprehensive information on PPTCT of HIV/AIDS in Zimbabwe.



In 1999 the ZDHS (1999:112) stated that data indicated that, “urban women are in general less likely than rural women to perceive problems in getting health care”. Women in rural areas cited getting money for treatment and transport as problems. A small fraction of the rural pregnant women used ANC services. The rest of the pregnant women from the rural setting might be unable to access PPTCT of HIV/AIDS if they never come into contact with these services during their pregnancies and/or deliveries.

**Table 4.8 Residential areas of pregnant women**

Place	Frequency	Percentage
Urban	37	74
Rural	13	26



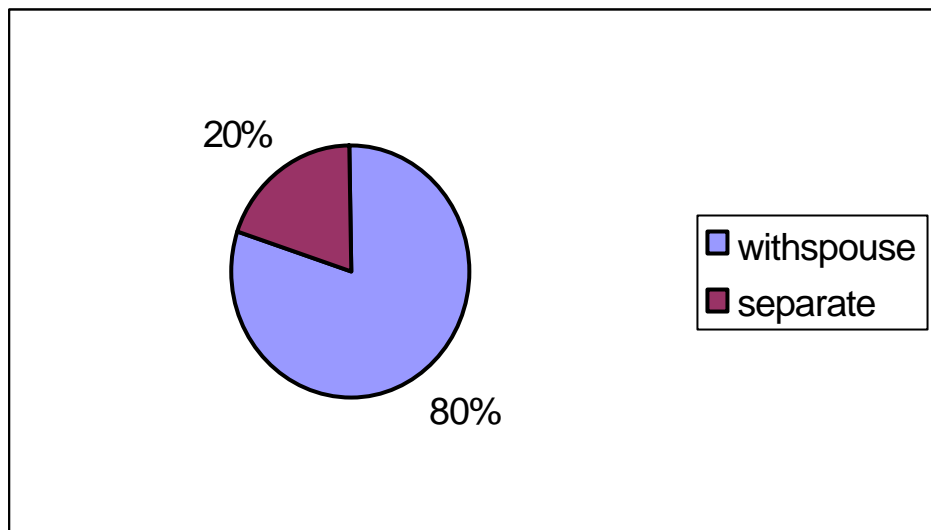
**Figure 4.9 Place of residence of pregnant women**

#### 4.3.1.7 Staying with spouse/partner

Table 4.9 and Figure 4.9 show the distribution of women who stayed with their spouses/partners. Forty, (80%) pregnant women stayed with their spouses/partners against 10 (20%) pregnant women who did not stay with their partners. The pregnant women who did not stay with their partners/spouses were single. The number of single women was 6 (12%). The 4 (8%) pregnant women who did not stay with their spouses provided a reason for this situation as the fact that their spouses worked outside Bulawayo city and they visited their families during weekends only.

**Table 4.9 Staying with spouse/partner**

Response	Frequency	Percentage
Yes	40	80
No	10	20



**Fig 4.10 Women who live with their spouses/partners**

A number of factors, which include migrant labour and employment, separate spouses from each other. Such forced separate lives of husbands and wives could fuel the HIV/AIDS epidemic and increase the need for pregnant women to use PPTCT services in Zimbabwe.

“It is common for Shona men to have multiple partners. Many men and women think that it is natural for men to have more partners, or that a man’s sexual drive is so strong that it can not be controlled” (Goercke 2004:19). This behaviour is made worse when couples are separated by either migrant employment or labour. Many men engage in extramarital affairs with high-risk populations such as commercial sex workers. If these men fail to use condoms correctly they put their spouses at

high risk of contracting HIV/AIDS, which could be passed on to their babies if the wives are pregnant or breastfeeding.

#### **4.4 VARIABLES AFFECTING THE LIKELIHOOD OF TAKING ACTIONS ON PPTCT OF HIV/AIDS**

The following section discusses variables affecting the likelihood of taking actions pertaining to PPTCT of HIV/AIDS.

##### **4.4.1 Practices adopted by pregnant women in relation to PPTCT OF HIV / AIDS**

Table 4.10 shows the practices adopted by pregnant women in relation to PPTCT of HIV/AIDS

**Table 4.10 Practices of pregnant women in relation to PPTCT of HIV/AIDS**

Practices	Frequency	Percentage
Pregnant women willing to visit VCT services	28	56
Pregnant women who were not willing to visit VCT services	22	44
Pregnant women who would not visit traditional healers	49	98
Pregnant women who would visit traditional healers	0	0
Pregnant women who were not sure whether or nor they would visit a traditional healer	1	2
Pregnant women who would opt for vaginal deliveries	23	46

Pregnant women who would opt for caesarian sections	27	54
Pregnant women who wanted more information on PPTCT of HIV/AIDS	29	58
Method of family planning they would use after delivery		
Response	Frequency	Percentage
Oral contraceptives	25	50
Hormonal implants	8	16
Depo provera	12	24
Tubal ligation (surgical sterilisation – females)	1	2
Male condoms	2	4
Undecided	2	4
Pregnant women who would go to a health centre for a follow up visit	25	50

#### 4.4.1.1 Women who would visit VCT centres

Of the pregnant women 56% (n=28) women were willing to seek VCT services, but 44% (n=22) were not willing to seek these services. Of the 28 pregnant mothers who would visit VCT centres, 42% (n=12) stated that HIV is like any other disease, thus it has to be diagnosed and treatment commenced with appropriate management being instituted. Of the 28 women who would visit VCT centres, 58% (n=16) said that if they get more knowledge from the health personnel and hence change their attitudes towards HIV/AIDS, they could also make more informed decisions.

Of the 22 pregnant women who would not visit VCT services, 36% (n=8) preferred to die without knowing their HIV status, an equal number (n=8) were afraid of depressing

themselves if found to be HIV positive, 28% (n=6) stated that neighbours and friends would “point fingers at” them.

VCT is a major component of HIV prevention and care programs. In Zimbabwe HIV testing, and pre and post counselling of women seeking ANC should be done on a voluntary basis. The Government of Zimbabwe is embarking on these programmes so as to reduce PTCT of HIV/AIDS.

“It is assumed that knowledge of one’s HIV status acquired voluntarily in a supportive environment with appropriate pre-test and post-test counselling is a significant motivator for positive behaviour change” (MOHCW 1999:15). VCT for HIV should be accessible to pregnant women and their spouses as an important intervention for HIV/AIDS prevention and control. VCT services have been integrated into MCH programmes in Zimbabwe.

#### **4.4.1.2 Pregnant women’s intentions to use ARVs or visit traditional healers**

Of the pregnant women 50 (100%) opted to use the ARV’s against 0 (0%) who would visit a traditional healer. Only 1 person (2%) was unsure whether she would visit a traditional healer or use ARVs.

They gave the reason that traditional healers' treatment is not scientifically proven, and never made public and that some of the herbs used are toxic. However, these answers of using ARVs rather than visiting traditional healers might be attributed to the sample of pregnant women using ANC services. With different population groups, and different samples, some pregnant women in Zimbabwe might opt to go to traditional healers rather than to use ARVs. "When people hear they have HIV/AIDS, they may be confident that the relevant traditional remedies will cure them, whether this means taking medicines, resolving witchcraft, appeasing angry spirits or other interventions" (Jackson 2002:203). According to Goercke (2004:64), "geographical location had a significant impact on how pregnant women regarded traditional healers. Peri-urban pregnant women said that traditional healers could either treat symptoms or cure HIV/AIDS". Some of the practices of the traditional healers like douching the vagina with herbs, cutting their clients with unhygienic razor blades in an attempt to insert herbs into the blood stream increase PTCT of HIV/AIDS. It is illegal for traditional healers to practise within Zimbabwe without a licence of the Zimbabwe National Association of Traditional Healers. "The advice given by traditional healers is taken seriously by many people as they are a highly trusted source of support and information" (Goercke 2004:67). "Workshops for traditional healers were held to increase their knowledge on HIV/AIDS" (Goercke 2004:66). They were also dissuaded from harmful practices.

A total of 22 (44%) pregnant women were not willing to seek VCT services, 56% opted to visit the services, and 50 (100%) pregnant women would be prepared to be given Nevirapine when they are in labour and the baby gets Nevirapine within 72 hours after birth.

#### **4.4.1.3 Preferred method of delivery: if found to be HIV +ve**

A total of 27 (54%) of the pregnant women would prefer lower caesarean sections against 23 (46%) of the pregnant women who would prefer to have vaginal deliveries, even if they should be HIV+ve. The pregnant women gave the main reason for preferring caesarean section was to reduce the chance transmitting HIV to the baby during the birth process.

Those women who preferred vaginal deliveries did so because they feared that their caesarean section wounds would not heal because they might be immuno-compromised.

“Elective caesarean section reduces the risk of transmission, but will not be available in many settings” (MOHCW 2002:31). This practice cannot be performed routinely for HIV +ve women in most developing countries, including Zimbabwe, because of the lack of resources. Higher rates of postoperative infections do occur among HIV +ve women.

In Zimbabwe because of the shortage of resources, Caesarean sections are very expensive costing more than a million Zimbabwean dollars, which is beyond the reach of many pregnant women. Vaginal deliveries are more likely to increase the risk PTCT of HIV/AIDS. Average wages for women are around ZW\$10m (ten million Zimbabwean Dollars) or US\$10 at 2005 exchange rates.



A normal vaginal delivery costs about ZW\$1,5m (one million five hundred thousand Zimbabwean dollars) which was US\$15.00 (fifteen United States Dollars). A caesarean section is ZW\$4m (four million Zimbabwean Dollars) which was about US\$40.00 during 2005. TBAs charge around ZW\$500 000.00 (five hundred thousand Zimbabwean Dollars) or US\$5. All antenatal and post natal services are charged for. The Government no longer offered free health services In Zimbabwe during 2005 when this study was done.

The most common mode of delivery in Zimbabwe is vaginal. Many women do not know their HIV status. Universal precautions for infection control were used for all deliveries (Southern Africa HIV/AIDS action 2000:9). For HIV positive mothers, Nevirapine is administered when the woman is in established labour. Practices that break the skin and increase the baby's contact with the mother's blood should be avoided (for example episiotomies). Artificial rupture of membranes should also be avoided as it increases PTCT of HIV/AIDS. Pregnant women are not routinely tested for HIV/AIDS. HIV testing is voluntary.

#### **4.4.1.4 Planned contraceptives to be used after the delivery of the baby**

Table 4.10 shows that 50% (n=25) of the pregnant women would use oral contraceptive because: -

They have been using them for a long time without developing severe side effects.

Oral contraceptives are easy to use.

The "pills" can be carried around in a handbag.

Only 24% (n=12) of the pregnant women would use Depo-Provera because it is long acting, convenient and it promotes lactation.

Unexpectedly 2% (n=1) of pregnant women would have tubal ligations done because she considered her family to be complete and she wanted a permanent method without side effects. Although Zimbabwe's health resources are limited, HIV +ve pregnant women who desire tubal ligations should perhaps be considered for LSCS and simultaneous tubal ligation as this will reduce the chances of MTC and ensure that the mother's health is not further depleted by future pregnancies.

Only 4% (n=2) of the pregnant women would use condoms because it involves no hormonal intakes and there are no severe side effects. Surprisingly, as many as 16% (n=8) of the pregnant women would use hormonal implants (such as Norplant) because it is long acting, but reversible should a future pregnancy be desired. Only 4% (n=2) of the women were undecided about future contraceptives. Women pay for the contraceptives in Zimbabwe. Each packet of contraceptive pills costed about ZW\$50 000.00. However due to Zimbabwe's hyperinflation rates, prices increased almost daily in 2005.

According to ZDHS (1999:XVI) "a 50% contraceptive prevalence rate of modern methods, and almost universal knowledge of modern methods of family planning at 98.5%" was

reported in Zimbabwe in 1999. “Despite a high knowledge and awareness of modern family planning methods there is still a gap in the use of modern family planning methods and the programme is pill dominated” (MOHCW 2001:91). Efforts are being made to broaden the method mix and increase the use of long term and permanent methods. “Oral contraceptives are not effective in preventing HIV/AIDS” (MOHCW 2001:94). HIV +ve mothers were given information about different family planning options, recommending permanent family planning methods, such as surgical sterilisation. All women in Zimbabwe, but especially those who are HIV +ve should be informed about emergency contraceptives.

#### **4.4.1.5 Preferred places for follow up after delivery**

All (n=50) the pregnant women would go to the nearest clinic/health centre for follow up visits, because there they could get medical treatment for themselves and for their babies

All centres offer the “supermarket approach” implying that immunisations for the baby, family planning services for mothers and health education sessions are all offered under one roof.

#### **4.4.1.6 Additional information concerning PPTCT of HIV / AIDS**

All 19 (38%) women who had indicated that they had no knowledge about PPTCT of HIV/AIDS, requested for more information about this topic. Of the 31 (62%) who had some

knowledge about PPTCT of HIV/AIDS, 10 (20%) pregnant women wanted to learn more about the most recent information about PPTCT of HIV/AIDS.

#### **4.5 SUMMARY**

This chapter presented the results of the analysis of the data by quantitative methods. The findings show that the more knowledge pregnant women had, the more positive attitudes they exhibited and were more inclined to adopt positive practices concerning PPTCT of HIV/AIDS. Without changing attitudes, health education alone does not lead to the adoption of positive health practices. The next chapter will discuss the conclusions and limitations of this research and make recommendations to enable more women in Zimbabwe to use the PPTCT of HIV/AIDS services.

## **CHAPTER 5**

### **CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS**

#### **5.1 INTRODUCTION**

In chapter 4 the results of the research were discussed and substantiated by providing references to the relevant literature in order to place the research findings within the context of the reviewed literature. In this chapter, the conclusions, limitations and recommendations will be presented and discussed. The research findings revealed the need to disseminate more information on PPTCT of HIV/AIDS to antenatal mothers in the Bulawayo region of Zimbabwe. The findings also supported the hypothesis that there is a relationship between knowledge, attitudes and practices of PPTCT of HIV/AIDS, as knowledge increases, attitudes improve and this consequently improves practices.

#### **5.2 CONCLUSIONS**

Conclusions and recommendations are discussed under the following headings in order to place the conclusions within the context of the HBM:

- Individual perceptions of PPTCT of HIV/AIDS
- Modifying factors
- Variables affecting the likelihood of taking action

## **5.2.1 Individual perceptions**

Individual perceptions of the 50 pregnant women who participated in this study will be discussed under attitudes towards and knowledge about PPTCT of HIV/AIDS.

### **5.2.1.1 Attitudes towards PPTCT of HIV/AIDS**

Participants responded to questions, which sought information on the attitudes pregnant women had towards PPTCT of HIV/AIDS. Twenty seven (54%) of the pregnant women were willing to be tested for HIV/AIDS, 28% (n=14) were unwilling to be tested and 18% (n=9) were not sure. The results indicated that the majority of the pregnant women were willing to be tested for HIV/AIDS.

Out of the 54% (n=27) pregnant women who wanted to be tested, 96% (n=26) wanted to know their results, only one (4%) did not want to know these results. Thus almost all women who wanted to be tested for HIV also wanted to know their results.

Of the 27 pregnant women willing to be tested, when asked whether in the event of being found HIV +ve, they would disclose the results to someone, 85% (n=23) stated that they would tell someone about their results while 15% (n=4) would not tell anyone. Those unwilling to be tested stated that they feared discrimination and stigmatisation.

Of those 23 women willing to disclose their HIV+ve status, 78% (n=18) would tell their partners while 39% (n=9) would tell their siblings or parents. The results showed that once identified as HIV +ve, the majority of the women wanted to share their plight with someone.

Some employed women feared losing their jobs if they disclosed their HIV +ve status. More than half of the pregnant women (62%; n=31) felt free to discuss PPTCT of HIV/AIDS with their husbands/partners.

The women were also asked about their preferred methods of delivery in the event of being HIV +ve. Only 54% (n=27) of the pregnant women would prefer to deliver their babies by caesarean section while 46% (n=23) would prefer to deliver vaginally even if they were HIV+ve.

The pregnant mothers were also asked whether they would visit traditional healers to give them herbs to cleanse the milk; 98% (n=49) women stated that they would not consult traditional healers while 2% (n=1) remained unsure. The majority of the pregnant women would not visit traditional healers.

As many as 56% (n=28) of the pregnant mothers were willing to visit VCT centres while 44% (n=22) were not willing to do so. The pregnant women who were willing to visit the VCT centres were also willing to be commenced on ARV drugs, should that be necessary.

#### **5.2.1.2 Knowledge on PPTCT of HIV/AIDS**

Questions were asked to ascertain the amount of knowledge pregnant women had about PPTCT of HIV/AIDS. Thirty-one women (62%) knew the definition of PPTCT of HIV/AIDS as compared to 19 (38%) who did not know what it meant. The results indicated that more than half of the pregnant women knew about PPTCT of HIV/AIDS.

Of the pregnant women who had no knowledge of PPTCT of HIV/AIDS, 52% (n=26) were from the rural areas while 48% (n=24) were from the urban areas. This indicated that the knowledge gap between urban and rural areas was small. Among the 62% who had PPTCT knowledge, 32% had obtained the information from health centres, 4% from the New Start Centres, and 64% from the media. The results showed that the media provided most of the information about PPTCT of HIV/AIDS, even slightly more than the health care centres.

## **5.2.2 Modifying factors**

The following factors were considered as possible influences on the attitudes pregnant women had about PPTCT of HIV/AIDS; marital status, level of education, employment status and residential area.

### **5.2.2.1 Age**

Of the booked pregnant women, 38% were within the age group of 26-30 years, with only 4% being older than 40 years of age. In Zimbabwe the childbearing ages are between 12 and 49 years of age. All the women who participated in this research were thus within the childbearing age but the majority of the women were young adults, indicating that they could possibly bear some more children.

### **5.2.2.2 Marital status**

Of the participating pregnant women only 12% were single, while the majority (88%) were married and of the 44 (88%) who were married, 80% (n=40) stayed with their husbands.



### **5.2.2.3 Level of education**

The data indicated that 68% of the pregnant women had attained secondary education, 18% had attained primary education and 14% had gone as far as tertiary level. All the women were literate. Literate women can comprehend health education on PPTCT of HIV/AIDS and read information on PPTCT of HIV/AIDS. This might explain the percentage (62%) of pregnant women who knew about PPTCT of HIV/AIDS.

### **5.2.2.4 Employment status**

The data on employment status indicated that 70% of the pregnant women were unemployed and 30% were employed. Unemployed women indicated that they were economically dependent on their spouses. There were 74% booked pregnant women from urban areas against 26% from rural areas.

## **5.2.3 Variables affecting likelihood of taking actions concerning PPTCT of HIV/AIDS**

The topic was discussed under the following headings: - method of family planning, mode of feeding the baby, follow-up visits after delivery.

### **5.2.3.1 Family planning**

The research results indicated that 50% would use oral contraceptives, 24% Depo Provera, 16% hormonal implants (Norplant), 2% opted for tubal ligations, while 4% were undecided.

### **5.2.3.2 Mode of feeding**

When the pregnant women were asked, if found to be HIV +ve, whether or not they would breastfeed their babies, 44% stated that they would breastfeed while 56% would not. The pregnant women knew that breast milk can transmit HIV to the baby. Nevertheless, due to increasing transport costs for visiting hospitals to collect infant formula feed, some would have to breastfeed their babies even if they were HIV +ve. Many women said they had no option except to breastfeed their babies.

### **5.3.3.4 Follow up after delivery**

Participants were asked where, after delivery, they would go for follow-up like post natal visits, family planning and baby clinics. All 50 (100%) of the pregnant women indicated that they would go to the nearest clinic. Some of the women highlighted fear of toxicity of herbs used by traditional healers.

## **5.3 RECOMMENDATIONS**

The following recommendations, based on the conclusions could help to enable more women in Zimbabwe to utilise PPTCT of HIV/AIDS.

### **5.3.1 Knowledge on PPTCT of HIV/AIDS**

Most of the pregnant women have information on PPTCT of HIV/AIDS. They need to be kept updated with new information on HIV/AIDS. The health workers should attend workshops so that they are updated and are able to give more accurate information on PPTCT of HIV/AIDS to pregnant mothers.

### **5.3.2 Availability of resources**

PPTCT of HIV/AIDS programs would save the lives of many babies of HIV positive mothers if enough resources were available. Inequitable distribution of experienced and trained staff leaves some pregnant women to be cared for by inexperienced staff and TBA's. caesarean sections should be available to pregnant HIV +ve women who opt to use this, especially those who would be willing to undergo surgical sterilisations simultaneously with the caesarean sections. There should be active political involvement in PPTCT of HIV/AIDS programs.

### **5.3.3 Involvement of husbands/partners**

A husband makes decisions on how many children his wife should have, what method of family planning the wife should use and even decides when and where the wife should go for ANC. The husbands should be involved in PPTCT of HIV/AIDS programmes. The men should be educated on how to keep the pregnancy safe by practising safer sex, protecting

the health of their babies and using VCT services with their wives, and encouraging their HIV +ve wives to use PPTCT services.

#### **5.3.4 Discrimination and stigmatisation**

The most effective way to address stigmatisation and discrimination is by promoting open dialogue about HIV/AIDS. The dialogue should be led at national level through an aggressive advocacy campaign. Zimbabwe's Ministry of Health must take the leading role in cultivating the culture of acceptance towards HIV/AIDS.

#### **5.3.5 Nursing education**

The curriculum for Registered General nurses in Zimbabwe includes obstetrics in order to prepare the nurse to work in all health care settings. The curriculum should be revised to incorporate more content on PPTCT of HIV/AIDS. For staff already in the field, orientation programmes should be organised in the form of in service education or seminars.

#### **5.3.6 Workshops for traditional healers and TBAs**

The management of traditional healers should become a public concern in Zimbabwe. Pregnant women using services of traditional healers tend to do so secretly. Some practices of traditional healers might fuel PTCT of HIV/AIDS. It is recommended that workshops on PPTCT of HIV/AIDS be conducted for traditional healers and TBAs.

#### **5.4 RECOMMENDATIONS FOR FURTHER RESEARCH**

This study has explored some aspects of PPTCT of HIV/AIDS epidemic in Zimbabwe.

There is need to conduct research on:

- The perceptions of the health personnel in relation to PPTCT of HIV/AIDS
- The knowledge and attitudes of husbands and communities in relation to PPTCT of HIV/AIDS
- The effectiveness and success of PPTCT of HIV/AIDS programmes in terms of lives saved rather than of infections prevented
- The traditional healers' perceptions in relation to PPTCT of HIV/AIDS.

#### **5.5 IMPLICATIONS OF THE RESEARCH RESULTS**

PPTCT of HIV/AIDS should be incorporated into the nursing care routines. When nurses deal with pregnant women, information on PPTCT of HIV/AIDS should be disseminated to all the pregnant women. The curriculum of general nursing training should include PPTCT of HIV/AIDS in order to develop nurses with knowledge of PPTCT of HIV/AIDS. Health centres provide a useful source of health education. Nurses who have not been exposed to training on PPTCT of HIV/AIDS should be sent for workshops and in-service training on the subject. This will result in the nurses being better equipped to provide accurate information on the topic.

It is recommended that the MOHCW should design guidelines on health education for nurses and midwives dealing with pregnant women. This would enable transmission of knowledge on PPTCT of HIV/AIDS throughout the country in a uniform manner. The guidelines would need to be reviewed periodically in order to keep abreast with new knowledge and practices worldwide.

## **5.6 LIMITATIONS OF THE RESEARCH**

The following problems regarding sampling are discussed. The sample was hospital based and only focused on the pregnant mothers attending one hospital's ANC.

The small number of participants (n=50) meant that the sample might not be representative of the general population because not every element in the population had an equal chance of being included in the sample, as would be the case in probability sampling. The sample may not be representative of the larger group of pregnant women in Zimbabwe.

Nonprobability sampling does not permit generalisation of the research findings from the sample to the population. The nonprobability sampling approach used in this research is a serious disadvantage because of the risk of "bias" subjectivity plays a part in sample selection.

## **5.7 CONCLUDING REMARKS**

Positive attitudes are essential for the pregnant women to adopt recommended practices of PPTCT of HIV/AIDS. Ongoing training of health workers so as to equip them with the latest

information is essential. Latest information on PPTCT of HIV/AIDS should be disseminated to all the pregnant women in Zimbabwe. Equitable distribution of trained health workers and evaluation of the PPTCT programme will improve the uptake of PPTCT of HIV/AIDS programme. Tabi and Frimpong (2003:249) concluded that: "HIV and AIDS are major public health problems throughout the world, particularly in developing countries with high fertility rates. The concomitant high fertility and high HIV infection rates increase the risk of vertical HIV transmission and infection in newborns and children. The importance of understanding the global effect of HIV infection among women is crucial to develop interventions to meet the challenges posed by this devastating disease on the health of vulnerable populations worldwide, and particularly in Africa. Equally important is the effect of HIV deaths on families, social systems, and national economic growth and development. Nurse leaders and policy-makers in African countries and of the global community will have to do far more to really make a difference to the epidemic".

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## ANNEXURES

### ANNEXURE A

1. Letter to the office of the medical superintendent of United Bulawayo Hospitals seeking authority to conduct study at the hospital.
2. Letter from the medical superintendent of United Bulawayo hospitals granting permission for study to be conducted at the hospital.

### ANNEXURE B

Letter with informed consent form to potential participants requesting them to take part in the study.

### ANNEXURE C

The interview guide

### ANNEXURE D

A completed interview guide

### ANNEXURE E

References from newspapers

5<sup>th</sup> June 2005

United Bulawayo Hospitals  
P O Box 958  
Bulawayo  
Zimbabwe

The superintendent  
United Bulawayo Hospitals  
P O Box 958  
Bulawayo  
Zimbabwe

**RE: REQUEST FOR PERMISSION TO CONDUCT A RESEARCH  
STUDY ENTITLED ANTENATAL MOTHERS' PRACTICES IN  
RELATION TO PPTCT OF HIV/AIDS**

I am requesting for permission to conduct a research study at UBH. This study is submitted as fulfillment of MA in Advanced Nursing Sciences which I am currently undertaking with the University Of South Africa (UNISA).

A copy of this study will be made available to you once it is ready. The information obtained from this study will be treated as confidential information.

Yours sincerely

.....

C Chivonivoni.

**Consent to be a research participant**

Dear Participant

My name is Clara Chivonivoni. I am a student with the University of South Africa, Department of Advanced Nursing Sciences, pursuing masters Degree in Community Health Nursing. I am carrying out a study of the “Antenatal Mothers” practices for Preventing Mother to Child HIV Transmission.”

I am requesting you to answer the following question as honestly as possible. The information given will be treated with confidentiality. Your co-operation in this regard is most appreciated.

Participation in this project is voluntary. No victimization if not participating in the study.

# Structured Interview Guide

Participant no 06/w

## Part I Demographic Data of the booked pregnant woman.

1.1 Age	16 – 20 years	<input type="checkbox"/>
	21 – 25 years	<input type="checkbox"/>
	26 – 30 years	<input type="checkbox"/>
	31 – 35 years	<input type="checkbox"/>
	36 – 40 years	<input type="checkbox"/>
	Above years	<input type="checkbox"/>

1.2 Parity	0 – 1 Children	<input type="checkbox"/>
	2 – 4 Children	<input type="checkbox"/>
	Above 4 Children	<input type="checkbox"/>

1.3 Marital Status	Married	<input type="checkbox"/>
	Single	<input type="checkbox"/>
	Widowed	<input type="checkbox"/>

1.4 Level of Education	Primary	<input type="checkbox"/>
	Secondary	<input type="checkbox"/>
	Tertiary	<input type="checkbox"/>

1.5 Employment Status	Employed	<input type="checkbox"/>
	Unemployed	<input type="checkbox"/>



1.6 Place of Residence

Urban

Rural

\_\_\_\_\_

1.6.1 Do you live with your spouse/partner?

Yes
No

1.6.2 If 'No' give reasons.

.....  
.....

Part 2 Knowledge on PPTCT of HIV/AIDS

2.1 What do you understand by the term PPTCT?

.....  
.....

2.2 Can you tell me how a mother can infect her newborn baby with HIV/AIDS?

.....  
.....

2.3 How can a mother prevent PTC transmission of HIV/AIDS to her baby?

.....  
.....

2.4 How does it benefit the baby for the mother to know her HIV status?

.....  
.....

2.5 Where did you get information about PPTCT of HIV/AIDS?

.....  
.....

Part 3 Attitudes towards PPTCT of HIV/AIDS

3.1 Would you want to be tested for HIV/AIDS

Yes
No
Not sure

3.2 Would you want to know your HIV test results?

Yes
No
Not sure

3.3 If positive what would you do?

.....  
.....

3.4 Whom would you tell about your HIV results?

.....  
.....

3.5 Give reasons to your answer.

.....  
.....

3.6 If negative what would you do?

.....  
.....

3.7 As a couple do you discuss about PPTCT of HIV/AIDS?

Yes	No
-----	----

3.8 If 'not' what are your reasons for not discussing about PPTCT of HIV/AIDS?

.....  
.....

3.9 Do you think an HIV positive mother should breastfeed her baby?

Yes	No
-----	----

3.10 Give reasons for your answer.

.....  
.....

Part 4 Practices adopted by pregnant women in relation to PPTCT of HIV/AIDS

4.1 Would you visit the VCT services?

Yes	No
Not sure	

4.1.1 Give reasons for your answer.

4.2 Would you opt to use ARV's visit the traditional healers or take no action?

4.2.1 Support your answer.

4.3 If you were found to be HIV positive, what method of delivery would you prefer?

4.3.1 Why do you choose that method?

.....  
.....  
4.4 Would you visit the traditional healers to give you medicine for douching and  
cleansing the milk?  
.....

4.4.1 Can you please support your answer?  
.....

4.4.2 If you are going to visit the traditional healers, tell me more on the traditional  
healers' HIV Management.  
.....

4.5 After delivery which family planning method would you use and why?  
.....

4.6 Where would you go for follow-up after delivery?  
.....

4.6.1 Why do you choose that facility?  
.....

4.7 Do you have any additional information you may want to share with me  
concerning PPTCT of HIV/AIDS?  
.....  
.....  
.....

Thank you for participating in the study.