THE CHARACTERISTICS OF PREGNANT WOMEN ATTENDING THE PREVENTION OF MOTHER TO CHILD TRANSMISSION OF HIV (PMTCT) PROGRAMME AT BULAWAYO CITY CLINICS, ZIMBABWE.

by

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DEDICATION

This is dedicated to all women living with HIV, in the sincerest hope that this study will make a small contribution to programme development and implementation. I also wish to dedicate this to my family: Patience, Babongile and Bongiwe, with love.

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DECLARATION

I declare that this dissertation is my own, original work undertaken in partial fulfilment of Master of Arts in Social Behavior studies in HIV/AIDS degree. I have made no use of sources, materials or assistance other than those which have been openly and fully acknowledged in the text.

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LIST OF ACRONYMS AND ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Therapy
ARVs	Antiretroviral Drugs
AZT	An antiretroviral drug that may be used to treat an HIV-positive pregnant woman. In this study, this refers to the drug Zidovudine
df	Degrees of freedom
DFID	Department for International Development (United Kingdom)
HAART	Highly Active Antiretroviral Therapy
HIV	Human Immune Deficiency Virus
HSD	Health Service Director
MOHCW	Ministry of Health and Child Welfare (in Zimbabwe)
MTCT	Mother-to-child-transmission
MSF	Medecin sans Frontieres
NAC	National AIDS Council (of Zimbabwe)
p	Chi-square (degree of statistical significancy)
PMTCT	Prevention of mother-to-child-transmission
PPTCT	Prevention of parent- to-child-transmission
PSI	Population Services International
SADC	Southern African Development Commission
SPSS	Statistical package for social sciences
STIs	Sexual Transmitted Infections
TB	Tuberculosis
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNISA	University of South Africa
USAID	United States Agency for International Development

Abstract

Antiretroviral therapy is an important public health strategy to reduce the risk of HIV vertical transmission. Implementation of such therapy depends on the identification of HIV-infected pregnant women. This study investigated how the biographical characteristics of the pregnant women (16-45 years) influenced their health decision-making in Bulawayo clinics. The study was guided by the theories of health behaviour. The study assumed that the respondents' demographic characteristics will influence their attitudes towards PMTCT programme. Using a structured questionnaire, forty pregnant women who visited the Bulawayo clinics to have prenatal checkups were interviewed. The majority of respondents came from a poor, high-density township. Most of the respondents were married, but about a third were not married at the time data collection and 5% were separated. The survey items were demographic characteristics, knowledge of PMTCT, HIV risk perceptions and service utilisation. The levels of literacy among the respondents were high; more than 80% had completed primary education. Overall the respondents' demographic characteristics influenced their attitudes towards PMTCT. Majority of the women knew that a mother with HIV can pass the virus to her child, during pregnancy, delivery and breastfeeding. The pregnant women's health-seeking behaviour and their attitudes toward reproductive health services are influenced by their demographic situation.

KEY WORDS: antiretroviral, HIV, pregnant, women, demographic, health, PMTCT, attitudes, knowledge, theory.

GLOSSARY OF TERMS

AIDS – Acquired immunodeficiency syndrome. AIDS is the advanced stage of HIV disease. It is marked by characteristic opportunistic infections and malignancies, and a CD4 cell lymphocyte of less than 200 cells per mm/3 (Jackson, Ray & Jenkins-Woelk 2002).

Antiretroviral - drugs that destroy a retrovirus or inhibit its replication (MOHCW, TB & HIV Unit 2005).

CD4 cell - a type of lymphocyte that plays an important role in co-coordinating both antibody-mediated and cell-mediated immune response. CD4 cells are rapidly killed by HIV-infection (MOHCW, TB & HIV Unit 2005).

Exclusive breastfeeding -this is solely breastfeeding an infant without adding water, other liquids or feeds such as semi-solid food (Jackson *et al* 2002).

HIV - Human immunodeficiency virus. HIV is the virus that causes immune deficiency diseases and AIDS worldwide (Jackson *et al* 2002).

Opportunistic infections - Infections that arise when the immune system is suppressed by the HIV virus. Opportunistic infections are responsible for up to 90% of all HIV related deaths (UNAIDS 2003).

Prophylaxis - Medical measures designed to preserve health and prevent the spread of disease. (Jackson *et al* 2002).

Safer sex - sexual practices which prevent potential contact with HIV infected fluids, such as the use of condoms during every act of sexual intercourse, or non-penetrative sex (Jackson *et al* 2002).

CHAPTER ONE: INTRODUCTION

1.1. INTRODUCTION

This chapter presents the background to the study, the international and national perspective on the prevention of mother-to-child-transmission (PMTCT) of HIV, as well as the history of the prevention of mother to child transmission of HIV (PMTCT) programme in Bulawayo, Zimbabwe. The chapter also expounds the statement of the research problem, the purpose of the study, the objectives of the study, the rationale for the study and the limitations of the study.

1.2 BACKGROUND TO THE STUDY

One of the most significant medical break–through since the first diagnosis of HIV in 1983 in the United States of America, was the PMTCT-programme in the prevention of HIV over the past decade (UNAIDS 2005). Within this programme it has been demonstrated that the use of antiretroviral drugs (ARVs) such as Nevirapine and Zidovudine during pregnancy by an HIV infected woman can substantially lower the rate of mother-to-child-transmission of HIV (UNAIDS 2005). The drugs are taken by a pregnant woman when she starts to experience labour pains and given to the baby in the first 72 hours of its life. However, due to lack of information, costs, stigma and discrimination associated with HIV and AIDS very few pregnant women access this service (Zimbabwean Government MOHCW, TB & HIV Unit 2003).

Following the success of medical trials on ARVs in the PMTCT of HIV in developed countries and in some parts of Africa such as Zambia and Uganda, the PMTCT programme was introduced in Zimbabwe as a pilot project in 1999 (Zimbabwean Government MOHCW, TB&HIV Unit 2003). It was scaled up and expanded to national level in 2001 as part of the antenatal care services within the Ministry of Health and Child Welfare (MOHCW) and it was declared a public health priority for pregnant women (Zimbabwean Government MOHCW, TB & HIV Unit 2003). According to the Zimbabwean Ministry of Health and Child Welfare (ZMOHCW 2005),

as of December 2004, Zimbabwe had approximately 265 comprehensive package PMTCT sites and 600 minimum package sites.

The comprehensive sites provide counselling and testing for HIV, offer micronutrients, treatment for sexually transmitted infections (STIs) and malaria and provide ARVs and infant feeding options. These sites are integrated into the already existing maternal and child health care services. They are manned by highly trained health personnel. In contrast, the minimum sites provide limited maternal and child health services such as the provision of ARVs and prophylaxis. These sites have a limited staff compliment. This expansion of services bears testimony to the commitment by the Zimbabwean government to the PMTCT of HIV infections (Zimbabwean Government MOHCW, TB & HIV Unit 2003).

The Zimbabwean government has made it a policy that all pregnant women are to be made aware of the risk of HIV-transmission from mother to child. All pregnant women are provided with information and opportunities for testing for HIV, however, these services are voluntary and women are free to choose not to access them (Zimbabwean Government MOHCW, TB & HIV Unit 2003).

ARV regimes that are used to prevent mother to child HIV-transmission are much simpler and less costly to administer than regimens such as the highly active antiretroviral drugs (HAART), which are given to treat HIV-infections over longer periods (Guay, Rutenberg & Scott 1999). Nevirapine and Zidovudine work by reducing the HI-viral load in the mother's blood. Evidence from the *Uganda: HIVNET 012 randomised trails* indicate that the most effective regime for PMTCT consists of a two or three drug combination therapy (Shaffer *et al* 1999).

Currently triple therapy is out of reach for the ordinary person, because of the exorbitant cost of the drugs. A monthly supply of ARVs costs about $6 million Zimbabwean dollars, when an average wage earner takes home an income of about $8 million per month (Zimbabwe Financial Gazette 2007). The least expensive, yet highly effective and readily available (due to some goodwill of the international development aid agencies like USAID, DFID and MSF) ARV, is a

single dose of Nevirapine given to the mother during labour and the baby in the first 72-hours of life (Zimbabwean Government MOHCW & National AIDS & TB Unit 2003).

A number of PMTCT studies in Zimbabwe undertaken by the Ministry of Health and Child Welfare have concentrated on the evaluation of service delivery at the pilot sites and very little has been done to interrogate the attitudes of the pregnant women towards the PMTCT programme. Hence this study sought to investigate how the demographic characteristics of pregnant women (16- to 45-years) might influence health decision making in the PMTCT programme in four Bulawayo City Clinics. The study focussed on the knowledge, practices and attitudes of pregnant women in Bulawayo.

1.2.1 The PMTCT counselling and testing programme in Bulawayo City clinics

According to the Bulawayo Health Services Report (2006), HIV/AIDS counselling services are routinely offered to all antenatal care (ANC) clinic attendees in order to maximise opportunities for PMTCT. The Voluntary Counselling and Testing (VCT) process aims at equipping pregnant women aged between 16- and 45-years with information and support on PMTCT strategies to enable them to make informed decisions regarding a healthy pregnancy and delivery. This information is also meant to empower them with skills to prevent the sexual transmission of HIV and of other STIs (Bulawayo Health Service Report 2006). Each of the ANC clinics has trained staff, and space for information sharing sessions and counselling about sexual risk reduction and PMTCT. These information sharing sessions and counselling activities include basic information on HIV-transmission, antenatal support and the benefits and implications of the PMTCT programmes (Bulawayo Health Service Report 2006).

The individualised pre-test counselling sessions focus specifically on information on the prevention of HIV-infections, testing as well as the implications of knowing one's HIV-status for the woman and her unborn baby (Population Services International 2005). The pre-test counselling sessions seek to clarify and demystify misconceptions about HIV/AIDS. When a pregnant woman opts for an HIV-test, testing is done on the same day and results given during an individual post-test counselling session, usually after 20 minutes (Bulawayo Health Services

Report 2006). This process is meant to empower, encourage and influence pregnant women to make informed decisions on preventing unborn babies from contracting HIV from them. The Zimbabwean Government's MOHCW, TB & HIV Unit Report (2003) indicates that rapid testing has seen a lot of women coming back to receive their HIV results. In the past, it took more than five days for the test results to be ready and available to the clients, which is believed to have contributed to a low turnout at VCT sites. However, it should be noted that despite these improvements in the testing and processing of the results, there is a 70% result collection rate, which is still low (Zimbabwean Government MOHCW, TB & HIV Unit 2003).

Pregnant women who test HIV-positive are helped through a pre- and post-test counselling session to examine and consider the implications of the results which include some social and medical aspects related to the PMTCT-programme options, such as protected sex, alternative delivery methods and modified breastfeeding (Zimbabwean Government MOHCW, TB & HIV Unit 2003). The aim of the counselling session is to enable pregnant women infected with HIV to decide how to actively reduce the chances of infecting their infants. It also creates an opportunity to examine options to meet future care and support needs and supplementary feeding options (Zimbabwean Government MOHCW, TB & HIV Unit 2003). All these sessions are meant to create an enabling environment for pregnant women to make informed choices and to engender positive attitudes towards the PMTCT programme.

According to the Zimbabwean Government's Ministry of Health and Child Welfare's guidelines on PMTCT of HIV, all women who are infected with HIV are encouraged to disclose their HIV-status to their sexual partners and also to invite them to attend the sessions at the clinics with them (Zimbabwean Government MOHCW, TB & HIV Unit 2003). This is meant to encourage greater involvement of the male sexual partners in the PMTCT programme (Zimbabwean Government MOHCW & PMTCT Unit 2003).

According to the Bulawayo City Health Services Directors' Report (Bulawayo Health Services Report 2006) a total of 20 605 babies were born in the city of Bulawayo in 2005 which represents an overall birth rate of 29, 8 per thousand of the population. In the same year a total of 8 562 deaths were recorded, usually this is 15% less than the records from the Births and

Deaths Registry Department, because the City Council's only records on infant deaths are based on those infants who have been buried in the city. Those that are buried elsewhere are not accounted for due to poor data management within the Registry Department (Zimbabwean Government Gazette 2006).

According to the Bulawayo Health Services Report (2006), AIDS-related illnesses remain the highest cause of the recorded deaths among children below the age of five years. The impact of HIV/AIDS is threatening to reverse the gains made in the reduction of child mortality rate in the last decade. A total of 5 379 babies are reported to have died of AIDS-related illnesses like opportunistic infections in 2006 (Bulawayo Health Services Report 2006). Hence efforts should be made to create awareness about PMTCT and to change public perceptions of the HIV preventive measures. This study investigated the attitudes of pregnant women towards PMTCT intervention strategies.

According to the Bulawayo City Health Clinics Register (2006) made available to the researcher by the Deputy Director of Nursing Services, during the period January 2004 to December 2005 a total of 43 004 babies were delivered at Bulawayo City health clinics. A total of 3 573 pregnant women were pre-test counselled and 3 257 of them agreed to have an HIV-test. Out of those who were tested 800 were HIV-positive. However 316 pregnant women declined to have an HIV-test despite high knowledge levels of the benefits of PMTCT programme (Bulawayo City Health Clinics Register 2006). Out of the 800 women who were HIV-positive, 339 mothers took Nevirapine while 307 babies received the same drug (Bulawayo City Health Clinics Register 2006). These figures indicate that 461 women declined to take Nevirapine after knowing their HIV-status (Bulawayo City Health Clinics Register 2006).

All of the above figures should be a cause for concern to the public health authorities as they indicate a high possibility of mothers infecting their unborn babies or infants with HIV – or to put it differently, it indicates many missed opportunities for the prevention of further HIV-infections. Moreover the Zimbabwean National AIDS Council (1999) survey, cited in the Zimbabwe Demographic and Health Survey (Zimbabwean Government 2006) indicates that 30% of infants born to mothers who are infected with HIV are also infected with HIV. Therefore, it is

imperative that an attempt be made to understand the reason why some pregnant women are still reluctant to enrol in the PMTCT programmes despite knowing the risk of mother-to-child-transmission of HIV (Zimbabwean Government MOHCW & National AIDS & TB Unit 2003). This study therefore set out to investigate the characteristics of 16- to 45-year-old pregnant women attending the Bulawayo city health clinics.

1.3 STATEMENT OF THE PROBLEM

According to the Bulawayo Health Services Report (2006), more than 85% of pregnant women who present themselves for antenatal care (ANC) clinics receive education on the prevention of HIV-infections from a mother to a child and 62% of all such clinic attendees receive individualised counselling sessions on HIV/AIDS. They also receive information about the process and the benefits of the PMTCT programme including antiretroviral drugs. However, despite the high levels of HIV/AIDS awareness and awareness of the benefits of the PMTCT programme, some HIV-positive women are still reluctant to enrol for the PMTCT programme. In order to offer better services, the demographic characteristics of women eligible for PMTCT would help programme designers to better understand the target audiences for specific interventions (Bulawayo Health Services Report 2006).

There are inconsistencies between what is happening on the ground and the ideals set by the policy framework for the Zimbabwean PMTCT-programme. Hence this study investigated the characteristics of pregnant women between the ages of 16- and 45-years who are eligible for enrolment in the PMTCT programme in the Bulawayo City Health Clinics (Zimbabwe).

1.4 PURPOSE OF THE STUDY

The study sought to determine the following:

- How demographic characteristics of pregnant women attending antenatal clinics are related to their attitudes towards the PMTCT-programme offered at Bulawayo City Health clinics.

- Which factors might contribute to some pregnant women (enrolled in the MTCT programme at Bulawayo City Health clinics) refusing free Nevirapine treatment during pregnancy.

1.5 OBJECTIVES OF THE STUDY

The objectives that guided the study were to:

- Investigate how biographical characteristics of pregnant women might influence health decision-making in Bulawayo City Health clinics.
- Investigate the reasons why some pregnant women decline an HIV-test and decline to enrol in the PMTCT programme
- Measure the attitudes of pregnant women towards the prevention of mother-to-child-transmission of HIV programme offered in Bulawayo City Health clinics
- Measure the knowledge of pregnant women concerning HIV/AIDS and the PMTCT-programme.

1.6 ASSUMPTIONS

The study assumed that demographic variables drive the women's decisions to make use of the facilities and services offered by the PMTCT programme in Bulawayo City Health clinics. It also assumed that higher levels of knowledge of HIV/AIDS and PTMTCT would lead to better utilisation of the PMTCT programme at Bulawayo City Health Clinics.

1.7 RATIONALE FOR THE STUDY

Since the inception of the PMTCT programme at Bulawayo City Health clinics in 1999, the Medical Director's office has not yet instituted a systematic evaluation of the acceptability of the MTCT programme by the target population. The Zimbabwean Ministry of Health and Child Welfare's understanding is limited to information focussing on VCT in the antenatal care (ANC) setting in the Bulawayo City Health Department, especially on service utilisation by pregnant

women and their perceptions of the services (Bulawayo Health Services Report 2006). In its recommendations, the study identified practical needs by women with regard to PMTCT of HIV.

1.8. STUDY LIMITATIONS

The study was undertaken during a particularly difficult political and economic period in Zimbabwe. Meetings outside public health facilities of more than five people were to be sanctioned by the police; hence all the appointments with the respondents were done at the clinic. There were serious shortages of basic commodities and fuel which resulted in the rescheduling of appointments, because the respondents spent most of their time in queues, chasing after the scarce commodities. This affected the data collection. However, contingency plans were put in place not to compromise the quality of the research process and outcome. The researcher failed to secure enough funding to cover transport, typing, stationery cost as well as engaging the services of more research assistants. This impinged on the amount of time spent in the field gathering data. The initial plan was to collect data within two weeks, but due to the above-mentioned challenges, it took about four weeks to complete the data collection.

The attitudes of the health workers also played a part in the delay of the data collection process. Health personnel in the Zimbabwean public service are poorly paid. Some publicly displayed negative attitudes towards the research team, despite clear communication from their superiors on the objectives of the study. A notable number wanted to be paid for the effort. This delayed the data collection in one clinic, by almost an hour and was only resolved after the clinic manager intervened.

1.9 CONCLUSION

The study sought to investigate how the demographic characteristics of the antenatal care (ANC) clinic attendees at the Bulawayo city health clinics are related to their health decision-making. Such findings are important to help tailor intervention programmes tailored to specific subgroups of women so that the uptake of VCT and of enrolment in the PMTCT-programmes can be addressed. The study used a descriptive survey research design. The respondents in this study

were 40 pregnant women (aged 16- to 45-years) who presented themselves at ANC clinics in Bulawayo between October 2007 and November 2007 and who received PMTCT education or were counselled and tested for HIV. The financial cost and the economic conditions that were prevailing at the time of data gathering made it impossible to increase the number of the respondents.

The dissertation is structured in the following way. In the first chapter the background to the study is discussed. Chapter two reviews the related literature and research work done on the PMTCT of HIV-infections in Zimbabwe and in the region. The third chapter covers the methods used and the data collection process. Chapter four covers the data presentation and data analysis. The last chapter addresses the conclusions and recommendations drawn from the study.

CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

This study investigated the biographical characteristics of pregnant women attending the PMTCT programme at Bulawayo City Health Clinics in Zimbabwe. This chapter reviews literature on the PMTCT of HIV-infections as researched by different authors. It traces the history of AIDS epidemic in Zimbabwe and the determinants of the prevention of mother-to-child-transmission of HIV-infections.

2.2 BACKGROUND TO THE AIDS EPIDEMIC IN ZIMBABWE

Zimbabwe has experienced one of the highest HIV-prevalence rates in the world. The first AIDS case was officially diagnosed in 1985. According to the Zimbabwean Ministry of Health and Child Welfare's 2005 report, the HIV prevalence rate for adults (15- to 49-years) has dramatically increased from an estimated figure of below 1% in 1985 to over 30% in 2001. It is estimated that over 1.8 million of the 12 million people were living with HIV in 2001. In 2003 the seroprevalence rate declined from 33.7% to 24.6%. The 2006 MOHCW preliminary report suggests that the HIV prevalence rate further declined to 18.1% (Zimbabwean Government MOHCW, TB & HIV Unit 2005). However, it is interesting to note that, about 1.3 million of the persons living with HIV are adults in the age group 15- to 49-years, the majority of which are women (UNAIDS 2005).

According to modelled estimates the acceleration of the epidemic in Zimbabwe has been largely driven by heterosexual transmission, with estimates that between 80% to 90% of HIV-infections arises from sexual contact and between 7% to 15% through mother–to-child transmission and a very small share through intravenous infections (Zimbabwean Government MOHCW, TB & HIV 2005). It is important however, to note that although infection risk has been generalised to the entire sexually active population, the population is not uniformly affected. Age, gender, education and locality are all associated with the uneven distribution of the epidemic.

According to the Zimbabwe Human Development Survey (2005-2006), more than half of all new HIV-infections occur among young people aged 15- to 24-years. Youth aged 15- to 19-years, particularly girls are more vulnerable to HIV-infection, and the differences in infection levels between men and women are most pronounced among young people (aged 15- to 24-years). Young women (aged 15- to 24-years) are three to six times more likely to be infected than young men (Zimbabwe National Family Planning Council 2003). The research evidence from the ZNFPC 2003 (*Zimbabwe Young Adult Survey 2001-2003*) shows that among 15- to 19-year-old girls, those who enrolled in school are more than five times less likely to have been infected with HIV than those who have dropped out. Recent research has shown that being female and an orphan is strongly associated with HIV prevalence in rural Zimbabwe (Zimbabwe National Family Planning Council 2003).

2.2.1 Knowledge of HIV/AIDS in Zimbabwe

There is much evidence that basic factual knowledge about HIV/AIDS and prevention is well established at a national level. In this regards, the Zimbabwe Demographic and Health Survey (2005-6) reports that 86% of females aged 15- to 49-years had heard of HIV/AIDS by 1988 and by 1999 this had risen to 96% of females and 99% of males. Between 1994 and 1999, according to the Zimbabwe Demographic and Health Survey of 2005 to 2006 (Zimbabwean Government 2006), the proportions of adults who were aware that a healthy-looking person can be HIV-infected did not change, and remained slightly higher for men than women (85% and 76%, respectively in 1999).

According to the Zimbabwe Demographic and Health Survey of 2005 to 2006 (Zimbabwean Government 2006), by 1999, 88% of males and 86% of females knew that HIV can be transmitted from an HIV-positive mother to her child during pregnancy. Considerably fewer respondents knew that mother-to-child-transmission of HIV can occur during delivery (males 19%; females 14%) or via breast-feeding (males 36%; females 33%).

Unfortunately, surveys are unable to keep track of the changing knowledge needs in terms of people's responses to the epidemic. For example, there has been little indication about the extent

to which the population is aware that the administration of post-HIV prophylaxis within 72 hours after sexual assault is a highly effective prevention measure or about the perceived efficacy of condoms. Knowledge about prevention options and resources and about risk behaviours may be considerably less developed than people's general basic knowledge about HIV/AIDS. The 1997 National Youth Reproductive Health survey cited in Zimbabwe Demographic and Health Survey of 2005 to 2006 (Zimbabwean Government 2006) shows that at the time of the survey, there was considerable ignorance among young people about reproductive health issues.

2.2.2 Perceptions of personal vulnerability to HIV-infection in Zimbabwe

A review of the literature on the interactions of perceived personal vulnerability and risk reduction behaviour shows that people may perceive themselves not to be personally vulnerable because they adopt HIV risk-prevention measures. This has sometimes led to the erroneous finding that there is not a positive relationship between perception of vulnerability and risk-reduction (Zimbabwean Government 2006).

Another reason for assuming that a weak relationship exists between perceived vulnerability and risk-reduction is the frequent claim that awareness of the risks of HIV-infections are high, but that behaviour change is lagging behind. This means that people might know they are at risk but this knowledge does not translate into preventive action. Again this may be based on fallacy; in this case awareness of personal risks is equivalent to awareness of personal vulnerability. In fact it may be the case that the population's susceptibility is due to personal or cultural beliefs or major power differences in decision-making between men and women (Zimbabwean Government 2006).

2.2.3 Condom use in Zimbabwe

According to Bassett and Mhloyi (1999), condom use is strongly associated by both men and women with extra-marital sex, whether as a means of contraception or as protection from STIs. Although most women seem to know that condoms are their best or most practical defence

against HIV-infection, the majority are negatively disposed to using them (Bassett & Mhloyi 1999).

The 2005 to 2006 Zimbabwe Demographic and Health Survey's findings suggest that the majority of women feared breakage and contact with the lubricating gel (referred to as "grease"), which they believed were the causes of diseases and possibly death (Zimbabwean Government 2006). They also claimed that condoms have an unpleasant odour and that they decrease their sexual pleasure. Many believed that for similar reasons men would not use them. However, the survey results indicate that in addition to their objections to the physical properties of condoms, women complained that the use of condoms threatens a stable relationship by suggesting that one partner is either diseased or unfaithful. It is therefore inappropriate for women in a marital relationship to suggest condom use, although they believed that promiscuous young girls, sex workers and others who wish to avoid pregnancy have a right to use them (Zimbabwean Government 2006).

These results from the Zimbabwe Demographic and Health Survey of 2005 to 2006 (Zimbabwean Government 2006) suggest that the quality of the latex used in condoms is very important, but so too are education and information sharing to teach the proper use of condoms and to dispel myths about condoms as a cause of disease. Moreover, HIV/AIDS education programmes must address the perception of a condom as a threat to the stability of relationships. It should be noted however, that these are complex and difficult issues, but if they are not directly addressed and resolved, suspicion and fear will continue to deny many women the right to protect themselves and their unborn babies from HIV-infection.

2.3 MOTHER-TO-CHILD-TRANSMISSION OF HIV

One of the tragedies of infant AIDS-related deaths is that the HI-virus can pass through from the mother's bloodstream and other body fluids, including breast milk, to the baby and cause infection (Jackson *et al* 2002). Worldwide, more than 4 million children are estimated to have died of AIDS-related illnesses, primarily contracted through mother–to-child transmission (MTCT). MTCT is especially widespread in sub-Saharan Africa, where approximately 600 000

babies become infected with HIV every year (Jackson *et al* 2002). MTCT can occur during pregnancy, at the time of delivery or through breastfeeding.

Antiretroviral prophylaxis is an important public health strategy to reduce the risk of HIV vertical transmission. Although short course regimens for the PMTCT of HIV-infections are available and cost effective, the implementation of the programme faces a number of challenges. Implementation of such therapy depends on the identification of HIV-infected pregnant women. There is generally a low uptake of voluntary counselling and testing (VCT), failure to return for HIV-test results and or failure of attend follow-up visits before starting antiretroviral therapy (Zimbabwe Government MOHCW, TB & HIV Unit 2005).

According to Zimbabwe Demographic and Health Survey of 2005 to 2006, most of the documented research to assess the health service utilisation in Zimbabwe has concentrated on rural areas, farms and mines (Zimbabwean Government 2006). Therefore, it is not quite clear whether such findings can safely be generalised to the entire country. It should be noted that there are marked differences in the demographic characteristics of the rural population when compared to the urban population. The urban dwellers are more knowledgeable and sophisticated, educated and economically advanced than the rural population. This study investigated how the demographic characteristics influence health decision-making of urban pregnant women on prenatal HIV-testing and their willingness to take antiretroviral prophylaxis to prevent HIV prenatal transmission if needed.

The risk of mother-to-child-transmission of HIV-infection ranges from 15% to 35% (UNAIDS 2005). UNAIDS has developed a standard method for calculating rates of vertical transmission that take into account entry criteria for enrolment in prenatal studies, follow-up procedures, diagnostic criteria and case definitions (UNAIDS 2005). These procedures, criteria and definitions ought to be followed worldwide, but unfortunately in Zimbabwe adhering to these guidelines is hampered by a lack of capacity and a shortage of manpower due to the prevailing economic decline in the country. According to the Zimbabwe Health Professions Council (2006) the country has witnessed an exodus of experienced and qualified health personnel to Europe and neighbouring countries leaving behind a cadre of inexperienced and de-motivated staff.

They work under very difficult conditions hence chances of compromising health standards are high. The situation has been worsened by the lack of drugs and proper equipment (Zimbabwe Health Professions Council 2006).

2.3.1 Maternity services in Zimbabwe

Public health services are widely used for antenatal and maternity care in Zimbabwe, although the quality and availability of facilities varies between urban and rural areas, and between regions. According to the Zimbabwe Demographic and Health Survey of 2005 to 2006 (Zimbabwean Government 2006) over two thirds of women in Zimbabwe give birth at public health facilities. Seventy per cent of women giving birth receive assistance from medically trained personnel. Two thirds of women make their first antenatal visit at less than six months of pregnancy, and a quarter between six and seven months.

Antenatal care involves routine examinations to monitor the foetus and the health of the mother. Treatment is offered if abnormalities are detected during any of the investigations. Women are also routinely given iron tablets and folic acid, however there are charges for antenatal services, which vary from area to area. Although Zimbabwe has a high coverage of antenatal clinics, some women may not have access to trained midwives and obstetricians because of the current shortages in health staff. Such women may then be taken care of by traditional midwives, of who only some have received training in how to conduct safe deliveries. The number of women using traditional midwives is said to be rising because of the current economic problems faced by the country (Zimbabwe Government MOHCW, TB & HIV Unit 2005).

2.3.2 The benefits of the Prevention-of-Mother-to-Child-Transmission programme

According the Zimbabwe Government MOHCW, TB & HIV Unit (2005) report, the benefits to a woman of learning her HIV-status before becoming pregnant or during pregnancy are greater than protecting a baby from HIV-infection. Even in high prevalence areas, most women attending ANC clinics will be HIV-negative. However, 5% of women will become infected during the year of their pregnancy and lactation, probably because it is often during this period

that their sexual partners are at greater risks of extramarital sex and they are themselves seroconverting (Zimbabwe Government MOHCW, TB & HIV Unit 2005). If women become infected with HIV during this period, the risk of mother-to-child-transmission of HIV is much higher as the viral load is particularly high in a newly infected person. Advice and testing services offer an important opportunity to discuss prevention of HIV transmission through seroconversion during pregnancy and breastfeeding (Zimbabwe Government MOHCW, TB & HIV Unit 2005).

The health care that a mother receives during pregnancy, at the time of delivery, and soon after delivery is important for the survival and well-being of both the mother and her child. Antenatal care (ANC) from a trained health care worker is important in order to monitor the pregnancy and to reduce the risks for the mother and child during pregnancy and delivery (Zimbabwe Government MOHCW, TB & HIV Unit 2005). ANC is more beneficial in preventing adverse pregnancy outcomes when it is sought early in the pregnancy and is continued through to delivery. Health professionals recommend that the first ANC visit should occur within the first three months of pregnancy and continue on a monthly basis through the 28th week of pregnancy and every two weeks up to the 36th week or until birth (Zimbabwe Government MOHCW, TB & HIV Unit 2005).

2.4 RISK FACTORS FOR TRANSMISSION OF HIV

Transmission of HIV-infection from a mother to her child is influenced by multiple factors. An important determinant may be the mother's viral load, CD4 cell count, and duration of labour. Several studies based on small numbers of mother-child pairs have demonstrated that a high viral load, as measured by polymerase chain reaction (PCR) is associated with increased transmission (UNAIDS 2004). Apart from the viral load the low maternal CD4 cell counts, an advanced clinical HIV stage and increased levels of neopterin or beta-micro globulin are also detrimental in mother-to-child transmission of HIV (UNAIDS 2004). Ray and Jackson (2000) argue that an infant born to a mother who has primary HIV-infection during pregnancy is at high risk of infection because of the mother's high viral load. They note that the biological and genetic variation of the HI-virus may also influence the risk of transmission. Therefore, it is imperative

for every pregnant woman to take an HIV-test and make informed decisions regarding her HIV-status.

2.4.1 Pregnancy and delivery as risk factors in the vertical transmission of HIV

During delivery, babies may swallow fluids from the cervix and vagina with HIV entering through the lining of their mouths (UNAIDS 2004). It is also believed that traumatic suction with tubes during delivery to remove mucus may also facilitate transmission through damaged, fragile tissues. Recent research suggests that vaginal delivery seems to facilitate HIV-transmission more than caesarean section (UNAIDS 2004). This is because of prolonged contact by the infant with infected maternal fluids and blood, an indication that many infants are uninfected up to this point. Hence, efforts should be made to reduce the MTCT during delivery by providing HIV-positive women with Nevirapine at 8 month of gestation. As noted elsewhere in this study, Nevirapine is meant to reduce the viral load of HIV in the blood during delivery. There is also a link with length of time since rupture of membranes, and HIV transmission research done in South Africa and cited by Ray and Jackson (2002) indicate that elective caesarean sections performed before the onset of labour and before the rupture of membranes reduce HIV-transmission when compared with emergency caesarean sections after the onset of labour. However, this medical procedure can only be done to a pregnant woman who knows her HIV-status and has voluntarily consented to it.

Other risk factors for mother-to-child transmission include chorioamnionitis and sexually transmitted diseases. These are associated with disruption of the placental barrier in later pregnancy and premature delivery and may be associated with an increased viral load in the genital tract (UNAIDS 2003). Modes of delivery and possibly duration of labour, interval from time of membrane rupture to delivery, and events during labour and delivery that can expose the infant to the mother's blood may also be important. Such events include abruption, use of foetal-scalp electrodes, episiotomies, and severe lacerations should be avoided (UNAIDS 2003). Jackson *et al* (2002) argue that it is therefore important for an HIV-infected pregnant mother to disclose her HIV-status to the health workers in order for them to exercise the necessary precautions during delivery.

2.4.2 Breastfeeding as a risk factors in the vertical transmission of HIV

HIV is present in breast milk. A study done in Rwanda shows breast milk to be independently associated with an approximately doubling of the risk of transmission (UNAIDS 2003). A meta-analysis of several studies has confirmed that between 5 and 20% of mother-to-child-HIV-transmission can be attributed to breastfeeding (UNAIDS 2003). However, further research needs to be done to determine the mechanisms and the timing of HIV-transmission through breastfeeding. Although formula feeding is recommended as an alternative to breastfeeding, in HIV positive mothers, it creates a lot of challenges especially in developing countries in Africa where poor sanitation and high rates of infectious diseases prevail. It is feared that in such situations, where formula feeding is advised infant mortality may increase (UNAIDS 2003).

According to the Zimbabwe Ministry of Health and Child Welfare's (1999) Infant Feeding Policy, infant breastfeeding must be promoted, supported and encouraged because the breast milk contains all the nutrients needed by the child in the first six months of life and is an uncontaminated nutritional source. The policy says complementing breast milk before six months of age is unnecessary and is indeed discouraged because of the likelihood of contamination and because of the resulting risk of diarrhoeal disease. Early initiation of supplementary feeding is believed to reduce breast milk output because the production and release of breast milk is modulated by the frequency and intensity of lactation (Zimbabwe Government MOHCW 1999).

2.5 INTERVENTIONS IN PREGNANCY AND DELIVERY TO PREVENT THE VERTICAL TRANSMISSION OF HIV

Interventions that prevent exposure to HIV-infection during pregnancy and delivery may protect a significant number of infants from getting infected with HIV. Such interventions fall into two categories, namely:

(1) Those that can be effected for all pregnant women in high risk areas (generalised interventions)

(2) Those that are dependent on women knowing their HIV-status (targeted interventions) (Jackson *et al* 2002).

According to Jackson *et al* (2002), the generalised PMTCT intervention strategy does not require the members of the target group to know their HIV-status. Instead, the intervention is aimed at a large number of people in high HIV prevalence areas irrespective of their status. The aim is to prevent HIV-infections in large numbers of infants without the mothers requiring testing. However, the ethical implications of such a practice are debatable. In contrast, the targeted interventions for the prevention of MTCT require that the mother, and preferably her partner as well, know their HIV-statuses and this requires access to testing facilities, ideally in combination with advice and support (Jackson *et al* 2002). Once the women and their sexual partners are aware of their status, they may be more able to make decisions with guidance from health care workers that will help to prevent HIV-transmission from mother-to-child.

2.5.1 PMTCT counselling and testing

Zimbabwe, like the majority of Southern African Development Commission (SADC) countries, has adopted the routine PMTCT strategy, with an opt-out option. For a pregnant woman to take advantage of measures to protect her child against HIV-infection, she needs to know her serostatus. The voluntary counselling and testing (VCT) services thus remain an essential part of any programme for the prevention of mother-to-child transmission of HIV. Ideally, everyone should have access to such services since there are clear advantages in knowing one‘s serostatus. People who know they are HIV-infected are likely to be motivated to be health conscious, perhaps with behaviour and lifestyle changes, and to seek early medical attention for problems (UNAIDS 2004). They can make informed decisions about sexual practices, childbearing, infant feeding, and take steps to protect partners who may still be uninfected. And those whose test results are negative can be counselled about how to protect themselves, their partners and their children from infection (UNAIDS 2004).

Furthermore, voluntary counselling and testing has an important role to play in unmasking the silent epidemic and reducing the hysteria and fear surrounding HIV/AIDS (UNAIDS 2004).

At present, UNAIDS estimates that around 90% of people living with HIV are unaware of their status (UNAIDS 2004). Efficient, widely accessible and user-friendly testing services can help societies recognise, and come to terms with, the fact that there are many people living with HIV who show no outward signs. This in turn encourages commitment to prevention (UNAIDS 2004).

In the majority of African countries, it is still common for women to be blamed for spreading sexually transmitted diseases, including HIV, despite the fact that very often they are infected by the husband or partner to whom they are entirely faithful (Chiroro, Mashu & Muhwava 2002). Voluntary counselling and testing that involves the partners of pregnant women, where this is feasible and desired, can play a vital part in challenging this pervasive prejudice (UNAIDS 2004).

In 1997 UNAIDS issued a policy statement on HIV counselling and testing which endorses the value of this service as a critical part of an effective response to HIV/AIDS, and sets down the guiding principles. UNAIDS promotes the establishment of voluntary counselling and testing services, offers technical assistance, and is currently supporting pilot projects in selected countries to find out how such services can be made as effective, efficient and acceptable as possible to those who wish to know their status (UNAIDS 2003).

With regards to PMTCT of HIV, the UNAIDS guidelines note that HIV counselling and testing are essential for the targeted PMTCT intervention strategies where women need to know their HIV-status. The most effective intervention of MTCT, ART, elective caesarean section and modification of infant feeding practices, are mainly targeted at women who know they are infected with HIV. In Zimbabwe, clinics provide HIV-testing as part of their antenatal care. Testing is also available through stand-alone VCT centres, known as New Start Centres. It is important to state from the onset that ANC testing should not be used to apply pressure on pregnant women to find out what their HIV-statuses are. Rather, it should provide women with an opportunity to make informed decisions about the short and long term advantages and disadvantages of knowing their HIV-statuses for their own benefit as well as for that of their partners and their infants. This is particularly important when considering offering testing to women during labour. A study done by the MOHCW, TB & HIV Unit (2004) in collaboration

with Medecin sans Frontieres (MSF-Spain), suggests that most pregnant women who present themselves at ANC clinics seemed to perceive HIV-testing as simply another medical procedure that has to be performed on them. This study further note that women rarely sought testing themselves because of the perceived cost and because they did not generally anticipate that they were infected with HIV.

2.5.2 Antiretroviral drugs to reduce MTCT

The provision of ARVs to pregnant HIV-infected women can significantly reduce the MTCT rate by lowering transmission during pregnancy and childbirth. In sub-Saharan Africa, two common ARVs regimes coexist. The first is a short course of Zidovudine (AZT). AZT (300mg) is taken twice a day starting at a gestational period of 36 weeks, and 300mg every hour during labour. No drugs are taken by the mother or infant post partum. This regime was shown to reduce transmission during pregnancy and childbirth by 50% (Shaffer *et al* 1999).

In Zimbabwe, the MOHCW adopted the use of Nevirapine primarily because of its low cost and ease of administration compared to AZT (Zimbabwe Government MOHCW, TB & HIV Unit 2005). The pregnant HIV-infected women are given 600mg of Nevirapine to take home and only swallow when they start to experience labour pains (Zimbabwe Government MOHCW, TB & HIV Unit 2005).

In general, PMTCT programme managers still know very little about what happens when women take ARVs, for example whether they actually use them, follow adherence advice closely and use the correct dosage at the correct intervals. The stigma and discrimination toward HIV-infected women, as well as misconceptions about ARVs, are some of the significant obstacles to the uptake of ARVs and adherence to drug regimens (Jackson *et al* 2002).

Stigma manifests itself in a number of ways. First, ignorance and misconception about ARVs is rampart. In a MTCT study done in Zambia the common misconceptions were that ARVs put women to sleep during labour and left them exposed to assault and that taking the drugs will deform or kill the baby (Ray 2002). A study at Mpilo Central hospital by MSF on the PMTCT

programme in Zimbabwe seems to corroborate the Zambian findings. At Mpilo hospital the misconceptions about the ARVs led to a number of pregnant women refusing to take the drugs after they had brought them home from the clinic (Zimbabwe Government MOHCW & MSF-Spain 2004). In some communities in Kenya, three women returned their drugs because of resistance from the husbands (Dadian 2001).

Stigma and fear of discrimination related to HIV/AIDS make pregnant women reluctant to share their HIV-status and information about prevention of MTCT with their spouses and as well as with health workers. According to a study done by Ray (2002), quite a number of HIV-positive pregnant women and mothers succeed in hiding ARVs at home but are unable to hide the drugs from the health workers and thus prefer to forego the critical labour dose rather than face the negative attitudes of health workers in the labour and delivery suite.

One of the most difficult challenges facing the MTCT programme is how to address the need that infected mothers have for the ongoing ARV treatment. While a number of promising initiatives to expand ARV access exist, the availability of drugs and related diagnosis will be very limited for the immediate future (Zimbabwe Government MOHCW & MSF-Spain 2004). There are not enough ARVs in the country for those who need them. According to the MOHCW and TB Unit (2003) report, lack of ARV treatment options for mothers undermines support for the effectiveness of the MTCT programmes. The common perception among the health workers and the general community is that the MTCT programme saves children's lives hence creating future vulnerable orphans (MOHCW, TB & HIV Unit 2005). This view supports the assertion by Jackson *et al* (2002) that the attitudes of the health care workers should be investigated, as they also influence the generally-held attitudes regarding the MTCT programme in Africa.

2.6 WOMEN'S HEALTH SEEKING BEHAVIOUR

Numerous interventions have been designed to promote and understand women's health seeking behaviour. However, relatively few have proved effective, which is, at least partially, due to the lack of development of theoretically-based programmes (Case, Menendez & Ardington 2005). Research findings provide undeniable evidence of the central role played by behaviour in the

world's health problems. Glanz, Rimer and & Lews (2002) note that, programmes that are meant to influence health behaviour, including health promotion and interventions, are most likely to benefit the communities when the programme is guided by theories of health behaviour. The theories of health behaviour identify the targets for change and the methodology for accomplishing the changes. These theories also inform the monitoring and evaluation of change by helping to identify the outcomes to be measured, as well as the timing and methods of study to be used.

A woman's access to health care, in physical, social, and psychological contexts, depends on her health beliefs and her socioeconomic and demographic background. The researcher reviewed three theories of health behaviour in an attempt to understand the characteristics of pregnant women attending the PMTCT programme; namely the Theory of Reasoned Action, the Theory of Planned Behaviour and Health Belief Model. These different theories or models of health seeking behaviour can be studied to produce a broad framework to inform investigation and intervention, particularly in the context of looking at use and non-use of PMTCT services. A study of the various theories or models thus produced a framework of variables which includes the attitudes towards and knowledge of women of HIV and AIDS and PMTCT services; sociodemographic characteristics, psychological and psychosocial factors and sociocultural and socioenvironmental factor. It should be reiterated that this study was not a test of any one of these theories, but rather that the constellation of factors guiding health seeking behaviour as posited in each of these theories contributed to the generation of the questionnaire and helped the researcher find important variables to include in the study.

2.6.1 Attitudes

An attitude is a hypothetical construct that represents an individual's like or dislike for an item (Myers & McCaulley 1985). Attitudes are positive, negative or neutral views of an "attitude object" (person, event or service). People can also be "ambivalent" towards a target, meaning that they simultaneously posses a positive and negative bias towards the attitude in question. According to Myers and McCaulley (1985), attitudes come from judgments.

Attitudes develop according to an ABC model (affect, behavioural change and cognition). The affective response is a physiological response that expresses an individual's preference for an entity. The behavioural intention is a verbal indication of the intention of an individual. The cognitive response is a mental evaluation of the entity to form an attitude. Most attitudes in individuals are a result of observational learning from their environment (Myers & McCaulley 1985).

2.6.2 The Theory of Reasoned Action (TRA)

TRA postulates that individual behaviour is driven by beliefs, attitudes, intentions, expectations, and social norms. It states that individuals hold attitudes and beliefs that shape their intentions to engage in behaviour. This in turn influences their actual behaviour (Valente 2002). The roots of the theory reasoned action also come from the field of Social Psychology (Chiroro *et al* 2002). The social psychologists attempts, among other things, to explain how and why attitudes impact behaviour. That is, how and why people's beliefs change the way that they act. In basic terms, TRA says that a person's behaviour is determined by his or her attitude towards the outcome of that behaviour and by the opinions of significant social others in the person's social environment.

Ajzen and Fishbein (cited by Chiroro *et al* 2002) proposed that a person's behaviour is determined by her or his intention to perform the behaviour and that this intention is, in turn, a function of her or his attitude toward the behaviour and her or his subjective norm. According to Petty and Cacioppo, (cited by Valente 2002), in order to change behaviour, health promotion programmes have to first change attitudes and beliefs about the behaviour.

Increasingly, TRA has included perceptions of community norms as an influence on behaviour. It argues that attitudes and intentions are influenced by subjective interpretations of the norms, social influence, and social pressure regarding the behaviour (Valente 2002).

The new model developed from the TRA by Chiroro *et al* (2002), posits that women's attitudes towards the PMTCT programme are determined to a larger extent by knowledge, social position in the family and sex role stereotypes. In turn, sex role stereotypes, sexuality standards and

attitudes towards HIV/AIDS are products of the individual's knowledge and beliefs about sexuality both of which are determined by sociocultural factors as well as the individual's personality, habits and general attitudes towards life (Chiroro *et al* 2002).

According to Chiroro *et al* (2002), the provision of information to people in order to increase their knowledge does not guarantee that such knowledge will necessarily be used. The mode of presentation and the extent to which the incoming information is assimilated, believed and used by recipients also play a role in this regard. Chiroro *et al* (2002) further argue that women's attitudes towards health care services do not directly affect their behaviour in a specific situation. A number of intervening variables play a significant role in determining whether or not a person decides to engage in a particular behaviour. First, a person's attitudes predispose her to act in a particular way but that intention is significantly affected by the individual's assessment of the social context prevailing at a given time.

The foregoing suggests that as the context changes, the same individual can arrive at different conclusions and engage in different types of health-seeking behaviours. Secondly, the person's physical state or health condition (e.g. already showing signs of HIV-infection) could significantly influence that individual's intentions and decisions. It is therefore important to note that the behaviour itself is a product of multiple factors that interact in a complex way in any given situation. This set of interrelated factors must be considered together as important determinants of pregnant women's attitudes towards the PMTCT programme if future intervention programmes are to be more effective in order to result in positive behavioural change. Finally, Chiroro *et al* (2002) argue that the individual is capable of assessing the consequences of her behaviour, the results of which are used to reshape that individual's health-seeking attitudes.

2.6.3 The Theory of Planned Behaviour (TPB)

The theory of reasoned action and the theory of planned behaviour are concerned with individual motivational factors as determinants of the likelihood of performing a specific behaviour (Chiroro *et al* 2002). The TRA includes measures of attitudes and social normative perceptions

that determine behavioural intention. Behavioural intentions in turn affect behaviour. Glanz, Rimer & Lews (2002) observe that, the Theory of Planned Behaviour (TPB) is an extension of the TRA rather than an independent theory. The TPB includes an additional construct concerned with perceived control over performance of the behaviour (Glanz, Rimer & Lews 2002).

According to Ajzen (1991); Ajzen & Driver (1991), and Ajzen &Madden (1986) (cited by Glanz, Rimer & Lews 2002), argue that, the TRA assumes that the most important direct determinant of behaviour is behavioural intentions. The success of the theory in explaining behaviour is dependent upon the degree to which the behaviour is under volitional control (i.e., situations in which individuals can exercise a large degree of control over the behaviour). It is further observed that, under conditions of high volitional control, motivation as measured by intentions and its attitudinal and normative determinants is expected to be the main determinant of behaviour. However, Ajzen and Driver (1991) note that, it is not clear that the TRA components are sufficient for predicting behaviour in which volitional control is reduced. For example, it is argued that a person who has high motivation to perform a specific behaviour may not actually perform that behaviour due to environmental conditions that intervene.

Perceived behavioural control was added to the TRA in an effort to account for factors outside of the individual's control that may affect his/her intentions and behaviour. Glanz, Rimer & Lews (2002) note that, the extension of the TRA was based in part on the idea that behavioural performance is determined jointly by motivation (intention) and ability (behavioural control).

Ajzen and Driver (1991, cited by Glanz, Rimer & Lews 2002) argue that a person will expend more effort to perform a behaviour when his/her perception of behavioural control is high. They observe that, a persons' perception of control over behavioural performance, together with intention is expected to have a direct effect on behaviour, particularly perceived control is an accurate assessment of actual control over the behaviour and when volitional control is not high. Therefore, the effect of perceive control declines and intention is a sufficient behavioural predictor in situations in which volitional control over the behaviour is high (Glanz, Rimer & Lews 2002).

The TRA and TPB provide an excellent framework for conceptualizing, measuring, and identifying factors that determine behaviour. The TRA focuses on cognitive factors (beliefs and values) that determine motivation (behavioural intention), and the theory has been very useful in explaining behaviour, particularly behaviour under volitional control. The TRA provides a very precise rationale for identifying and measuring behavioural and normative beliefs and for testing their association with intentions and behaviours. The TPB extends the TRA by adding perceived behavioural control concerned with facilitating or constraining conditions that affect intention and behaviour. This is particularly important for behaviour over which a person has less volitional control.

2.6.4 Health Belief Model (HBM)

The Health Belief Model (HBM) was first developed in the early 1950s by a group of social psychologists to explain the widespread failure of people to participate in disease prevention programmes (Glanz, Rimer & Lews 2002). Over the years the model has been modified and extended to peoples' responses to symptoms and to their behaviours in response to diagnosed illness, particularly adherence to specific medical regimens. The HBM postulates that people will take action to prevent, to screen for, or to control illness if they regard themselves as susceptible to the condition (Glanz, Rimer & Lews 2002). It also poses that people will take action to prevent or control ill-health condition; if they believe it would have potentially serious consequences, if they believe that a course of action available to them would be beneficial in reducing either their susceptibility to or the severity of the condition. It also observes that, people will act if they believe that the anticipated barriers to (or cost of) taking the action are outweighed by its benefits (Glanz, Rimer & Lews 2002).

HBM argues that in order for behaviour to succeed, people must feel threatened by their current behavioural patterns (perceived susceptibility and severity) and believe that change of a specific kind will result in a valued outcome at acceptable cost. They also must feel themselves competent (self-efficacious) to overcome perceived barriers to taking actions. For example, if the perception of HIV/AIDS threat is high, and the perceived benefits outweigh perceived

barriers, the HBM predicts that a cue to action could prompt an individual to adopt HIV/AIDS preventive behaviours (Glanz, Rimer & Lews 2002).

The theories for health behaviour (HBM, TRA, and TPB) remain major organising frameworks for explaining and predicting acceptance of health and medical care recommendations. In this study, the researcher was guided by the variables pointed out in these frameworks as correlates of health seeking behaviours, but this study was not a test of these theories and neither did it set out to follow the methodological pathways traditionally followed in the strict application of these theories.

2.7 FACTORS THAT PREVENT PREGNANT WOMEN FROM PARTICIPATING IN THE PMTCT PROGRAMME

In addition to the theoretical perspectives on health seeking behaviour, this section of this chapter covers empirical finings on factors that prevent pregnant women from participating in the PMTCT programme. Access to good and comprehensive reproductive health services is a basic human right and can help to prevent primary HIV-infection and vertical transmission. If women can not access family planning advice, treatment of reproductive health infections or antenatal care, they are unlikely to be exposed to interventions to prevent HIV transmission (Jackson *et al* 2002). Many factors can prevent women from getting advice or treatment for themselves when they are sick. Information on such factors is particularly important in understanding and addressing the barriers women may face in seeking care during pregnancy and at the time of delivery.

2.7.1 Stigma, discrimination and denial

Research on stigma and discrimination has generally been bedevilled by conceptual problems, and in Zimbabwe like in most other countries in the region, there has not developed a strong research agenda on stigma related to HIV/AIDS. Existing research shows little consensus about how to best measure attitudes towards people living with HIV. What needs to be measured is subject to change as the epidemic and intervention programmes develop.

In a study by Feldman and Maposhere (2003) in Zimbabwe on the quality of care and discrimination in health care, the female respondent's discussion of the quality of health care focussed mainly on how comfortable they felt with their care, especially their experience of discriminatory or patronising behaviours by health care workers, rather than on the efficacy of treatment. Besides discrimination, discomfort with male nurses was the only other element of quality of care that women commented on, with over 40% of the pregnant women in the survey feeling ill at ease when male nurse examined them. This may reflect much stronger sensitivities about protecting bodily privacy than health provider took into account of, especially in small communities where patient and nurse may be known to each other.

According to Jackson *et al* (2002), discrimination may take many forms including open hostility and rudeness, differential treatment and betrayal of confidentiality. Hostility and rudeness manifest themselves in several ways. Feldman and Maposhere (2003) reported that women who participated in the study complained that nurses scolded them, especially when they were pregnant, as they advise women who are infected with HIV not to have children. Sometimes the rudeness took the form of verbal abuse and undermining comments or calling a woman names and telling her baby would not survive.

Preliminary findings from the MOCHW and MSF-Spain (2004) at Mpilo Central hospital in Zimbabwe indicate that most of the reported stigma and discrimination by health care workers was the betrayal of confidentiality about the patient's HIV-status. The respondents reported that the health care workers disclosed their HIV-status without their consent. The research further notes that, to avoid breaches of confidentiality and being discriminated against, some women did not disclose their HIV-status in health care facilities, including antenatal, maternity or baby clinics. All these factors negatively impact on the access and quality of care for pregnant women.

2.7.2 Availability of antiretroviral drugs or antiretroviral therapy (ART)

It is quite widely accepted that ART could help reduce the incidence MTCT due to reduced transmission following reduction of an individual's HIV-viral load. Another positive prevention effect is that ART leads to a reduction in denial, stigma and discrimination as ARVs treatment becomes available and renders HIV/AIDS as a chronic and a manageable disease rather than a

fatal condition (Jackson *et al* 2002). This encourages individuals to come forward for voluntary counselling and testing (VCT). This effect would probably be complimented by the reduction of stigma and discrimination associated with more people knowing their HIV-status.

However, Feldman and Maposhere (2003), argue that treatment optimism can have a negative effect on the prevention behaviour of people living with HIV who may be more likely to engage in sexual risky behaviour because they believe treatment will make them or their partners less infectious or that HIV-infection is a less serious condition than before. However, the evidence that treatment optimism has had a negative impact on prevention behaviour in the developed world is inconclusive and there has been little work done on understanding this issue in Africa although this is likely to become an area of increasing interest.

2.7.3 Personal susceptibility to risk

According to Wight *et al* (1998), (who drew much of his experience on the HBM), understanding of risk is, often culturally specific, varying with social context, age, gender, educational level and other demographic characteristics. They also argue that people are now living in an era characterised by a high sense of individualism and our understanding of risk is closely related to identity. The extent to which people concern themselves with risk is also related to how much of our experience we attribute to fate or forces beyond our control (Wight *et al* 1998).

Anticipated severe consequences of an event only threaten individuals who accept that they are personally at risk. Wight *et al* (1998) argue that personal susceptibility can be promoted by identifying and undermining stereotypes by which individuals dissociate themselves from those recognised to be at risk. This view is supported by the Zimbabwe Demographic and Health Survey of 2005 to 2006 (Zimbabwean Government 2006). Several of the women who participated in the survey thought that HIV/AIDS did not apply to married women. They reported that it only applied to women they termed “loose women” or commercial sex workers. The belief that HIV/AIDS is a special attribute of those with exceptionally high partner turnover

or those who engage in distinctive sexual practices undermines a pregnant woman's personal susceptibility.

2.7.4 Psychological factors

In Zimbabwe Demographic and Health Survey of 2005 to 2006 (Zimbabwean Government 2006), fifty per cent of the women who participated in the survey reported that they had known nothing about HIV prevention before they found out they were HIV-positive. However, some acknowledged that they had heard of HIV/AIDS, but they did not see how this knowledge applied to them. More commonly, women actively distanced themselves from any thing to do with HIV/AIDS so that it would not apply to them. This is very common in dealing with difficult or unacceptable information. Distancing oneself from HIV/AIDS was easier for those who saw themselves as keeping to the strict rules of marital and sexual relations in Zimbabwe. Those perceived to be at risk were frequently seen as other types of women, who did not keep to these strict rules (Zimbabwean Government 2006). The survey indicates that participants viewed HIV/AIDS as an attribute of "those types of people" rather than as an infectious virus. This contrasts with Mate's argument (2002) that women put themselves at risk of HIV-infection because they have low self-esteem.

According to Cartwright (cited by Mbizvo *et al* 2001) knowledge is a pre-requisite for any behavioural change to take place. Cartwright argues that, even if a woman is aware of the dangers of MTCT of HIV-infection, she has to make decisions about the implications of disclosure of her status in a community which still harbours fear and stigma. This view is further supported by Bassett and Mhloyi (1999) and Mate (2002). Mate (2002) states that a woman is faced with weighing up the social risks of disclosure against the mental and physical health risk of not disclosing. There is usually fear of rejection and blame if they disclose their status.

Constraints related to exclusive breastfeeding are said to bring emotional challenges to a mother who would have to fight the temptation to breastfeed a baby sleeping next to her and crying to be

breast-fed. Women are also pressured to explain as to why they are not breastfeeding if they choose the option not to breast-feed (Mate 2002).

2.7.5 Social approval

Wight *et al* (1998), note that, when an individual assesses the benefits of an action before engaging in it, as noted above, perceived social rewards, approval and social costs are often important. The beliefs about what others think and do can have an important impact on behaviour. Women's perception of the MTCT prevention strategies open to them in Zimbabwe have to be understood within the context of common expectations of sexual relationships and marriage, which include having children and obeying "your husband". Although women often express anger and resentment at the control exercised by their sexual partners, marriage is one of the few ways that women can ensure their social status and economic security (Jackson *et al* 2002).

Jackson *et al (*2002) observed that, even if a woman endorsed the benefits of the prevention of MTCT programme, due to lack of decision-making powers, decisions about her reproductive healthcare may be deferred to her husband, in-laws and sometimes other members of the extended family. This argument is further buttressed by Kanyemba *et al* (2000). They observe that deeply held traditional beliefs in male superiority give men almost total control over their wives. As a result some women may not take important decisions without permission from their spouses or male relatives. Ray (2002: 49) says that *"although women may be able to afford formula or are provided for free, they still breast feed their infants when they are crying, in front of their husbands if they have not disclosed their status"*. This assertion augments Mate's (2002) argument regarding "traditional explanations" for not breastfeeding, which includes mental illness, being possessed with evil spirits, and one having lied about the baby's paternity or general ill health. Even though a woman is empowered by the efforts of the PMTCT programme, fear of stigma, discrimination as well as having to explain why she is not breastfeeding and why she decided to wean her baby early, may undermine her decision-making.

The role of women in the family, the power structures and decision making process and particular norms in a society all impact negatively on a pregnant HIV-infected woman who is struggling to make a decision whether or not to participate in the PMTCT programme.

2.7.6 Accessibility and affordability

Zimbabwe is facing a number of challenges as far as scaling up universal access to treatment is concerned. This has among other things been mainly due to the prevailing economic climate, insufficient resources, and low treatment literacy levels. Health care services in public facilities are only free for people who earn less than Zimbabwean $50 million per month (Zimbabwean Government Gazette. 2006). To prove eligibility for free treatment one has to obtain a confirmation letter from the social welfare office, which is usually congested by people seeking assistance. At primary health care clinics patients are seen by a nurse and referred to a doctor if the condition is severe. Medicines are provided at the clinic, but recently essential drugs have often been unavailable. According to the latest survey done by MSF-Spain and MOHCW (2004), almost all of the health care service centres are under-staffed, i.e. one nurse to 300 patients and there are no doctors. Many people are said to have resorted to traditional healers for basic health care. Traditional healers are reported to be cheaper than conventional medicines and people could pay later, or pay in kind instead of cash, which makes treatment easy and affordable (MOHCW& MSF-Spain 2004).

The poor national economic performance has lead to a decline in the health care delivery services as noted above. Currently in Zimbabwe, ARVs are not ready available for all those who need them. A number of pregnant women who have tested HIV-positive are failing to benefit from the ARVs programme. This obviously could result in a disincentive for mothers to pursue PMTCT prevention options (MOHCW& MSF-Spain 2004).

2.8 MALE INVOLVEMENT IN THE PMTCT PROGRAMME

To further explore factors that might have a bearing on women's propensity to attend PMTCT services; the issue of male involvement is discussed here. According to the Zimbabwe National AIDS Policy document (1999), prevention of HIV-infection in mothers and fathers is a key facet of PMTCT. Thus, male involvement is critical not only as a means to good pregnancy care, but also as a way to improve reproductive and sexual health. The Ministry of Health and Child Welfare in Zimbabwe has tried a number of strategies to involve men in HIV-related care. The programme implemented by farm health workers to help promote couple counselling at the local clinics has started to bear some fruits. It is reported that in some communities the number of couples visiting ANC clinic rose from 2 to 39 per week (Zimbabwe Government MOHCW & TB Unit 2004). The New Start Centres in Zimbabwe operate campaigns to promote couple counselling by providing free VCT to couples on occasions such as Valentine's Day and Mother's Day. According to Population Services International-New Start Annual Report (PSI 2005), this has seen more than 340 couples testing on free days.

Preliminary research findings in a study done by MSF at Mpilo Central Hospital in Zimbabwe, suggest that although efforts are made to adapt PMTCT services to involve male partners, large gaps still exist. The MOHCW & MSF-Spain (2004) Report suggests that the current ANC services are, for the most part, not designed to accommodate men. In the majority of cases, men are considered as intruders by health care staff and female patients and a lack of privacy for female clients further reinforces the attitudes that such clinics are for women only. The ANC clinics' opening hours are also a hindrance as clinics are usually closed at times when working men can most easily attend (MOHCW & MSF-Spain 2004).

Results from the pilot settings in Bulawayo, Zimbabwe suggest that male involvement and support are critical to improve women's uptake of core PMTCT services including the decision to test, return for the test results, correctly taking ARVs and choosing an appropriate infant feeding method. However, very little has been done to explore the kind of male involvement decision-making, hence this neglect has contributed to the lower than hoped for uptake of the PMTCT in Bulawayo (Bulawayo Health Services Report 2006).

2.9 CONCLUSION

The broad aim of the study was to investigate how biographical characteristics correlate with health decision-making patterns of pregnant women in Bulawayo city health care clinics so that programme managers can tailor their interventions according to specific target groups of women. This chapter presented the epidemiology of HIV/AIDS in Zimbabwe and attempts were made to link the epidemiological profile to the main modes of HIV-transmission which is heterosexual and mother–to-child. Various theories of health behaviour were reviewed and adopted as the theoretical framework to guide the research process. An attempt was made to review the most recent literature on prevention of mother-to-child programme.

CHAPTER THREE: METHODOLOGY

3.1 INTRODUCTION

In chapter two recent studies on PMTCT were reviewed. The study sought to investigate how the biographic characteristics of the ANC attendees influenced their health decision-making at the Bulawayo City clinics. Quantitative data collection techniques were used, in order to compare variables. The population surveyed comprised pregnant women between the ages of 16- to 45- years with varying demographic characteristics. The categories of respondents surveyed and sample sizes obtained and sampling methodologies utilised are described below. To validate the credibility of the responses given by the respondents, follow up interviews were done with the Health Care Services Director. He volunteered very valuable information that was used in data analysis.

3.2 RESEARCH DESIGN

In this study, a research design refers to a logical framework that guides the researcher in the processes of collecting, analysing and interpreting the data (Valente 2002). The study used a descriptive survey. The study investigated how the biographical characteristics of pregnant women might influence their health decision-making and descriptive surveys are ideal for investigating attitudes and experiences.

Questionnaires were used to gather data from the respondents. The questionnaires were designed and pilot tested before the actual study was conducted with ten respondents who matched the selection criteria but were not included in the final research sample.

Fixed-response questions were used in this study. The respondents were expected to choose the item that reflected their opinion and feelings on the question item. Most of the questions were adapted from the Ndola (Zambia) PMTCT descriptive survey (Ray & Jackson 2000), although some question items were modified to suit the objectives of the current study.

These questions enabled the researcher to investigate the knowledge, experiences and attitudes of the respondents on PMTCT programme.

3.3 REASONS WHY A QUANTITATIVE DESIGN WAS USED IN THE STUDY

The purpose of the study was to investigate how biographical characteristics of pregnant women influenced health decision - making in the Bulawayo City Health clinics. The quantitative design was the most appropriate research design for this research as the study sought to investigate the demographic characteristics of those pregnant women who refuse an HIV-test and those who decline to enrol in the PMTCT programme.

The quantitative design enabled the researcher to measure the frequency of responses and to examine differences between key variables, such as educational level, knowledge, marital status, number of surviving children and age. This made it possible to quantitatively describe pregnant women's attitudes towards the PMTCT programme and to identify possible subgroups requiring further intervention through the programme.

By employing a specific random sampling technique (see discussion under subheading 3.6) the researcher was able to exercise control over extraneous variables, such as researcher's bias. The quantitative design made it possible for the researcher to answer the research questions. However, generalising the findings to the population was hampered by the small sample size.

3.4 LIMITATIONS OF THE STUDY DESIGN

In descriptive surveys, researchers attempt only to relate one variable to another; they do not attempt to determine causation. According to Valente (2002) the information obtained in a survey tends to be superficial. This assertion is true to some extent, since the breadth rather than the depth of the information is emphasised.

In this study, the data collection process was relatively expensive and consumed a lot of unbudgeted time. This study used fixed responses-questionnaire, which made it impossible to explore in detail some of the experiences of the respondents.

3.4.1 Economic and socio-political constraints experienced during data collection

The study was conducted during the most politically volatile period in Zimbabwe. The fieldwork was done a few months before the national general elections, which was characterised by politically motivated violence. Meetings outside public health facilities of more than five people were to be sanctioned by the police; hence all the appointments with the respondents were done at the clinic. During this period, the country was faced with a number of economic challenging. There were serious shortages of basic commodities and fuel which resulted in rescheduling of appointments, because the respondents spent most of their time in queues, chasing after the scarce commodities. This affected the data collection. However, contingency plans were put in place not to compromise the quality of the research process and outcome. The researcher failed to secure enough funding (due to hyperinflation) to cover transport, typing, stationery cost as well as engaging the services of more research assistants. This impinged on the amount of time spent in the field gathering data. The initial plan was to collect data within two weeks, but due to the above-mentioned challenges, it took about four weeks to complete the data collection.

3.4.2 Manpower constraints

The researcher failed to secure enough funding for the study, hence only three research assistants participated in the fieldwork. As mentioned elsewhere this affected the time taken to complete the data gathering process.

The attitudes of the health workers also played a part in the delay of the data collection process. Health personnel in the Zimbabwean public service are poorly paid. Some publicly displayed negative attitudes towards the research team, despite clear communication from their superiors on the objectives of the study. A notable number wanted to be paid for the effort. This delayed the data collection in one clinic, by almost an hour after the clinic manager intervened.

The study only used 40 respondents (a 5% sample from the universe) because of time and financial limitations. It should be noted however, that the research is a study of limited scope.

3.4.3 The role of the clinic managers in this study

The clinic managers are senior nursing officers in charge of the clinic. They placed a pivotal role with the logistics in their clinics. They assisted in introducing the research team to the clinic staff and in organising private rooms in the clinics. The managers of the four clinics were kept informed at all stages of the study. The researcher had to spend a lot of time travelling by public transport and taxis due to fuel shortages experienced in the country during the time of fieldwork. This impacted negatively on the arrival times at the research sites for the research team; however this did not affect the arrival of the respondents because the clinics are within walking distance.

3.5 POPULATION AND THE SAMPLE

According to the Bulawayo City Clinics' Medical Director, the Luveve, Nkulumane, Pelandaba and Northern Suburban clinics service high-density townships. Most people who come from the high-density townships are very poor (surviving on less than 1US $ a day), unemployed and highly mobile as people move in search of cheap, rentable accommodation (Zimbabwe Human Development Report 2003). The women's socioeconomic situations predisposed them to HIV-infection as suggested by the MOHCW TB & HIV/AIDS Unit (2004) reports that women of child-bearing age groups are five times more at risk of getting infected with HIV because of gender imbalances and economic dependence.

In this study forty pregnant women (age 16- to 45-years) were recruited and sampled. These were pregnant women who booked themselves in at the Bulawayo Health City clinics for antenatal care during the month of October to November 2007. They were randomly drawn from the four Bulawayo City clinics (these included the Luveve, Nkulumane, Pelandaba and Northern Suburban clinics). Permission to carry out the study was sought and granted by Bulawayo City Health Care Services Director.

3.6 SAMPLING DESIGN

The study used a simple random sampling method. Each element of the population (in this case each pregnant woman presenting at the four clinic sites between 22nd of October and 20th November 2007) had an equal and independent chance of being included in the sample (Schneider & Beanland 1999).

The researcher used the antenatal care (ANC) booking register as a sampling frame. The ANC booking register contains the demographic details and medical notes of each patient at the clinic. These registers of attendees are kept at each of the four clinics. The permission to use the register was granted by the clinic managers. The information in the register was treated with utmost confidentiality during the data collection period. The registers were kept in locked storerooms at the clinics. It yielded a pool of names of 783 pregnant women who were booked in at the clinics in the month of October 2007 and who fitted the selection criteria.

The final 783 names were randomly listed - that is, any systematisation was avoided, for example alphabetical order, or age. However, each name was linked to the clinic where the woman receives ANC services to ease locating the correct respondent. In addition, a number (001 to 783) was assigned to each name on the list. By using a random number table, the names of 40 respondents were drawn. By working through the clinic, the selected respondents were then individually approached and requested to participate in the study when they visited the clinics for their routine ANC and appointments were negotiated and made with each respondent. The study only used 40 respondents (a 5% sample from the universe) because of time and financial limitations. It should be noted however, that the research is for a dissertation of limited scope and that 40 respondents were the maximum number of research participants that could be reached under very difficult circumstances in the field.

Five appointments were made each day. In order not to inconvenience the respondents the appointments were made to coincide with their routine ANC visits at the clinics. Only 5% of the respondents either refused or failed to meet appointment schedule. These were randomly replaced, until a desired sample of 40 respondents was achieved.

3.7 DATA COLLECTION

The study used a questionnaire (a copy is attached as Appendix A) to collect data. The data were collected over a period of four weeks (from 22nd October to 20th November 2007). Two research assistants (students majoring in Applied Mathematics) were recruited and trained on the objectives of the research and data collection techniques by the principal researcher. The Applied Mathematics students were deliberately recruited for this study, because of they had experience in applying quantitative research methodology. They participated in the pilot testing of the questionnaire and editing of the questionnaire. This process gave them an appreciation for the flow and skipping patterns of the questionnaire. The research assistants were paid a small stipend or allowance at the end of the study. In order to ensure inter-interviewer reliability, all the interviewers were expected to commence the session by reading out the following:

Hello, I am ……. I study at the University of South Africa [UNISA]. I'm asking pregnant women in Bulawayo City Health Clinics to answer a few questions, which we trust will benefit Bulawayo City Health Department.

The purpose of the research is to explore how the demographic characteristics of pregnant women influenced the health decision-making in the Prevention of Mother - to -Child Transmission of HIV Programme in the Bulawayo City Health clinics.

The data were collected at the clinics when the respondents came for their routine antenatal care. At each study site the clinic manager introduced the research team to the clinic staff and to each respondent separately in a private room. In order not to bias the results, the researcher explained the objectives of the study to the respondents. The respondents were told to give preference to their ANC routine check-ups, in other words they were encouraged to complete their ANC testing and consultation routines as usual and then only present themselves to be interviewed. This was deliberately done in order not to inconvenience the respondents. In this way the data-collection in no way interfered with the respondents chances to receive regular ANC services just like all other attendees. The respondents were reassured that the responses they gave were not going to influence the type of services they will receive at the clinic. The principal researcher and the two research assistants collected data using the questionnaire. In order to ensure confidentiality, no names were written on the questionnaires. The interviewers read each item

from the structured questionnaire to the respondent and recorded their responses on the questionnaire.

These interviews were conducted in a private room at the clinic. Each interview lasted between 30 to 45 minutes. Interviews were conducted in English to ensure comparability of responses and questions. Each session was closed by thanking the respondents for their time and handing each respondents Z$500 000 as a reimbursement for travelling expenses. The refusal rate across all centres was low (calculated to be less than 1%).

3.8 STRUCTURE OF THE QUESTIONNAIRE

The questionnaire was designed to gather data on each respondent's demographic details, as well as information on knowledge and attitudes towards PMTCT, HIV/AIDS and VCT. The questionnaire had the following subsections:

a) Demographic characteristics
b) Knowledge about HIV/AIDS, attitudes and practice
c) Knowledge about the PMTCT programme
d) Voluntary counselling and testing
e) Awareness of the risk of further exposure to HIV-infection.

3.8.1 Credibility and validity of the research instrument

Reliability refers to the consistency of an instrument in producing the same results each time it is used repeatedly on the same subjects (Reave 1992). The questionnaire was adapted from the *Ndola (Zambia) PMTCT descriptive survey* (Ray & Jackson 2000). The questionnaire was pilot tested with 10 antenatal attendees drawn from non-participating clinics. This resulted in changing the skip-patterns in the questionnaire. The final questionnaire was discussed with the supervisors and the two research assistants.

The research assistants (these were students majoring in Applied Mathematics) were carefully trained by the researcher to protect the confidentiality of the respondents and to ensure their

safety. They also received three day's training on basic interviewing skills in order to ensure consistency in the way data were collected.

3.9 ETHICAL CONSIDERATIONS

Permission to carry out the research was sought, and granted by the Bulawayo City Health Directorate. The antenatal care clinic–booking registers were used to identify and randomly select the targeted respondents. It was imperative during the recruitment process that respondents understood what their participation in the study would involve. Information about the study, as well as the consent forms were written and explained in vernacular language, and a signed consent form was obtained from each respondent.

3.9.1 Voluntary participation

The respondents were informed that participation in the study was voluntary. The purpose of the study was explained to all of the respondents so that they could make informed decisions about whether or not to agree to the interview. The respondents were assured that even if they decided to stop at any time during the data collection process they would not be prejudiced in any way. All of the respondents who took part in the study were given a reimbursement of $500 000 Zimbabwe Dollars (equivalent to 25 Rand at the time of data gathering). However, the respondents did not have prior knowledge of the reimbursement before participation in the study.

3.9.2 Shared confidentiality

The respondents were informed about shared confidentiality between the researcher and the University of South Africa. They were also assured that no relative, family member or friends would have access to the research findings unless where the respondent gave permission. They were also assured that the information given would remain confidential and they will be no detrimental consequences from the answers given.

3.9.3 Informed consent

The respondents who participated in the study were requested to sign a consent form. The consent forms clearly stated that the information given was to be treated in strict confidentiality and no names or any form of identification was to be used that would link them with information provided. The consent form stated that participation was voluntary and that the interviewees could stop the interview at any moment. All the consent forms, interview sheets, and study material were kept in a safe and secure place. The researcher will destroy these materials when his supervisors instruct him to do so.

3.10 DATA PRESENTATION

The data are presented in the next chapter in the form of graphs, frequency tables and percentages. This method of data presentation facilitates easy appreciation of data at a single glance, as different variables are presented in the tables, figures and graphs. The presentation is arranged according to the sections of the data-collecting instrument.

3.11 DATA ANALYSIS

Data were analysed quantitatively. The data were grouped and analysed according to the sections of data-collecting tool. The data were then coded and the statistical package for social sciences [SPSS] used to analyse the data.

3.12 CONCLUSION

A descriptive survey (research design) was used in the study to investigate the how biographical characteristics of pregnant women might influence health decision-making in selected Bulawayo Clinics. A total of 40 pregnant women between 16- and 45-years participated in the study. The fixed response questionnaires were used to gather data. The questionnaire was adapted from the Ndola (Zambia) PMTCT descriptive survey and was pilot tested with 10 pregnant women who matched the characteristics of the women who participated in the study. The data collection took

about four weeks. The data were collected under a highly challenging political and economic situation. The data were analysed quantitatively.

CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS

4.1 INTRODUCTION

The objective of the study was to investigate how biographical characteristics of the antenatal attendees in Bulawayo City clinics influence their health decision-making. It was assumed that the demographic characteristics of the respondents will determine their attitudes towards service utilisation and knowledge of HIV/AIDS, PMTCT and VCT. It is hoped that the findings of the study will contribute towards meaningful policy changes aimed at guiding and facilitating the implementation of effective national PMTCT programmes in Zimbabwe. This chapter presents the analysed data collected among pregnant women (16- to 45-years) who presented themselves for antenatal services at the four selected Bulawayo City clinics (these included the Nkulumane, Luveve, Pelandaba and Northern suburbs clinics) during the month of October 2007. .

4.2 DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

In this section, the demographic characteristics of the 40 pregnant women who participated in this study are presented. The data are presented in frequency, tables and percentages according to the age distribution, level of education, number of children, marital status and employment status.

Table 4.1 shows the age distribution of the 40 respondents who participated in the study. It indicates that 15% of the respondents were below twenty years of age, 27.5% of the respondents were between 20- and 25-years, 15% of the respondents were between 26- and 30-years, 17.5% of the respondents were between 31- and 35-years and, 25% were above thirty-six years of age. These results are similar to the findings in the Zimbabwe Human Development Report, (2003) which indicated that 50% of women of reproductive age (15 – to 44-years) in Zimbabwe are aged 15 and 24 years.

Table 4.1: Age distribution of the respondents

Age in years	Frequency	%
Younger than 20	6	15.0
20 -25	11	27.5
26-30	6	15.0
31-35	7	17.5
36 and older	10	25.0
Total	40	100.0

Table 4.2: Level of education of the respondents

Level of education	Frequency	%
Primary	10	25.0
Secondary	28	70.0
Tertiary	2	5.0
Total	40	100.0

The majority 28 (70%) of the respondents had attained secondary education, 10 (25%) primary education and 2 (5%) had attained tertiary education. Although all of the women surveyed had some schooling, table 4.2 indicates that a quarter of them never attended secondary school. These results are similar to the findings of the Zimbabwe Human Development Report (2003), which suggests an 80% literacy rate in Zimbabwe. According to the UNAIDS (2001) report, education plays an important role in predicting how well an individual is able to incorporate current lifestyle messages into their sexual behaviour. It further notes that the better educated young women tended to delay their first sexual debut. The study assumed that pregnant women who had attained higher levels of education would be more knowledgeable and have positive attitudes towards PMTCT programmes, when compared to those with lower educational attainment.

Table 4.3: Marital status of respondents

Marital status	Frequency	%
Never married	13	32.5
Married	25	62.5
Separated	2	5.0
Total	40	100.0

Table 4.3 shows that the majority 25 (62.5%) of respondents were married at the time of the fieldwork, about a third 13 (32.5%) were never married and 2 (5%) were separated. The TRA postulates that married couples have significant others who are likely to influence decision-making concerning sexual health issues. The study therefore assumed that the marital status of the respondents would influence their decision–making process in deciding to take an HIV-test and enrol in the PMTCT programme if they tested HIV-positive.

Table 4.4: Employment status of respondents

Employment status	Frequency	%
Unemployed	22	55.0
Formally employed	11	27.5
Informally employed	4	10.0
Student	3	7.5
Total	40	100.0

Table 4.4 shows the employment status of the pregnant women who participated in the study. Of these women, more than half 22 (55%) were not gainfully employed, 11 (27.5%) were formally employed, 4 (10%) were involved in the informal sector and 3 (7.5 %) were students at the time of the fieldwork. The results of the study support demographic research evidence that suggests that the majority of Zimbabwean women are not gainfully employed and depend on the benevolence of their husbands or male partners (Zimbabwe Human Development Report 2003). This economic dependence makes women more vulnerable to HIV-infection since this weakens their bargaining power on sexual matters.

4.3 THE PREGNANCY HISTORIES OF THE RESPONDENTS

Table 4.5 indicates that of the 40 ANC attendees who participated in the study, more than half (25 or 53%) of the respondents had more than one surviving child, and 6 (15%) had more than five surviving children at the time of data-gathering. Only 9 (22.5%) were pregnant for the first time. This gives an average of 2.45 children ever born to the research group.

Table 4.5: Number and per cent of living children, pregnancies and months of gestation for the respondents

	Frequency	**%**
Number of children born alive		
None	9	22.5
1	10	25.0
2-4	15	37.5
Five or more	6	15.0
TOTAL	40	100.0
Mean number of children born	2.45	
Number of pregnancies (including the present one)		
First pregnancy	9	22.5
Second pregnancy	10	25.0
Third or fourth pregnancy	15	37.5
Fifth or more pregnancy	6	15.0
TOTAL	40	100.0
Mean number of pregnancies	2.45	
Number of months pregnant at the time of the interview		
4 – 6 months	6	15.0
7-9 months	34	85.0
TOTAL	40	100.0
Mean number of months pregnant	7.36	

Table 4.5 also shows that the majority of respondents (85%) were in their last trimester when they presented themselves for at the ANC clinics and that only 6 (15%) were between 4-6 months pregnant**.** On average most women attended ANC clinics when they were on average

7.36 months pregnant. According to the Zimbabwe Government MOHCW AIDS & TB Unit (2004), all pregnant women should book themselves in at their local clinic at six weeks of pregnancy and present themselves for ANC at least six times prior to delivery. However, the results of the study indicate that the majority of the attendees had booked themselves in during their third trimester. The late presentation of ANC impacts negatively on the implementation of the PMTCT programmes. Moreover, earlier access to antenatal care implies more opportunities for health care interventions and health education.

This section discussed the demographic characteristics of the pregnant women who took part in the study. More than 40% of the respondents were below the age of 25. According to the Zimbabwe Government MOHCW National AIDS and TB Unit (2004) the 19- to 25-year age group is the worst affected by HIV and AIDS. Seventy-five per cent of the respondents had attained secondary education and 25% had completed primary education. More than 60% of the respondents were in a stable relationship and 73% were not gainfully employed. The study assumed that these demographic variations would influence the respondents' attitudes towards PMTCT programme in Bulawayo City clinics.

4.4 THE RELATIONSHIP BETWEEN LEVEL OF EDUCATION AND KNOWLEDGE OF PMTCT

Education is an important determinant in influencing an individual's attitude and outlook on various aspects of life. Generally, educational attainment in Zimbabwe is high, 71 per cent of men and 63 per cent of women attended seven-year primary education or secondary education (Zimbabwean Government 2006). According to the Zimbabwe Demographic and Health Survey of 2005 to 2006 (Zimbabwean Government 2006), education plays an important role in predicting how well an individual is able to incorporate current lifestyle messages into their sexual behaviour. It further notes that better educated young women tended to delay their first sexual debut. The study assumed that those pregnant women who had attained higher levels of education would be more knowledgeable and would have positive attitudes towards PMTCT programmes, when compared to those with lower educational attainment. Table 4.6 below

presents, frequency and per cent respondent according to specific knowledge of mother-to-child transmission risks of HIV

Table 4.6: Respondents' knowledge of the mother-child-transmission risks of HIV

Risk factor	Frequency	%
Knew that HIV can be transmitted during pregnancy	28	70.0
Knew that HIV can be transmitted during delivery	34	85.0
Knew that HIV can be transmitted during breastfeeding	40	100.0

The study wished to establish the levels of knowledge with regard to the vertical transmission of HIV-infection. As indicated in table 4.6, the respondents demonstrated high levels of knowledge of the risks of MTCT. Of the 40 respondents who participated in the study, 70% said it was possible for the child to be infected during pregnancy, and 30% of the respondents were not aware that HIV can be transmitted during pregnancy, 85% knew that it was possible for the child to be infected at birth and all of the respondents knew that the child can be infected during breastfeeding.

Table 4.7 below presents the data according to three ways of in which vertical transmission occurs, i.e. during pregnancy, during delivery and breast feeding. Each subsection of the table presents the percentage of correct knowledge according to the respective educational levels indicated by the respondents. The data has also been statistically verified as significant or not significant according to confidence levels.

The study assumed that the respondents' level of education would influence their knowledge of PMTCT. Table 4.7 indicates a strong relationship between the respondents' levels of education and their knowledge of MTCT during pregnancy and delivery. The relationship between the respondents' level of education and knowledge of MTCT during breastfeeding was not significant. The results in table 4.7 suggest that the levels of knowledge of vertical HIV-transmission fluctuate with the respondents' levels of education and that more educated women were slightly better informed about the risks of MTCT of HIV-infection. The pregnant women in the study were aware of the risk of HIV-transmission to their babies and did not want their

children to get infected with HIV. This level of awareness can be attributed to group health education sessions given at the ANC clinics and the pre- and post-HIV-test individualised counselling sessions at the clinic. The results support the assumption that there is a strong relationship between the respondents' level of education and their knowledge of PMTCT programme.

Table 4.7: Levels of knowledge of vertical transmission of HIV according to the level of education of the respondents

Knowledge of vertical transmission during pregnancy	% with correct knowledge in each educational level	Frequency	% of all who knew
Primary	30.0	3	10.7
Secondary	82.1	23	82.2
Tertiary	100.0	2	7.1
Total	70.0	28	100.0

Chi-square=10.442; degrees of freedom (df) =2; p = 0.005

Knowledge of vertical transmission during delivery	% with correct knowledge in each educational level	Frequency	% of all who knew
Primary	50.0	5	14.7
Secondary	96.4	27	79.4
Tertiary	100.0	2	5.9
Total	85.0	34	100.0

Chi-square=11.555; df=2; p =0.021

Knowledge of vertical transmission during breastfeeding	% with correct knowledge in each educational level	Frequency	%
Primary	100,0	10	25.0
Secondary	100,0	28	70.0
Tertiary	100,0	2	5.0
Total	100,0	40	100.0

Chi-square=0.923; df =2; p = 0.921

4.5 THE RELATIONSHIP BETWEEN MARITAL STATUS AND KNOWLEDGE OF PMTCT

The new behavioural change model developed from the theory of reasoned action by Chiroro *et al* (2002), posits that women's attitudes towards HIV-infection in Zimbabwe are determined to a larger extent by knowledge, social position in the family and sex role stereotypes. Chiroro *et al* (2002), note that women's perceptions of HIV-prevention strategies open to them should be understood within the context of common expectations of marriage, which include having children and obeying their husbands. Marriage for the majority of uneducated and economically disadvantaged women is one of the few ways in which a woman can ensure her social status and economic security. Chiroro *et al* (2002) further urge that lack of knowledge is a consequence, rather than a cause, of the perception that HIV/AIDS is an attribute of others. If HIV/AIDS has nothing to do with you, why bother to find out more about it?

In this study it was assumed that the respondents' marital as well as their knowledge levels would influence their risk perception of HIV-infection. It was also assumed that those respondents who completed grade seven would be more knowledgeable and have positive attitudes compared to those who did not complete seven years of education. Married women were predicted to be more conservative and would not see themselves at risk of HIV-infection.

Table 4.8: Respondents' knowledge of risk-reduction strategies* for HIV-infection to the child during pregnancy by marital status

Risk reduction strategy known	Currently married		Not currently married		Total	
	Frequency	%	Frequency	%	Frequency	%
Take ARVs	25	100.0	6	40.0	31	77.5
Abstain from sex	5	20.0	7	46.7	12	30.0
Use condoms	5	20.0	11	73.3	16	40.0
Seek good antenatal care	8	32.0	0	0.0	8	20.0

**Respondents could give more than one risk-reduction strategy*

Table 4.8 shows that the majority of the pregnant women who took part in the study were aware of the risk of HIV-infection to the baby during pregnancy. The majority of the respondents mentioned that the use of ARVs may reduce the risk of HIV-infection to the child during pregnancy, 12 (30%) said abstaining from sex can reduce the chances of HIV-infection, 16 (40%) reported the use of condoms and only 8 (20%) mentioned seeking good ANC as possible ways of preventing the vertical transmission of HIV during pregnancy. It is also interesting to note that the eight respondents who mentioned antenatal care as a prevention of vertical transmission strategy were all married women and that none of the unmarried women mentioned it. The results indicate that, the respondents' marital status did not significantly affect their knowledge of risk-reduction strategies for HIV–infection to the child during pregnancy. This poor knowledge of the value of ANC probably to some extent explains the relatively late first attendance of antenatal care for pregnant women in this study.

Table 4.8 indicates demographic variations in respondents' knowledge of PMTCT strategies during pregnancy. Forty per cent of the respondents who were not married at the time of data collection mentioned taking ARVs as a risk-reduction strategy against MTCT of HIV-infection during pregnancy, as compared to 100% of those who were married. Twenty per cent of the respondents who were married at the time of data collection reported abstaining from sex as a possible strategy of preventing MTCT of HIV-infection during pregnancy, compared to 46.7% of those who were not in relationship. Working with a created variable, called "any prevention strategy during pregnancy known" and cross-tabulating that with marital status yielded a Chi-square of 1.348 (df =1; p = .510) indicating that knowledge of prevention strategies according to marital status was not significant for the sample.

Only 20% of the respondents who were married at the time of data collection mentioned condom use as a possible strategy of preventing MTCT during pregnancy. This contrasts sharply with the 73.3% of the unmarried respondents who mentioned condom use. This supports the assertion made by Civic and Wilson (1996) that generally men in Zimbabwe prefer not to use condoms and that many women regard condom use as inappropriate within marriage. Civic and Wilson (1996) report that the married women in their study saw condomless sex as meaning that the woman was valued more than a sex worker or any other temporary sexual partner.

On the other hand, unmarried antenatal clinic attendees can be more subjected to messages stressing sexual abstinence and condom use than married antenatal clinic attendees. This may imply that the observed patterns in table 4.8 can also be a reflection of the education given at the clinics. It should be mentioned in this regard that this question item has been added to the questionnaire as it was felt that women may be infected with HIV during their pregnancy and that the use of condoms whilst pregnant is an important vertical transmission prophylactic.

Table 4.9: Respondents' knowledge of risk-reduction strategies* for HIV-infection to the child during delivery by marital status

Risk reduction strategy known	Currently married		Not currently married		Total	
	Frequency	%	Frequency	%	Frequency	%
Take ARVs	4	16.0	3	20.0	7	17.5
Caesarean section delivery	14	56.0	9	60.0	23	57.5
Seek good ANC management during delivery	6	24.0	2	13.3	8	20.0

** Respondents could give more than one risk-reduction strategy*

Table 4.9 indicates that a small percentage (17.5%) of the respondents mentioned ARVs as a possible strategy for reducing the risk of HIV-infection to the child during delivery. Caesarean section delivery was mentioned by more than half of (57.5%) the respondents and only 20% of the respondents mentioned seeking good ANC management during delivery as a way of reducing PMTCT during delivery. Working with a created variable, called "any prevention strategy during delivery known" and cross-tabulating that with marital status yielded a Chi-square of 1.196 (df=1 and p=0.550), suggesting a poor relationship between the respondents' marital status and knowledge of PMTCT strategies during delivery.

Table 4.10: Respondents' knowledge of risk-reduction strategies* for HIV-infection to the child during breastfeeding by marital status

Risk reduction strategy known	Currently married		Not currently married		Total	
	Frequency	%	Frequency	%	Frequency	%
Breastfeed the child exclusively for 6 months	23	92.0	9	60.0	32	80.0
Use condoms	0	0.0	2	13.3	2	5.0
Early weaning	2	8.0	5	33.3	7	17.5

** Respondents could give more than one risk-reduction strategy*

Table 4.10 shows that the majority of the respondents (80%) correctly reported exclusive breastfeeding for the first six months of the infant's life as an important risk reduction strategy. In this regard, married respondents were more knowledgeable (92%) than non-married respondents (60%). A mere 5% of the respondents were aware that use of condoms during breast-feeding can reduce the spread of HIV-infection from mother–to-child postpartum and again it was the non-married group that stressed condom use. Whereas two thirds of the non-married respondents regarded early weaning as a risk reduction strategy, only 8% of the married respondents mentioned this strategy.

Giving correct information regarding condom use seems to emerge from the results as an urgent priority. In this regard, the consistent use of condoms during pregnancy to avoid new infection, re-infection, and/or further transmission; and the promotion of dual protection (with condoms and other treatments) throughout the postpartum and breastfeeding periods are encouraged. One wonders whether the non-married respondents proportional higher reporting of condom use as an HIV prevention strategy during pregnancy and breastfeeding is a reflection of clinic personnel targeting unmarried women for condom use messages. Such a strategy can have the negative consequence of reinforcing the idea that condom use is restricted to or more acceptable in non-marital sexual relations. Working with a created variable, called "any prevention strategy during breastfeeding known" and cross-tabulating that with marital status yielded a Chi-square of 7.110 (df=1; p = 0.130) indicating that the respondents' marital status did not significantly affect their knowledge of risk-reduction strategies for HIV–infection to the child during breastfeeding.

Out of the 40 pregnant women who took part in the study, a quarter said that an HIV-infected woman should have children of her own whereas three quarters (75%) felt that an HIV-infected woman should not give birth (see table 4.11). Breaking these perceptions down by current pregnancy and number of children, it is obvious that women with a lower parity had more relaxed views of HIV-infected women giving birth. Among women with two or more children, the majority (85.7%) expressed the view that an HIV-infected woman should stop childbearing, whereas for the lower parity respondents about a third confirmed an HIV-infected woman's right to bear children versus two thirds who felt that an HIV-infected woman should ideally stop childbearing.

Table 4.11: Respondents' views on whether an HIV-positive woman should bear children

All women	**Frequency**	**%**
Yes, she should	10	25.0
No, she should not	30	75.0
Total	40	100.0

By number of children	**First pregnancy – one child**	**2 or more children**
Yes, she should	36.8	14.3
No, she should not	63.2	85.7
Total	100.0	100.0
Number of cases	19	21

Table 4.12: Respondents' views of perceived reactions of male partners to an HIV-positive woman's decision not to breastfeed her baby*

Perceived reactions of the male partner	**Frequency**	**%**
He will reject her	40	100.0
He will support her	1	2.5
He will think that she wants to kill the baby	20	50.0
It will confirm her HIV-status to him	38	95.0

** Respondents could give more than one reason for their views on perceived reactions of male partners to an HIV-infected woman's decision not to breastfeed her baby.*

In Table 4.12 the total of the research sample exceeds 40 due to the respondents providing more than one response for the perceived reactions of the male partners. As indicated in the table 4.12,

all of the respondents reported that if HIV-infected women should decide not to breastfeed her child on her own without consulting her partner, she will be rejected. Only 2.5% of the respondents felt that a woman will have the support of her partner whereas 95% reported that by not breastfeeding the woman's HIV-positive status will be confirmed to her partner. Half of all the respondents felt that the partner will believe that the woman intends to harm the baby by not breastfeeding. These results indicate a strong social currency placed on breastfeeding as indicating that the mother is healthy and "a good mother". These attitudes may drive an HIV-infected woman to breastfeed her child against the recommendations of the medical personnel.

Table 4.13: Respondents' views on whether an HIV-positive woman should breastfeed

	Frequency	**%**
Yes	12	30.0*
No	28	70.0
Total	40	100.0

** Of the 12 respondents in favour of breastfeeding, 9 (75%) said that it is the mother's right to breastfeed her child, irrespective of her serostatus.*

Despite the respondents' high levels of knowledge of HIV-infection and PMTCT, they still felt that it was not desirable for an HIV-infected mother to breastfeed her baby. Less than a third of the respondents (30%) felt it was important for an HIV-infected mother to breastfeed and 28 (70%) said it was inappropriate for the HIV-infected mother to breast-feed. In table 4.14, the reasons for being against breastfeeding are listed according to the respondents' number of current children and pregnancies. Many of the women opposed to breastfeeding by an HIV-infected mother felt that breastfeeding will have a detrimental effect on the mother's health and it was mostly (86.7%) the women with two or more children who felt this way. Whereas only 15.4% of the respondents against breastfeeding by an HIV-infected mother suggested that the very act of breastfeeding will kill the mother thereby creating more orphans, this was the view expressed mostly by women with lower parities.

Table 4.14: Respondents' reasons for opposing breastfeeding in an HIV-positive mother *

Reason for not breastfeeding	1st pregnancy – one child		Two or more children		All respondents opposed to breastfeeding	
	Frequency	%	Frequency	%	Frequency	%
Breastfeeding the child will be a waste of the mother's time and strength	3	23.1	5	3.3	8	32.0
Breastfeeding will create more orphans	7	53.8	1	6.7	8	28.6
It will weaken the mother's health further	2	15.4	13	86.7	15	83.6
Number of cases	13		15		28	

** Respondents could give more than one reason for their opposition to breastfeeding by HIV-infected mothers*

Table 4.14 indicates demographic variations in respondents' reasons for their opposition to breastfeeding by HIV-infected mothers. The results show that, respondents with lower parity had more relaxed views.

Overall, the results of the study suggest a high level of HIV/AIDS and PMTCT awareness among pregnant women who presented themselves for ANC clinics in Bulawayo. However, it should be noted that women in Africa generally have little say on their reproductive health. The results of this study support the observations made by Ray (2002) that the values and attitudes of individuals and community members affect the incidence of PMTCT. He further argues that if preventive behaviour is at odds with community norms, it will be difficult to implement. He gives the example of an HIV-infected woman who upon choosing not to breastfeed her child in order to prevent vertical HIV transmission may face overt negative sanction and criticism for not breastfeeding. Worse, she may experience stigma and rejection because her positive status may is suspected or disclosed. This study suggested that apprehension about the mother's health be a great concern amongst pregnant respondents who oppose breastfeeding.

Therefore, there is a need for a community-oriented educational programme which aims at educating and empowering opinion leaders about PMTCT services. Evidence exists to show that prevention and community education programmes have been effective in reducing HIV sero-

prevalence in some countries such Uganda, and in influencing attitudes towards those infected by HIV and AIDS (Jackson *et al* 2002).

4.6 ATTITUDES TOWARDS HIV-TESTING, COUNSELLING AND INFORMATION ON SEROSTATUS

This section examines the extent to which the women's knowledge about HIV/AIDS influenced them to take preventative measures against risk of infection to the baby. The benefits of knowing one's HIV-status before becoming pregnant or during pregnancy are greater than protecting a baby from HIV-infection. Even in high prevalence areas, most women attending antenatal clinics will be negative. However, according to Zimbabwe Government MOHCW, TB & HIV Unit (2003) between 5-6% of women will become infected during the year of their pregnancy and lactation, probably because their partners are at risk of extra-marital sex and are themselves seroconverting. If women get infected with HIV during this period, the risk of PMTCT is much greater as the viral load is particularly high in a newly infected person. VCT provides an opportunity to discuss prevention of HIV-transmission through seroconversion during pregnancy and breastfeeding. Of the 40 pregnant women who took part in the study, 36 (90%) had tested for HIV and knew their HIV-status. They were requested to indicate whether or not it was possible to tell if a person is HIV positive by merely looking at them.

Table 4.15: Respondents' views whether it is possible to tell by mere looking at someone whether they are HIV-positive

	Frequency	**%**
Yes, one can tell by merely looking at someone	26	65.0
No, one cannot	14	35.0
Total	40	100.0

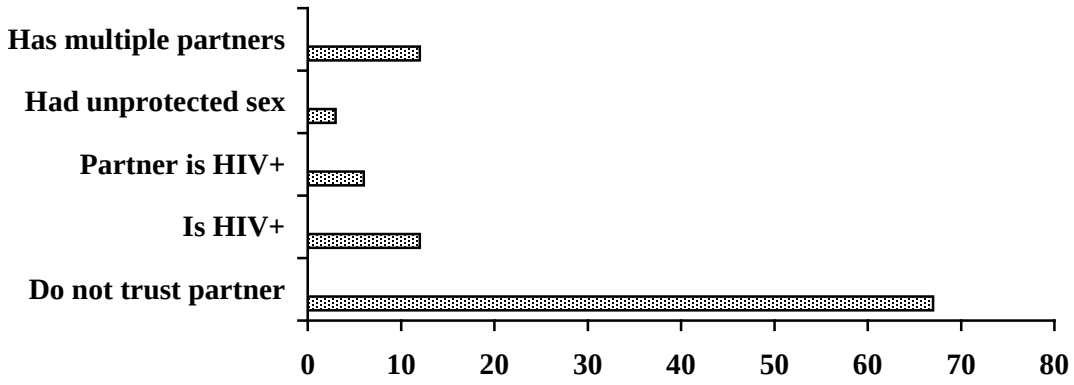
Table 4.15 shows that 26 (65%) of the respondents said it is possible to know someone's HIV-status by mere looking at that person. This result reflects a serious information gap, despite the high levels of awareness related to HIV/AIDS.

Table 4.16: Respondents' perception of their own risk of becoming HIV-infected

	Frequency	%
Yes, I am at risk	33	82.5
No, I'm not at risk	7	17.5
Total	40	100.0

When the respondents were asked whether they felt at risk of becoming HIV-infected, the majority 33 (82.5%) said they felt at risk and 7 (17.5%) said that they did not feel at risk of becoming HIV-infected. Of the 33 respondents who felt that they were at risk of becoming HIV-infected, 4 (12.1%) reported that they have multiple partners, 1 (3%) said they were having unprotected sex, 2(6%) noted that their sexual partners were already infected with HIV, 4 (12.1%) reported that they were infected with HIV themselves. A significant number 22 (66.7%) noted that they do not trust their sexual partners.

Figure 4.1: Reasons for feeling at risk for HIV-infection*



** Among all respondents who indicated that they are at risk. Respondents listed more than one reason.*

It is interesting to note that of those who felt they were at risk of becoming HIV-infected, 67% said they did not trust their sexual partners. Despite the high-risk perception, 20% of the pregnant women (as indicated in table 4.19) reported that they have never used condoms with their sexual partners. The results support the assertion made by Civic and Wilson (1996) that Zimbabwean women's perceptions of the HIV prevention strategies available to them are

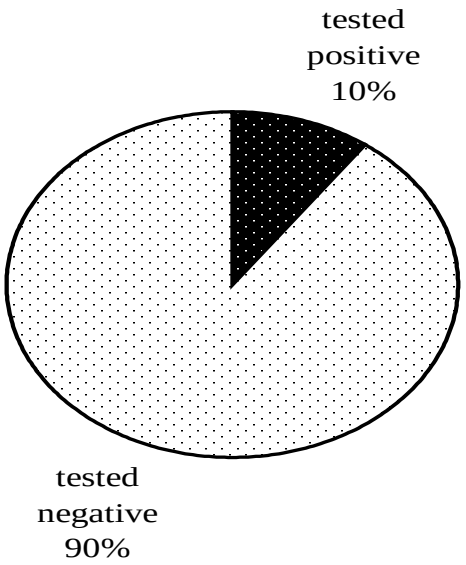
contained by the restrictions and expectations of marriage, which include having children and obeying the male sexual partner. In the study done by Civic and Wilson (1996)in Zimbabwe, just below half of the surveyed women (48%) said that they did not use condoms or any other form of contraception because they were in a new relationship, or because their sexual partners had paid *lobola* and it was important to give him a child.

4.17: Respondents' reported number of sexual partners in the past 12 months

	Frequency	**%**
None	0	0
One sexual partner	36	90.0
More than one sexual partner	4	10.0
Total	40	100.0

Table 4.17 indicates that 90.0% of the respondents reported that they had only one regular sexual partner and 10% cent said that they had more than one sexual partner in the past twelve months.

Figure 4.2: Pie chart of per cent respondents who had tested positive for a sexual transmitted infection (STI) at the time of data-collection



There is a strong association between sexual transmitted infections (STIs) and HIV-infection. Untreated STIs can dramatically increase the risk of HIV-transmission to the baby during pregnancy. According to the MOHCW, TB & HIV Unit (2003), the majority of women infected with STIs do not know they have them, especially as some do not produce symptoms in women. All women who present themselves for ANC in Zimbabwe are routinely tested for syphilis. As illustrated on Figure 4.2 of the 40 respondents who took part in the study, 4 (10%) tested positive to syphilis, and received treatment.

Table 4.18: Responses to the question: "Was the purpose of the test explained to you?"

"Was the purpose of the test explained to you?"	**Frequency**	**%**
Yes, it was explained	11	27.5
No, it was not explained	29	72.5
Total	40	100.0

According to table 4.18, 72.5% of the respondents were not given the explanation for the purpose of the syphilis test. The purpose of the syphilis test was only explained to 27.5% of the respondents. All the respondents reported that pap-smear has never being done on them. The results support the previous findings by Zimbabwe Demographic and Health Survey of 2005 to 2006 that a number of medical procedures are being flouted with impunity and usually not properly explained to patients (Zimbabwean Government 2006). According to the Bulawayo City Health Services Director[1], (HSD) the respondents who had tested positive for syphilis were requested by the clinic to bring their sexual partners along for treatment, but only one of these partners agreed to come to the clinic to be treated for syphilis, the majority refused to be treated.

[1] Follow-up interview with the HSD

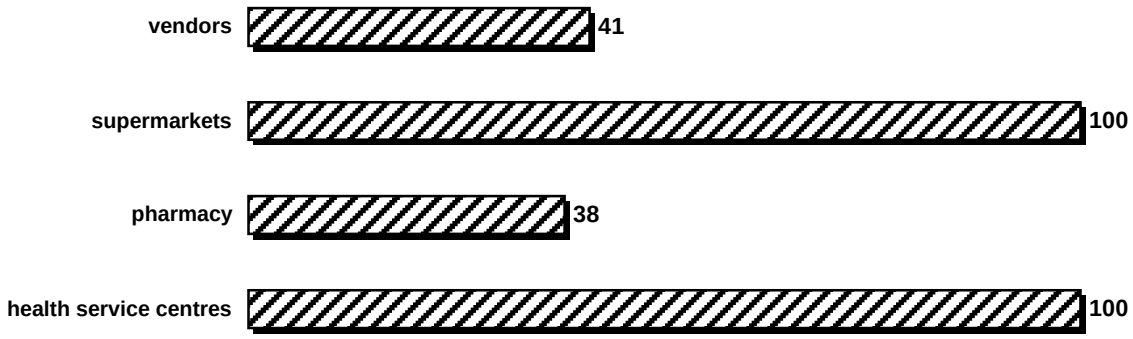
Table 4.19: Frequency and percentages of condom use (regular use with current sexual partner), by marital status

All respondents	**Frequency**	**%**
Yes , use regularly	32	80.0
No	8	20.0
Total	40	100.0
By marital status		
Currently married: Yes	17	77.3
Currently married: No	5	22.7
Currently married: Total	22	100.0
Not currently married: Yes	15	83.3
Not currently married: No	3	16.7
Not currently married: Total	18	100.0

Chi-square=0.871; df=1; p = 0.647

Table 4.19 shows that 32 (80%) of the respondents reported condom use with their regular sexual partners. Eight (20%) reported that they had never discussed condoms and had never used condoms. The results indicate a high condom use rate (83.3%) among the sexual active women who were not married at the time of the interviews. It is important however to note that a condom is perceived to be appropriate only with a non-regular sexual partner and in a marital relationship when a woman is experiencing her monthly periods. The results support the previous findings in the studies done by Bassett and Mhloyi (1999) and Meursing and Sibindi (1995), cited by Civic & Wilson (1996) in Zimbabwe, that whether as a means of contraception or as protection from STIs or HIV-infection, condoms are strongly associated by men and women with extra–marital sex or causal sex in a non-committed relationship.

Figure 4.3: Sources of condoms



* *Respondents could give more than one source where they usually obtain condoms.*

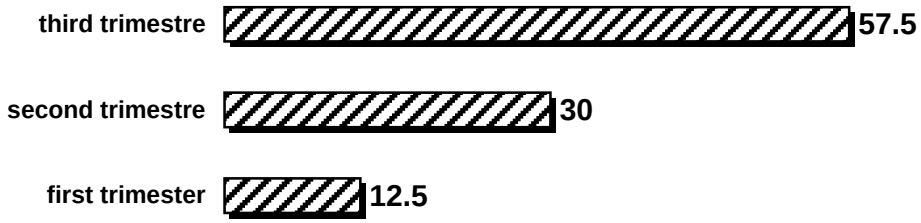
Figure 4.3 shows the sources of where the respondents usually obtain condoms from. All of the respondents reported that they get their condoms from clinics and supermarkets, 12 (38%) said they obtained them from a pharmacy and 13 (41%) from vendors. Condoms are provided free in all the public sector clinics in Zimbabwe. The public clinics are providing cheap condoms, while pharmacies and supermarkets provided branded and attractive condoms. At these outlets such supermarkets, condoms are sold at subsidised prices (MOHCW, TB & HIV Unit 2003). Although this study did not investigate the respondents' preferences in sources of condoms, it is possible that their choices could have been influenced by condom type. Previous studies indicate that, people usually prefer the branded and socially marketed condoms, as compared to condoms given for free (Bassett & Mhloyi 1999).

4.7 CONSTRAINTS TO ACCESS TO HEALTH CARE

Figure 4.4 indicates that 5 (12.5%) of the respondents visited the clinic for ANC in their first trimester, 12 (30.0%) visited the clinic in their second trimester and the majority 23 (57.5%) visited the ANC clinic in their last trimester. This falls short of the MOHCW, TB & HIV Unit (2003) guidelines, because according to the MOHCW, TB & HIV Unit (2003) guidelines a pregnant woman should visit the ANC clinic at least six times.

According to the Health Services Director, thirty-four per cent of the ANC attendees usually miss their clinic appointments due to costs. According to the MOHCW, TB & HIV Unit (2003) National AIDS and TB Unit the health care in public facilities is only free for children under five years of age and elderly persons. Even for the elderly people they have to prove their eligibility for treatment, by obtaining confirmation of their social status form the local social welfare. Because the process of getting the confirmation is difficulty most people have to pay for treatment.

Figure 4.4: Bar chart of per cent ANC visits during pregnancy



Of the 40 respondents who took part in the study, 36 (90%) took an HIV-test and received the results the same day. According to table 4.20, the minority (11.1%) of the respondents reported that they were tested for HIV in the first trimester, a third tested for HIV in the second trimester and the majority 20 (55.6%) said they took an HIV-test in the last trimester of their pregnancy. The fact that majority of pregnant women present themselves late for ANC has serious implications for services delivery. The HDS reported that counselling and testing for HIV is sometimes hurriedly done by the clinic staff when women present in their last trimester for their first antenatal visit at the ANC clinics. This is done order to accommodate the delivery date for those who had delayed making bookings at the ANC clinics.

Table 4.20: Responses to the question: "When were you tested for HIV during this pregnancy?"

Months of gestation	Frequency	%
First trimester	4	11.1
Second trimester	12	33.3
Third trimester	20	55.6
Total	36	100.0

As indicated in the table 4.21 a high percentage of the surveyed married or cohabitating respondents (77.5%) said that they had to ask for permission from their sexual partners or in-laws before taking an HIV test, reflecting the subordinate position of women within families. Given that few women had money of their own, it was difficult for women to seek health care without their partner's consent.

Table 4.21: Responses to the question: Whom would you consult before taking an HIV test?" by marital status

Respondents' marital status	Friend		Health worker		Partner		Total	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Currently married	2	9.1	3	13.6	17	77.3	22	100.0
Not currently married	1	7.1	3	21.5	10	71.4	14	100.0
Total	3	8.3	6	16.7	27	75.0	36	100.0

Table 4.21 indicates that more than three quarters (75.0%) of the respondents, 80% of all married respondents and 73.3 of all unmarried respondents reported that they discussed HIV-testing with their husbands or sexual partners prior to testing. While 16.7% of the respondents said they consulted health care workers (two out of every ten unmarried respondents will consult a health care worker) and only 7.1% consulted their friends before taking an HIV test.

The results of this study support the basic assumptions of the theory of reasoned action, suggesting that people in marital relationships have significant others who are likely to influence decision-making concerning reproductive health. Ray (2002) argues that even if a woman has been counselled and advised on the merits of knowing one's HIV-status, the majority of women deferred such important decision to the sexual partners.

Figure 4.5: Percentages of respondents' places of HV testing

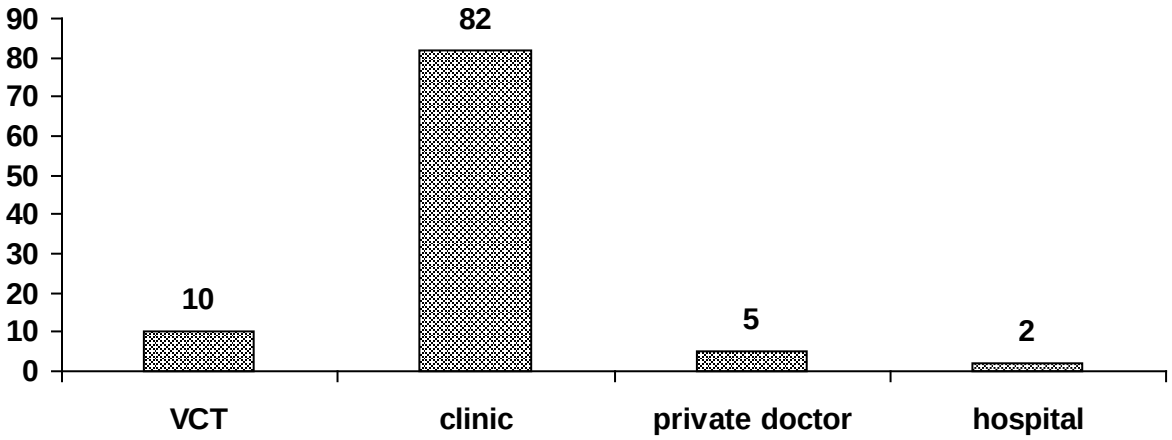


Figure 4.5 shows the places where the respondents received their HIV-tests. The vast majority of respondents (82% of the 36 respondents who have taken an HIV-test) received their tests at the ANC clinics. A further 10% reported that they had tested at the VCT (New Start centres), 5% were tested by private doctors and only 3% were tested at the hospital. Most of the pregnant women seemed to perceive HIV-testing as simply another routine antenatal medical procedure as two thirds of the respondents who have taken an HIV-test reported that they did so because of their pregnancy. The research findings suggest that 95% of the pregnant women who took an HIV-tested did so because of ill heath, pregnancy and on the doctors' advice (see table 4.22).

Table 4.22: Frequency and percentages of respondents' reasons for taking an HIV-test

Reason for the test	Frequency	%
I was worried that I might be HIV-positive	8	22.2
My doctor suggested it	4	11.1
Pregnancy	24	66.7
Total	36	100.0

Table 4.22 shows that the majority (66.7%) of the pregnant women in the study who had tested for HIV perceived the test to be simply another medical intervention in routine antenatal care. Of the 36 respondents who took an HIV-test, 8 (22.2%) tested because they were worried that they might be HIV-positive and only 4 (11.1%) were advised by their doctors to take an HIV-test. A total of 4 respondents did not answer the question; hence the total research sample is 36.

According to the Director of the Bulawayo city clinic, HIV-testing is routinely offered to all ANC attendees. This explains to some extent the high number of pregnant women who tested for HIV at the clinics.

Table 4.23: Frequency and percentages of responses to the question: Has your partner tested for HIV?

Respondents' marital status	Don't know		Yes		No		Total	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Currently married	4	18.19	7	31.81	11	50	22	100.0
Not currently married	2	14.29	5	35.71	7	50	14	100.0
Total	6	16.7	12	33.3	18	50	36	100.0

Table 4.23 indicates that, of the 36 respondents who took an HIV test, 16.7% reported that they do not know whether their sexual partners have tested for HIV. While 33.3% of the respondents noted that, their sexual partners have tested for HIV and 50%, said their sexual partners were not tested for HIV at the time of data collection. The results do not suggest any significant demographic variation.

Table 4.24 shows that, of 12 respondents who reported that their sexual partners had already tested for HIV, 83.3% said that their partners disclosed their HIV statues. Only 16.7% reported that, their sexual partners did not share their HIV test results with them at the time of data collection.

Table 4.24: Responses to the question: "Did your partner share the results of his HIV test with you?*"

	Frequency	%
Yes	10	83.3
No	2	16.7
Total	12	100.0

** 12 respondents reported that their sexual partners had already tested for HIV*

4.8 DISCLOSURE OF AN HIV-POSITIVE STATUS

Disclosure of an HIV-test result to a partner can be an important step for an HIV-positive woman in accessing care and support. Following such a disclosure a woman can openly seek medical care and other post-test support services. HIV-negative women can also benefit by disclosing to partners that they have had an HIV-test and by sharing the topics discussed during counselling, since this can be an entry point to enlist support for behavioural change to reduce risk of HIV-infection.

Table 4.25 indicates that, of the 36 respondents who took the HIV-test, 31 (86%) reported that they disclosed their HIV-status to a significant other and 5 (14%) said they did not disclose their HIV-status. The proportion of women disclosing their HIV-status to sexual partners and significant others in this study is notably higher than the figures described in the literature on

PMTCT in Sub–Saharan Africa that draws heavily on studies of clinical trials (UNAIDS 2004). It may be that women in routine PMTCT services receive more supportive counselling for disclosure during their pre- and post-HIV-test counselling sessions than women participating in clinical trials focussing on the efficacy of preventive ARV therapies.

The respondents were requested to list people they disclosed their HIV status to after an HIV test. Table 4.25 below indicates the persons to whom the respondents disclosed their HIV status.

Table 4.25 indicates that all respondents who have disclosed their HIV status did so to health workers and to their sexual partners. A total of 32.3% respondents disclosed their HIV status to their parents, 16.1% disclosed their HIV-statuses to siblings and, 6.5% discussed their HIV-statuses with friends. The low percentages of people disclosed to other than sexual partners and health workers indicates that people still fear stigma and rejection and that their possible social support groups are not extensive. The total of frequency reflects more than the research sample as respondents could list all the persons to whom they disclosed.

Table 4.25: Persons to whom the respondents disclosed their HIV-status*

Person(s) disclosed to	**Frequency**	**%**
Health workers	31	100.0
Siblings	5	16.1
Sexual partners	31	100.0
Parents	10	32.3
Friends	2	6.5

** 31 respondents reported that they had already disclosed their HIV-status to someone else. They were asked to list all the people they disclosed to.*

Table 4.26: Responses to the question: "If you were HIV-positive will you take Nevirapine"?

Would you take Nevirapine?	Frequency	%
Yes	34	85.0
No	2	5.0
Don't know/No answer	4	10.0
Total	40	100.0

Table 4.26 indicates that the majority (85%) of respondents will take Nevirapine, the ARV drug used to suppress the viral load during delivery, if they knew that they were infected with HIV. Whereas only 5% of the respondents indicated that they will not use Nevirapine, 10% of the respondents were unsure. This implies that a fair proportion of pregnant women are still unsure about the safety and efficacy of the drug.

Table 4.27: Respondents' reasons for declining Nevirapine if they tested HIV positive*

Reason for the test	Frequency	%
Side effects	2	100.0
Need more time to think about it	2	100.0
No reason	0	0.0
Total	4	100.0

***** *The respondents were allowed to give more than one response*

Responding to the question **"Why would you refuse to take Nevirapine, if you should test HIV-positive?**" of those who said they will refuse the use of ARVs, the majority said that they needed time to think about whether or not to take the drug and expressed concerns over the reported side-effects of the treatment.

4.9 CONCLUSION

The objective of the study was to investigate how the biographical characteristics of pregnant women influence health decision-making in Bulawayo city clinics. The study assumed that the demographic characteristics of the respondents would influence their attitudes towards the PMTCT programme. The findings of the study suggest important links between demographic

characteristics of the respondents and their attitudes towards HIV/AIDS and PMTCT intervention strategies. Marital status, educational attainment, age and the number of surviving children of the respondents were important demographic variables that were analysed. The results seem to suggest that these variables affected the way in which pregnant women appraised the PMTCT programme.

The results indicate that married women and those in steady relationships met challenges in practicing risk-reduction behaviours despite high levels of HIV/AIDS awareness. The findings seem to suggest that generally, women have little control over their reproductive health; hence important decisions such as testing for HIV and enrolling in a PMTCT programme are usually deferred to male partners. Overall, however the pregnant women who took part in the study were aware of the risks of MTCT of HIV-infection and were motivated to practice risk-reduction behaviours.

More than 40% of the respondents were below 25 years of age and had less than two surviving children. Approximately 80% of the women surveyed reported that they felt at risk of HIV-infection, most often due to a lack of trust in the sexual behaviour of their partners. Although the responses of the women in the study appear to indicate that they had tried to reduce sexual risks, options under their control may have been limited due to gender-related power imbalances within their relationships. It is possible that the absence of significant preventive behaviour change is associated with cultural taboos preventing women from discussing such sensitive issues as sexual behaviour, condom use and serostatus with their spouse. Further research is required to explore ways of reaching men with risk-reduction information, such as couple counselling and community-wide education campaigns.

The results indicate that the majority of the respondents were informed about PMTCT. Despite their knowledge of PMTCT, 75% reported that an HIV-infected woman should not bear children. The majority of the respondents noted that if an HIV-infected woman decides on her own without consulting her sexual partner, she will be rejected. However, 90% felt that deciding not to breast will confirm her HIV-status to the partner. Most of the respondents reported that they use condoms with their regular sexual partners. The results support the existing literature, that

condom use is supported and regarded as only appropriate in a causal relationship. Eighty-five per cent of the respondents reported that they would take ARVs, if they tested HIV positive. However, those who indicated that they would refuse the ARVs reported that they were concerned about side-effects, while others wanted to first consult their significant other. The results support the assumption that the biographical characteristics of women might influence their health decision-making.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

The purpose of the study was to investigate how the biographical characteristics of the pregnant women (aged 16- to 45-years) might influence their health decision-making in Bulawayo city clinics. The study was guided by the assumption that the demographic characteristics of the respondents would shape their attitudes towards PMTCT. Data collection was done in the four Bulawayo city clinics (Pelandaba, Luveve, Nkulumane and Northern Suburban) between the 22nd of October and the 20th of November 2007. A total of 40 pregnant women took part in the study. A descriptive survey design was used in data gathering and analyses. The data were presented in tables, figures and percentages.

5.2 SUMMARY OF THE MAJOR FINDINGS

In this section a summary of the major findings is presented. It seemed that the demographic characteristics of the respondents had an influence on their attitudes towards the PMTCT programme in Bulawayo City clinics. The majority of the respondents demonstrated high levels of knowledge regarding the PMTCT programme.

5.2.1 Knowledge of PMTCT

The objective, as stated in the first chapter, was to measure the knowledge of pregnant women concerning HIV/AIDS and the PMTCT-programme. The results of the study indicate that the overall knowledge regarding PMTCT was high. All the respondents were aware of the PMTCT programme, and were motivated to prevent the risk of MTCT. Although the respondents were knowledgeable about the PMTCT programme, gaps were noted in strategies for reducing the risk of HIV infection during pregnancy, delivery and breastfeeding. Demographic variations were noted on the attitudes of women on HIV/AIDS and the PMTCT programmes. The pregnant women who possessed high educational qualifications exhibited high levels of knowledge of the

PMTCT preventive strategies, compared to those with lower educational qualifications. However, all the respondents tended not to link the different PMTCT strategies as a continuum of care, but viewed them as separate entities. All the respondents reported that they heard about the PMTCT programme through the health workers when they were already pregnant and attending the ANC clinics.

5.2.2 Counselling and testing for HIV

Another objective of this study, as mentioned in Chapter 1, was to measure the attitudes of pregnant women towards the prevention of mother-to-child-transmission of HIV programme offered in Bulawayo City Health clinics. Counselling related to HIV/AIDS is routinely offered to all ANC clinic attendees at the Bulawayo city clinics. According to the Health Care Services Director this is done in order to maximise the opportunities to prevent MTCT and to properly manage pregnancy and child delivery. The Health Care Services Director reported that the VCT process aims at equipping pregnant women with information and to offer a support system to enable them to make informed decisions that will favour a healthy pregnancy and delivery. All the ANC attendees are provided with clinic-based education sessions on HIV prevention and PMTCT is provided to groups of women waiting for services. These sessions are followed by mandatory pre-test counselling that specifically focuses on providing information about the HIV-test and its implications for the woman and her family, and on clearing up myths and misinformation. Should a woman opt to be tested, HIV-testing can be done the same day and the result given during an individual post-test counselling session. Post-test counselling sessions focus on both cognitive and emotional understanding of the results that help the client cope with immediate reactions and address the disclosure of HIV-test results to partners and significant others.

The research findings suggest that 82% of the respondents were tested at the ANC clinics, 10% at the New Start Centres (VCT), 3% were tested at the hospital and the remainder (5%) were tested by private doctors. Those tested at the clinics reported that they received their HIV results

the same day. This probably explains the high number of women who opted for an HIV-test and received their results.

The Health Care Services Director (HSD) reported that despite the high number of women who are tested for HIV the uptake of the VCT services is negatively affected by staff shortages, particularly a shortage of trained nurse counsellors. According to the PSI-VCT manual (PSI 2008), good counselling takes time, which is in short supply at many busy clinics where workers already provide antenatal and family planning services.

The HSD noted that some of the women fail to test for HIV-infection at the clinic because of perceived lack of privacy, long waits, or rules that require clients to return another day for the post-test counselling and results. The results of this study support the argument by Ray (2002) that women do not receive their HIV results for a variety of reasons, which include results not being ready when they return, women changing their minds or women who were never sure about the benefits of testing, or who are discouraged by the sexual partners.

The existing literature suggests that, HIV counselling and testing during ANC provide information to pregnant women that is tailored to their concerns and context about their own risk, the health of their partners and children (Ray 2002). The women found the counselling sessions educative and empowering. The literature also suggests that those women who went through VCT process were more knowledgeable and had positive attitudes towards PMTCT programme (Ray 2002).

5.2.3 Risk perceptions and risk reduction behaviours

The final two objectives of this study, as stated in Chapter 1 was to investigate how biographical characteristics of pregnant women might influence health decision-making in Bulawayo City Health clinics and also to investigate the reasons why some pregnant women decline an HIV-test and decline to enrol in the PMTCT programme. In this regard, the findings of the study in terms of these two objectives are grouped under the subheading risk perceptions and risk reduction

behaviours. Four sub-themes are explored here, namely condom use, disclosure of an HIV-positive status, risk perceptions during breastfeeding and perceptions about having children.

5.2.3.1 Condom use

The results indicate that 82.5% of the respondents felt that they were at risk of becoming HIV-infected. Of these respondents, 66.7% reported that, they did not trust their sexual partners and 6% of the respondents reported that they were already infected with HIV. Despite the high risk perception, more than 10% of the respondents said they had never discussed condom use nor used them with the current sexual partners. Why did women not use protection despite the fact they did not trust their partners? The explanation is to be found not just in their limited knowledge about HIV/AIDS, but in an understanding of how they related their knowledge about HIV/AIDS to themselves and an understanding and other aspects of their lives. These include their expectations of sexual relationships and the degree of control they felt they had in such relationships, as well as attitudes towards condoms and to the control of disease more generally. It should be noted also that even those who reported condom use with current sexual partners, were not consistently using the condoms. The literature on condom use shows, even those women who report that they are using condoms noted that (Bassett & Mhloyi 1999) it was not easy to initiate condom use. This is particularly so for those who are married. The results support the assertion made by Ray (2002) that women feel that men generally control a couples' sexual encounters both in terms of if or when they have sex, and whether they use condoms. It is also important to note that whether as a means of contraception or as protection from STIs, condoms are strongly associated with extra-marital sex. The results support the assumption that demographic characteristic would influence the respondents' attitudes towards condom use.

5.2.3.2 Disclosure of an HIV-positive status

Disclosing the HIV-testing experience and sharing results with a partner is a key step towards eliciting support and greater involvement of men in a PMTCT programme. However, the benefits of disclosure of an HIV-positive status to a male sexual partner need to be balanced

against the potential risks that an individual woman may face when she discloses that she had an HIV-test. In contrast to the available literature on disclosure, more than 70% of the respondents reported that they had shared their HIV-status with sexual partners and significant others. However, there were no significant demographic variations noted in disclosure of HIV-status by women.

5.2.3.3 Knowledge of HIV-transmission through breastfeeding

Prevention of MTCT was a paramount concern of all of the respondents, but they displayed little if any information on ways to reduce HIV-transmission through safer breastfeeding. Current research in Africa has shown that either exclusive breastfeeding or exclusive artificial feeding has less risk of HIV-transmission than mixed breast and artificial feeding (Shaffer *et al* 1999).

All the women in the study knew that breastfeeding could transmit HIV to the baby and over two-thirds thought that HIV-infected women should not breastfeed. In principle, many would have preferred to avoid breastfeeding because they believed this would be a safer option.

5.2.3.4 Views about having children

Out of the 40 pregnant women who participated in the study, 86% of the women thought that positive women should not bear children. Almost all the women expressing this view were over 25 years and had already had at least one surviving child. The women who already had some children wanted to give priority to these children. They were concerned that pregnancy and child birth would affect their health and that their children would be left orphans. Eighty-five per cent of the respondents reported that they were willing to be enrolled in the ART programme if they test HIV positive. Only 15% said they needed time to consult their sexual partners and others expressed concern on the fact that the ARVs are said to cause side-effects.

There has been limited research on the health of women with HIV in Zimbabwe. One review of such research suggests that there is "*limited but growing evidence from developing countries that, complications of pregnancy, delivery and induced abortions are more frequent and more*

severe in HIV-positive than HIV negative women, especially those who are symptomatic" (Shaffer *et al* 1999:49). It is also urged that pregnancy may contribute to HIV disease progression, immune deficiency and AIDS, in pregnancy as compared to non-pregnant women (Shaffer *et al* 1999).

Hence, some of the negative attitudes uncovered in this study by pregnant women concerning an HIV-infected women having children or breastfeeding can be attributed to the fact that women in the study were more informed of the risk of HIV-infection to the child and did not want their children to get infected.

The results of the study showed important links between gender role stereotypes and health services utilisation by pregnant women in Zimbabwe. The results were also broadly consistent with the basic tenets of the theory of reasoned action. The theory of reasoned action postulates that, married couples have a significant that is likely to influence decision-making concerning sexual health matters.

5.4 RECOMMENDATIONS

5.4.1 Capacity Building

WHO recognises that community mobilisation is critical to the success of increased access to and uptake of HIV testing and counselling because it can be used to overcome the barriers of ignorance, denial, stigma and discrimination while raising awareness and encouraging people to utilize hiv testing and counselling services(MOHCW 2008). The following elements of community mobilized interventions are recommended; use of role models, e.g. PMTCT success stories, training of community health care and other service providers in the issues of non-discrimination and ethics and involving people living with HIV.

In order to promote and facilitate behaviour change among the general population in Zimbabwe, it is necessary to implement effective programmes designed to alter their beliefs and attitudes towards women and sex as well as to educate them about women's human and reproductive

health rights. According to Chiroro *et al* (2002), the Zimbabwean culture and legal system provide a congenial environment for the propagation and perpetuation of beliefs, stereotypes, and sexual behaviour among Zimbabwean men that not only puts their sexual partners' lives at risk but adversely compromise unborn babies' lives and women's reproductive health rights.

The study recommends increasing the involvement of male partners, although this is difficult to achieve in many settings. Making sure that the nursing staff at the ANC clinic welcome men and value their involvement could be a starting point. Other key relatives, such as mother-in-law, may also need to be involved around pregnancy and child care. Couple testing and counselling should be encouraged as a key strategy to reduce vertical transmission. This may be one way to ensure that men are not left out of the programme and for health workers to realise the important role men play in the epidemic. Also, this is an opportunity to move towards a 'family' oriented approach to HIV/AIDS.

PMTCT programmes should advocate for the greater involvement of men. The ANC clinics should be user-friendly for both men and women. Community education should be designed to educate the public on women's human, sexual and reproductive rights. Empowerment of women economically will also eradicate women's dependency on men, hence breaking the circle of vulnerability.

5.4.2 Clinical Practice

Increasing utilisation of VCT as part of ANC requires addressing both obstacles to service delivery and attention to the demand for services. This means expanding tested strategies, such as group pre-test counselling and using lay counsellors, community and client education, as well as trying out new approaches, including provider-initiated testing and counselling approach.

The clinics should carry out rapid testing in the ANC clinics and give women their results the same day, unless they opt to wait until another visit to receive their results. Same day results for HIV is likely to result in increased uptake of VCT but male involvement, particularly in high density suburban areas, should be considered for complete success of PMTCT programmes. The

ANC clinics should consider engaging the lay counsellors in VCT activities, to complement the professional staff's efforts.

PMTCT programmes should establish links with existing care and support organisations and test promising strategies to tap into these resources for the benefit of their clients. An HIV-positive woman should be linked with post-HIV-test support system in her community to deal the challenges brought by her HIV-status and to disclose her status to her sexual partner and significant others.

5.4.3 Research

Finally, the findings highlight the need to conduct more research to examine the relationship between clients' HIV-status, disclosure to partners, and the incidence of negative outcomes to those who disclose.

The researcher recognises that the above recommendations are not exhaustive in themselves, but could nevertheless be useful as catalysts for generating public debate about the contentious issues such as gender equality, condom use, disclosure of HIV-status and ARVs raised in this study.

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APPENDIX A

AN INVESTIGATION INTO THE ATTITUDES OF PREGNANT WOMEN TOWARDS PMTCT PROGRAMMES IN BULAWAYO HEALTH CLINICS, ZIMBABWE

Section 1: Demographic characteristics

No.	Questions and filters	Coding categories
Q101	How old are you?	age in years [_____|_____]
Q102	What is the highest grade of school that you completed?	grade [_____|_____] Never attended school
Q103	How many months is your pregnancy?	months [_____|_____]
Q104	What is your current marital status?	married 01 single 02 three 03 four 04 five 05 other specify_____ 88
Q201	During your ANC visits were you tested for syphilis?	Yes 01 No 02 Other, specify_____ 88
Q202	Was the purpose of the test explained to you?	Yes 01 No 02
Q203	What were your syphilis results?	positive 1 negative 2
Q204	When last did you have a PAP smear?	Yes 01 No 02 Don't Know 99

SECTION 3: Mother-to-Child Transmission (MTCT)

No.	Questions and filters	Coding Categories
Q301	When can HIV be passed from a mother to her child? **Do not read out, probe and circle a code for each**	(M= Mentioned, Nm = Not mentioned) M nm During pregnancy 1 2 During delivery 1 2 Through breastfeeding 1 2 Other, specify_____ 1 2

		Don't know 1 2
Q302	What can a mother do to reduce the risk of transmission of HIV to her child during pregnancy? **Do not read out, probe and circle a code for each**	(M= Mentioned, Nm = Not Mentioned) M Nm Nothing 1 2 Take Medicine, specify__ 1 2 Abstain from sex 1 2 Use condoms/safer sex 1 2 Better nutrition 1 2 seek good ante natal care 1 2 Other, specify__ 1 2 Don't know 1 2

Q303	What can a mother do to reduce the risk of transmission of HIV to her child during delivery? **Do not read out, probe and circle a code for each**	(M = mentioned, nm = not mentioned) M nm Nothing 1 2 Caesarean section at delivery 1 2 Take medicine, specify 1 2 Seek good management during delivery 1 2 Other, specify_____ 1 2 Don't know 1 2
Q304	What can a breastfeeding mother do to reduce the risk of the baby becoming infected with HIV during the breastfeeding period? **Do not read out, probe and circle a code for each**	(M = mentioned, nm = not mentioned) M nm Nothing 1 2 Give breast milk only/no feeds up to 6 months 1 2 Get tested; if HIV+ make informed decision 1 2 Use condoms 1 2 Get early treatment for illnesses 1 2 Early weaning; give formula/cow's milk 1 2 Take medicines (specify)__1 2 Better nutrition for both mother and baby 1 2 Other, specify_____ 1 2 Don't know 1 2
Q305	What do you think about a mother who is HIV positive breastfeeding her baby? **Do not read out, probe and circle a code for each**	(M = Mentioned, Nm = Not Mentioned) M Nm Baby will get HIV infection 1 2 She may not have money for formula 1 2 Baby can die 1 2 If she doesn't breastfeed, will suspect is HIV+ 1 2 Other, specify_____ 1 2 Don't know 1 2
Q306	If a known or suspected HIV positive mother decides on her own NOT to breast-feed, how would her **spouse/partner** react? **Do not read out, probe and circle a code for each**	(M = mentioned, nm = not mentioned) M nm Will reject her 1 2 Will support her 1 2 Will encourage her to breastfeed 1 2 Will think she wants to kill baby 1 2 Will confirm suspicion Of HIV 1 2

		Other, specify_____ 1 2 Don't know 1 2

Q307	In your opinion should an HIV positive woman bear children?	Yes 1 No 2 Not Sure 3 HIV

Q308	What are your reasons? **Do not read out, probe and circle a code for each**	(M = Mentioned, Nm = Not Mentioned) M Nm It is a waste of time, baby will get HIV 1 2 Will create orphan 1 2 It is her right 1 2 It is up to her 1 2 Pregnancy weakens the mother 1 2 Other, specify _____ 1 2

Section 4: HIV Knowledge, Attitudes, and Practices

No.	Questions and filters	Coding categories
Q401	Would you know whether somebody has HIV by looking at him/her?	Yes 1 No 2

Q402	Do you think you are at risk of becoming infected with HIV in the next 12 months?	Yes 1 No 2
Q403	What is the <u>main</u> reason you think you are at risk of getting infected with HIV? **Record verbatim**: _____ **and then code→**	Multiple partners 01 Unprotected sex 02 Partner is infected 03 Accidents 04 We are all infected 05 Can't happen to me 06 Other , specify_____ 88
Q404	How many sexual partners have you had in the past 12 months? *If respondent says "none," ask if they are including their spouse or regular partner. Answer should include <u>ANY</u> sexual partner, including a spouse.*	None 0 One 1 Two 2 Three 3 Four to Ten 4 More than Ten 5
Q405	Have you ever discussed condoms with your sexual partner? **IF NO, probe the reason why?**	Yes 1 No 2
Q406	Was it easy or difficult to discuss condoms?	Easy 1 Difficult 2

Q407	Have you ever used MALE condoms? **IF NO, probe the reason why?**	Yes 1 No 2
Q408	Do you use male condoms with your regular partner never, rarely, sometimes, often, or always?	Never 1 Rarely 2 Sometimes 3 Often 4 Always 5
Q409	Did you use a male condom the last time you had sexual intercourse with your regular partner?	Yes 1 No 2
Q410	Have you had a non-regular partner in the last 12 months?	Yes 1 No 2
Q411	Do you use male condoms with your non-regular partner never, rarely, sometimes, often, or always?	Never 1 Rarely 2 Sometimes 3 Often 4 Always 5
Q412	Did you use a male condom the last time you had sexual intercourse with a non-regular partner?	Yes 1 No 2

Q413	If you wanted male condoms, where can you obtain them? **Do not read out, probe and circle a code for each**	(M=mentioned, nm=not mentioned) M nm Health clinic 1 2 Pharmacy/drug shop 1 2 Shop/kiosk 1 2 Supermarket 1 2 Condom seller 1 2 Other, specify _____ 1 2 Don't know 1 2

Section 5: VCT (Voluntary Counselling and Testing)

No.	Questions and filters	Coding categories
Q501	Have ***you*** ever had a HIV-test?	Yes 1 No 2
Q502	How long ago did you have the HIV - test? *Instruction: If respondent answers less than four weeks, then enter 00 for months.*	Months ago [_____|_____] Don't remember 77 Years ago [_____|_____]
Q503	Were you tested for HIV during your [this current] pregnancy?	Yes 1 No 2

Q504	At about which month of pregnancy were you tested for HIV?	Enter the month of pregnancy at which they were tested (must be from 00 to 09) [_____|_____] Don't know 99

Q505	Where did you get the HIV-test?	VCT 01 Clinic 02 Private doctor 03 Other, specify_____ 88
Q506	Did you find out the result of your HIV- test?	Yes 01 No 02
Q507	How long after being tested for HIV did you get the results?	Same day 00 Days [_____|_____] Weeks [_____|_____]
Q508	Did you tell anyone the result of your HIV - test?	Yes 01 No 02
Q509	Who did you tell the result about of your HIV -test? **Do not read out, probe and circle a code for each**	(M=mentioned, nm=mot mentioned) M nm No one 1 2 health worker 1 2 Sister 1 2 Brother 1 2 spouse/partner 1 2 Mother 1 2 Father 1 2 peer/ friend 1 2 religious leader 1 2 community member/ neighbour 1 2 other, specify_____ 1 2
Q510	If you were to test HIV positive, will you take Nevirapine?	Yes 1 No 2 don't know/no answer 3
Q511	Why would you refuse to take Nevirapine, if you tested HIV positive?	I need more time to think about it 01 I am afraid of side effects of the drug 02 I need to consult my sexual partner first 03 Other, specify _____ 88

THIS IS THE END OF THE INTERVIEW
THANK YOU FOR YOUR KIND CO-OPERATION

APPENDIX B

CONSENT FORM

Hello, I am …….. I study at the University of South Africa [UNISA]. I'm asking pregnant women in Bulawayo City Health Clinics to answer a few questions, which we trust will benefit Bulawayo City Health Department.

The purpose of the research is to explore the attitudes of pregnant women towards the Prevention of Mother - to -Child Transmission of HIV in the Bulawayo City Health clinics.

Please understand that **your participation is voluntary** and you are not being forced to take part in this study. The choice of whether to participate or not, is yours alone. However, I would really appreciate it if you do share your thoughts with me. If you choose not take part in answering these questions, you will not be affected in any way whatsoever. If you agree to participate, you may stop at any time and tell me that you don't want to go on with the interview. If you do this there will also be no penalties and you will NOT be prejudiced in ANY way.

I will not be recording your name anywhere on the questionnaire and no one will be able to link you to the answers you give. Only I, UNISA and the Bulawayo City Health department officials will have access to the unlinked information. The information will remain confidential and there will be no "come-backs" from the answers you give.

The interview will last around (30 to 45) minutes. I will be asking you a few questions and request that you are as open and honest as possible in answering these questions.

I hereby agree to participate in the research regarding attitudes of pregnant women towards Prevention of Mother-to-child-transmission of HIV in the Bulawayo City Health Clinics. I understand that I am participating freely and without being forced in any way to do so. I also

understand that I can stop this interview at any point should I not want to continue and that this decision will not in any way affect me negatively.

I understand that this consent form will not be linked to the questionnaire, or to the test results.

Researcher signature…….. Date……..

Signature of participant……Date:……