THE UNIVERSITY OF ZAMBIA

SCHOOL OF MEDICINE

DEPARTMENT OF POST BASIC NURSING

A STUDY TO DETERMINE MATERNAL KNOWLEDGE AND BREASTFEEDING PRACTICES IN RELATION TO HIV TRANSMISSION IN CHIBOMBO DISTRICT

BY

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DEDICATIONS

To Mainza, Tembozi, Buumba and Augrey (Father). You're the source of my energy. I owe you my love.

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ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
BFHI	Baby Friendly Hospital Initiative
BF	Breast feeding
CBOH	Central Board of Health
CSO	Central Statistics Office
DHMT	District Health Management Team
EAF	Exclusive Alternative Feeding
HIV	Human Immune Virus
IEC	Information Education Communication
IMCI	Integrated Management of Childhood Illness
MTCT	Maternal to Child Transmission
NAC	National Aids Council
NFNC	National Food and Nutrition Commission
NNA	Norwegian Nurses Association
OPV	Oral Polio Virus
PMTCT	Prevention Maternal To Child Transmission
PHC	Primary Health Care
SIV	Semian Immune Virus
TTBA	Trained Traditional Birth Attendants
UN	United Nations
UNAIDS	United Nations Programme on HIV/AIDS

UNICEF	United International Children Emergency Funds
UNZA	University of Zambia
VCT	Voluntary Counseling Testing
W.H.O	World Health Organization
ZDHS	Zambia Demographic Health Survey
ZNA	Zambia Nurses Association

DECLARATION

I here declare that the work presented in this study for a Bachelor of Science degree in nursing has not been presented wholly or in part for any other degree and is not being currently submitted for any other degree.

SIGNED ..... **DATE** 10:04:06

CANDIDATE

APPROVED ..... **DATE** 10/04/06

SUPERVISOR

STATEMENT

I hereby certify that, this study is entirely the result of own independent investigations. The various sources to which I am indebted are clearly indicated in the text and in the references.

SIGNED.....A.B.Kamba.....**DATE**.....10:04:06.

CANDIDATE

ABSRACT

Mother to child transmission (MTCT) of HIV is a relatively new concept in rural populations, despite the huge amount of work that has been done. There still remains a dearth of information on knowledge of mothers on this concept especially in areas related to appropriate feeding methods for infants born to mothers infected with the virus. This study sought to examine the viable breast milk alternatives for mothers who would be HIV positive in Chibombo District. Fifty pregnant mothers were selected from women attending antenatal care at four rural health centres.

This cross- sectional study was designed to determine maternal knowledge of HIV and breastfeeding practices in relation to HIV transmission in the rural setting. The purpose of the study was to assess the maternal knowledge and breastfeeding practices. The findings would aid in making adjustments in the area of infant feeding so as prevent HIV among children. It is equally hoped that the findings would help the health care providers to re-examine themselves in terms of the health education offered to the mothers during antenatal clinic.

Literature review was based on the studies conducted in countries all over the world, to try and establish the knowledge and the breast feeding practices in relation to HIV transmission. Data was collected using an interview schedule and

was checked for its completeness and accuracy. The data collected was analyzed manually on a data master sheet. The study findings were presented in frequency tables, cross tabulation tables and figures like the pie charts and bar graphs.

The study findings revealed that 96% of respondents had heard about HIV and 76% of respondents had heard about exclusive breast-feeding. Only 38% of respondents had correct knowledge of what exclusive breastfeeding is, while 74% of respondents had knowledge that HIV could be transmitted through breast feeding. Actually only 70% of the respondents were knowledgeable about HIV and breastfeeding. The main source of information for the respondents was the health centre. Furthermore, 52% of respondents exhibited bad breast feeding practices, with 30% of respondents who could consent to wet nursing. The dried powdered milk was a viable alternative infant feed with the varying social economic and /or nutritional constraints.

Programmes aimed at improving breast milk alternatives supply, water and sanitation, family planning counseling services and infant feeding education and counseling, availability of VCT and ARV to the mothers could help reduce MTCT rate were suggested in this area.

The following major recommendations have been made;

- The DHMT to enhance HIV and breastfeeding teachings in other groups (such as churches, clubs) to widen the source of information for parents. This is aimed to reduce the attached stigma to HIV in traditional settings such as Chibombo district.
- The seminars /workshops should be held to sensitize the health care providers on issues to do with breastfeeding practices to prevent HIV transmission and possible alternative infant feeds.
- The DHMT to collaborate with NFNC to teach frontline health workers on alternative infant foods.
- Ministry of Health should work in collaboration with Ministry of Education and incorporate HIV and infant feeding alternatives in the curriculae in

schools and colleges to enable school leavers/dropouts to be knowledgeable before they start to have their babies.

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND INFORMATION

The Republic of Zambia is a large country at the heart of sub-equatorial Africa surrounded by 8 bordering countries namely, Democratic Republic of Congo (DRC), Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Namibia and Angola.

More than a quarter of its 10.5 million people lives in two urban areas namely in the capital city Lusaka and the Copper belt. The rest of Zambia is very sparsely populated, particularly in the west and the northeast of the country. The majority of people make their living as subsistence farmers. In its four decades of independence, the Republic has found peace but not prosperity. Zambia today is one of the poorest and if not the least developed, with a crippling national debt. Around 2/3 of the population live on less than a dollar a day, ZDHS, (2001-2002). The report, states that poverty the levels is as high as 80%.

Zambia's problems have since mid 1980s been compounded by one of the world's most devastating HIV/AIDS pandemic. The statistics alone are appalling. For example;

- 1:6 adults are living with HIV;
- 89,000 people died of AIDS in 2003;
- life expectancy at birth has fallen below 40 years
- 630,000 children are AIDS orphans;
- Urban areas have 23% prevalence among 15-49 years while rural area has 11% by 2002.

Besides this, 84% of every 100 people aged 15-49 still remain uninfected (National AIDS Council, 2004). If all these take measures to protect themselves and their Children, the spread of HIV/AIDS can be stopped.

Responses to HIV /AIDS in Zambia have for many years aimed to prevent HIV transmission, to care for those who are infected and affected, and to mitigate the

personal, economic and social impact. The area of prevention of HIV transmission is where all programmes of PMTCT has been initiated by provision of Anti-viral Drugs in late pregnancy and labour but much is required especially at the point of breast-feeding. Prior to HIV existence in Zambia and elsewhere in the world (especially in Africa), breast-feeding was the only best-approved method of feeding infant, (Moko, et al 2004). This is because of its health benefits both for the mother and baby. These include Mother-baby bonding, promotion of infant mental development and generally improving child's survival. Owing to this, exclusive breastfeeding for six months and continuing breastfeeding up to two (2) years and beyond was recommended and proved to save about (4,000) babies a day from death due to diarrhea and acute respiratory infections caused by early introduction of formula and other food substitutes to a baby (Cohen, et al, 1992).

This fact was supported by a UNICEF statement (1994), which states that "exclusively breast fed children are at a lower risk of infection than infants who receive complementary feeds earlier than six (6) months.' Breast milk has many advantages compared to alternatives to breast milk". Arke (1992) states that breast milk enhances the baby's immune system, it also satisfies both the baby's nutritional and fluid needs. Arke (1992) further argues that offering complementary feeds to infants below six (6) months reduces breast milk intake and interferes with full absorption of the nutrients and exposes the infant to the danger of contamination.

This information has been taught to mothers for a long time and most mothers have proved it. The information has been passed from generation to another. Today, Zambia commemorates annually, the Breastfeeding Week. This followed the Innocent Declaration (1990) by WHO/UNICEF. The joint statement aimed at protecting, promoting and supporting breastfeeding. Many concepts have since come up such as exclusive breast-feeding, rooming in concepts and Baby Friendly Hospital Initiative (BFHI).

Community breastfeeding support groups and social mobilization activities have been incorporated to promote breastfeeding so as to reduce childhood problems. To promote breastfeeding, the nutrition commission has a national policy on breastfeeding. The goal of the policy is to facilitate child survival, growth developing

and psychological well-being. Following BFHI guidelines in 1993 by UNICEF/WHO, Zambia has attained the status of BFHI.

Confusion has come now, when HIV has been known to be transmitted to babies through breastfeeding. This has brought the concept like Mother to Child Transmission (MTCT) meaning the immediate source of the child's infection lies within the mother. It means that an infant may acquire the Human Immune Virus (HIV) during late pregnancy (in utero) around delivery period and/or during breastfeeding period. This route is said to be responsible for more than 20% of annual new infections of 50-60 babies getting infected each day in Zambia (NAC, 2004).

Overall, a woman who is infected with HIV has a 30-35% chance of transmitting the virus to her newborn child. World Health Organization (WHO) suggests the transmission rates during different periods are as follows: 5-10% during pregnancy; 10-20% during labour and delivery; and breastfeeding 10-20% if the infant is breastfed for 2 years (NAC, 2004). HIV causes disease by infecting $CD4^{+}$ T-cells, Leukocytes that normally coordinate the immune response to infections and cancer. When a person's CD^{4} T-cell count reduces significantly, he is prone to a range of diseases that a healthy body is able to fight. HIV infection to brain cells causes some neurological disorders.

HIV is closely related to the Semian Immunodeficiency Virus (SIV). The SIV are Lent virus like HIV and are endemic to many African Monkey and Apes. Many scientists have suggested that HIV may have been transmitted to the human being through oral polio vaccine (OPV). The Oral Polio Vaccine (OPV) hypothesis argues that the use of monkey and Chimpanzee organs to prepare vaccines provides a positive mechanism for the introduction of SIV into humans. Particularly, considering that vaccines were administered to young infants with weak immunity.

As for HIV infection in children, the critical factor is when the mother becomes infected. The risk of infection to baby is 29%, if the mother is infected while breastfeeding. 10-14% additional risk is when the mother gets infected before delivery. The UNICEF (1999) report projects that Zambia will have 25% of infant mortality rate due to AIDS in the period of 2000-2005. But if treatment is given to the

mother before birth and the mother does not breastfeed, then the combination will reduce the risk from as much as 30% to less than 8% (UNAIDS, WHO and UNICEF-4th Annual African Region meeting statement on HIV and breastfeeding; IBFAN-internet).

However, prevention of Mother to Child Transmission (PMCT) programmes have been put in place. Luo (1998), the MTCT-HIV Coordinator, has stated that through the funding from Turner Foundation of United States some country wide programme sites have been setup where HIV infected mothers are being treated with ARVs. Other programmes like Integrated Management of Childhood Illness (IMCI) have been put to enhance child survival. The other programmes are exclusive breastfeeding with proper instruction, which have been instituted in almost all health facilities. These instructions have been made available by National Food and Nutrition Commission (NFNC).

1.2 STATEMENT OF THE PROBLEM

According to ZDHS (2003) report, Zambia is currently experiencing infant mortality rate of 109/1,000 live births and childhood mortality rate of 168/1,000 live births, which means 1 of 6 children would die before the 5th birthday. This has caused a great concern for the Zambian Ministry of Health.

Coupling with HIV infection in women (17.8%) of reproductive age, it is expected to have more children dying. HIV infected mothers are said to contribute more than 20% of new HIV infection in children annually (NAC, 2004). Children get HIV infection from the mother during late pregnancy around delivery and in breastfeeding period. Breastfeeding alone is said to contribute 1/3 of childhood HIV infection (ZNA/NNA, 2002).

In Chibombo District, this year alone, CSO projection report (2005) states that there will be 8,068 HIV infected women (of reproductive age). Using National AIDS Council statistics (more than 20%), Chibombo District will have an estimated 1,614 HIV infected children this year alone, of which 1/3 will get HIV through breastfeeding.

Until recently, there was no means of prevention of MTCT for those HIV infected mothers who wished to give birth. Then Ministry of Health in 1997 introduced MTCT activities in 6 sites as pilot study sites. Then in 2002 these sites were evaluated and led to introduction of activities in 72 Districts of Zambia. Currently, 83 sites in Zambia offer PMTCT activities as an integral part of MCH activities. NAC (2004) states that the quality and consistency of services are still inadequate. In addition a survey done by Linkages (2003) in Ndola further revealed that maternal knowledge has very little impact on breastfeeding practices. Nevertheless, UNAIDS (2002) argues that breastfeeding adjustments has a major role in reduction of mother to child transmission.

Advice to give to mothers has been complicated by the Comparison of benefits of breastfeeding messages and dangers of HIV infection. Knowledge among mothers is therefore a very good basis of decision making whether to have a child, breastfeed and/or exclusive alternative feed. It is for this reason that the investigator wished to undertake this study to determine the maternal knowledge level and breast feeding practices in relation to HIV transmission.

1.3 FACTORS INFLUENCING MATERNAL KNOWLEDGE OF HIV TRANSMISSION AND BREASTFEEDING PRACTICES

Mother to Child Transmission is a new concept, hence the need to offer more knowledge to mothers on HIV transmission through breastfeeding. Knowledge empowers mothers to make informed choices and decisions on the practices of infant feeding should they be found HIV infected. There are several factors that influence maternal knowledge and practices of HIV transmission through breastfeeding, and these will be discussed under the following sub-headings:

(a) Service Factors

(b) Socio-economic and Cultural Factors.

1.3.1 SOCIO - ECONOMIC FACTORS:

1.3.1.1 Age:

This refers to maternal age. Age affects knowledge in the sense that it determines the exposure to the environment. In Zambia, most girls are married off at a tender age (more especially in rural areas). As a result, their knowledge and experience on

health issues is limited, as they leave school early and / or they never go to school. They depend on older women's knowledge, which is passed on from one generation to another generation. This knowledge is usually outdated, more especially in the area of HIV since it is the new disease of the younger generation. On the hand older, mothers have very limited information concerning new diseases and they tend to resist change.

1.3.1.2 Level of Education

Knowledge is power. Education empowers mothers with knowledge to be able to recognize what is right and wrong, as well as to be able to make decision on issues pertaining to their health and that of their families. It is more likely that an educated mother would not only depend on health workers to advise her on health issues but she would also read and understand any literature on health. The level of education also affects one's ability to interact with other people. It determines whom to interact with and for what reason. Inadequate interaction can limit one's exposure to information on health. Therefore, a mother's level of education has a significant influence on the knowledge levels.

1.3.1.3 Maternal Parity

A mother with high number of children is said to have enough experience with childcare. Breastfeeding is one of the experiences she should have had in her childbearing life. It is this prior experience, which cements the knowledge, they have and it is difficult to break it. Mothers with high parity have been told that breastfeeding is good and it is difficult for them to comprehend that breastfeeding can transmit HIV. In addition, pregnancy and childbearing is one of the chances that give chances to the mothers to interact with health workers and receive health information education and communication. On the other hand, mothers with low parity do not have adequate experience and good interaction with the health workers hence they have no knowledge, or low knowledge levels.

1.3.1.4 Low Economic Status

Generally, Zambian's economy is poor hence there are very few health centres more especially in rural areas. The economic status usually gives the purchasing power to an individual. In this case, when the antenatal mothers economic status is low, would

not be able to pay for her transport expenses to the health centre to seek knowledge. She will end up booking and receive antenatal care from trained TBA, who will probably not give adequate health information.

1.3.1.5 Traditional Beliefs

In most African traditions, a woman is expected not to be very proactive and be able to make her own decisions. With this in mind, women tend to confine themselves in the home and not interact to get new information-knowledge. The mothers are only expected to get information from husbands and they are only given instructions on what to do in most things. In so doing, it limits their ability to seek for more knowledge in most of times.

1.3.2 SERVICE FACTORS

Surveys done by CSO (1996) on source of knowledge for mothers' shows that 53% of antenatal mothers get information (knowledge) from the health centres.

1.3.2.1 Staff levels

Shortage of staff in health facility leads to inadequate IEC and short cuts in performing procedures, hence poor quality of care.

1.3.2.2 Staff Attitude

Rude staff scares patients away from health facilities.

1.3.2.3 Availability of VCT Services

Testing for HIV only takes place after counseling and information transfer. Where there are no VCT services, health care providers tend to give information as general information. But where these services are available, the individual staff will take time to explain so that as a particular expectant mother consents for testing and the mother will have enough knowledge on HIV and breastfeeding. In case where services are not available then the knowledge is limited.

1.3.2.4 Distance

Distance to the health facility makes mothers book late for antenatal care and consequently affect the number of visits for antenatal care and quality of antenatal

care. When mothers have fewer visits to antenatal services, it then means even reduces privileges of health education, ultimately she has no knowledge. This is a very difficult factor to deal with more especially in rural areas as largely the population is sparsely. Even when PHC posts have been established, there are still far from their homes.

1.3.2.5 Staff Training

Staff not trained in breastfeeding would not be able to give adequate IEC.

1.3.2.6 Insufficient Supervision

Staff who are not supervised tend to relax and do short cuts. This leads to poor services.

1.3.2.7 Inconvenient Opening Hours

Hours of opening health facilities inconvenience patients to a large extent.

1.3.2.8 Long Waiting Times

Since patients are made to wait for long hours, many patients get frustrated and leave the health facilities before receiving any care.

1.3.2.9 Cost Of Travel

In a number of instances, due to high poverty levels, mothers cannot afford the cost of travel to health facilities if they live far away from health facilities.

1.3.2.10 Inadequate IEC

Inadequate IEC by staff would lead to poor patient understanding of benefits of breastfeeding.

1.3.2.11 Knowledge

Maternal knowledge of benefits of breastfeeding will influence their breastfeeding practices.

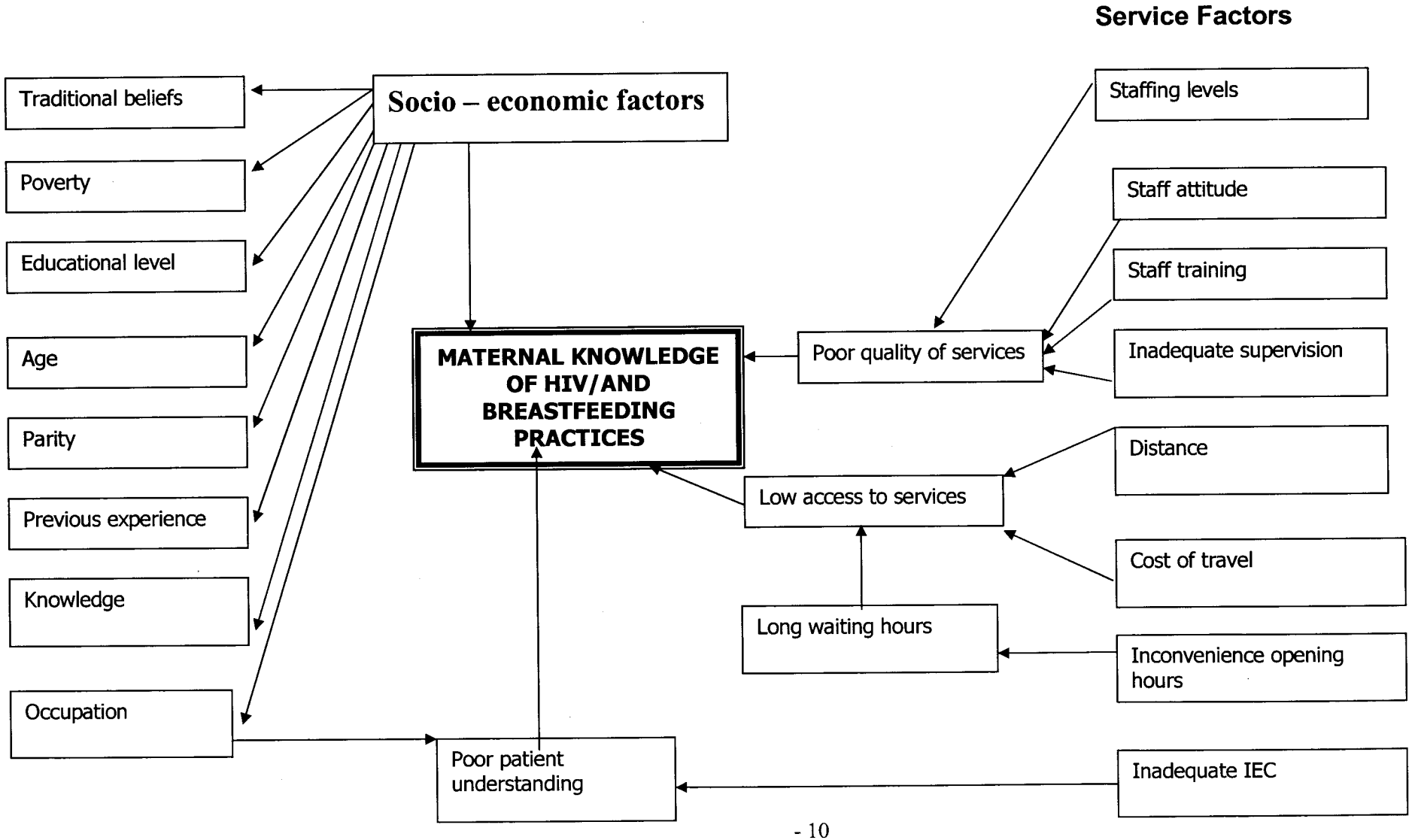
1.3.2.12 Previous Knowledge

The previous knowledge held by patients tends to influence their response to the new knowledge on breastfeeding practices.

1.3.2.13 Occupation

The nature of the occupation for mothers influences largely their habits of breastfeeding. Thus, mothers with more free time will indulge in breastfeeding more than those mothers that are too busy at work.

1.4 FIGURE 1: DIAGRAM OF PROBLEM ANALYSIS



1.5 JUSTIFICATION OF THE STUDY

The purpose of this study is to assess the maternal knowledge on HIV transmission and practices of breastfeeding. The results of this study will help the health care providers to reexamine themselves with regard to information Education and Communication and counseling services offered in maternal child health clinics. The findings will equally aid in making adjustments in the area of infant feeding and HIV/AIDS prevention among children. It is hoped that, the findings of the research will consequently change mother's breastfeeding practices in view of preventing Mother to Child Transmission of HIV.

1.6 RESEARCH OBJECTIVES

1.6.1 General Objective

To determine the maternal knowledge and practices in relation to HIV transmission through breastfeeding in order to make recommendations to relevant authorities on formulation of strategies that encourage positive breastfeeding practices among mothers despite their HIV status.

1.6.2 Specific Objectives

1. To assess the maternal knowledge levels in relation to breastfeeding.
2. To establish the maternal knowledge levels with regard to HIV transmission through breastfeeding.
3. To identify maternal practices with regard to breastfeeding.
4. To explore the maternal knowledge on the alternative infant feeding.
5. To make recommendations to relevant authorities with regard to HIV transmission and breastfeeding concerning mothers and the children.

1.7 HYPOTHESES

1.7.1 The maternal knowledge levels of HIV transmission through breastfeeding directly influence the breastfeeding practices.

1.7.2 There is a relationship between the maternal knowledge levels of HIV transmission through breastfeeding and the breastfeeding practices.

1.7.3 There is no relationship between the maternal knowledge levels of HIV transmission and the breastfeeding practices

1.8 OPERATIONAL DEFINITION OF TERMS

1. **Knowledgeable of HIV/AIDS**: This is the ability to state the causative organism, mode of spread preventive measure of HIV and being aware that HIV is fatal.
2. **Knowledgeable on Exclusive Breastfeeding:** The ability to state what exclusive breastfeeding is, when it should be started and ended.
3. **Good breastfeeding practices**: The mother should be able to either choose to exclusively breastfeed alternative infant feeding.
4. **Mother to Child Transmission:** This is when the HIV infected mother passes the HIV infection on to the baby during pregnancy, at delivery or during breastfeeding.
5. **Exclusive Alternative Infant Feeding:** This is feeding of the baby on other feeds apart from breast milk from day 0 of delivery.
6. **HIV transmission:** Passage of HIV infection from one person to another person. This other person should be able to be tested HIV positive afterwards.
7. **Infant:** A baby from the time is born up to 2 years.
8. **Wet nursing:** Allowing another person (a relative or any other person) to breastfeed the baby on behalf of the biological mother.

1.9.0 VARIABLES AND CUTOFF POINTS

According to Bless and Achola (1999) a variable is an attribute that differs. In other words, it is a characteristic, which varies or changes in different people depending on the prevailing situation.

An independent variable is the attribute that is not influenced by another variable, or it the "cause" in a relation while a dependent variable is the effect resulting from a certain causal relationship.

1.9.1 Dependent Variable

- Knowledge
- Practice

1.9.2 Independent Variables

Maternal age, maternal parity, educational level, occupation, source of knowledge.

1.10 INDICATOR AND CUT OFF POINTS FOR THE VARIABLE

According to each variable (Dependent), the investigator will classify where someone is knowledgeable or not depending on the questions, which the respondent will get right or wrong. To those respondents who will get 4-6 questions right will be classified as knowledgeable and when the respondent gets less than 4 points then she will be classified as being not knowledgeable. This will be the same with practice questions.

Table 1: Variable, indicators and Cutoff points

Knowledge	Knowledgeable	4-6 Scores of 6 on knowledge questions
	Not knowledgeable	0-3 Scores/less than 4
Practice	Good	*Should breastfeed *Should not do breastfeeding
	Bad	*Does wet nursing * Does not breastfeed

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

Literature review is a critical summary of research on a topic of interest, often prepared to put a research problem in context or as the basis for an implementation project (Polit & hungler, 2001). The purpose of literature review is to determine what is already known about the topic being studied so that a comprehensive picture of the state of knowledge on the topic can be obtained. It also gives the researcher clues to the methodology and instruments that people used before and therefore provide information on what has not been tried in regard to approaches and methods and what types of data collecting instruments exist and do not work. It also assists the researcher to refine certain parts of the study. The literature reviewed is mainly on breast-feeding, HIV transmission and maternal knowledge. This literature reviewed is presented and mainly discussed from the various scholars from around the world. It is arranged in three parts, namely the global perspective, regional perspective and national perspective respectively.

Throughout the world and in all cultures breastfeeding has been accepted as perfect food for infants. Breastfeeding is traced as early as 2nd century A.D with Hebrews who gave breast within 24 hours of birth and even before the umbilical cord was cut (Gunnlangsson, 1993). But this is only according to what is in the literature, breastfeeding has been in existence for as long as man lived on earth. This is also seen in all other mammals.

In 17th century, the German Doctor Ettmimular issued a written instruction to put baby on the breast during the colostrum period. This improved not only early breastfeeding but also neonatal feeding in 19th century. Early breastfeeding was said to improve child survival. This magnified the coming of baby-friendly hospitals, which are in place in most countries. This is in order to promote, protect and support breastfeeding the whole world. The World Health Organization (WHO) and United National International

Children's Fund (UNICEF) has come up with initiative to support all breastfeeding programmes by providing funds. This gave birth to annual breastfeeding week which is celebrated every year even in Zambia.

On contrary, much less has been stated about breast milk. A Greek physician Saranus in the 2nd century AD stated that mother's milk was unwholesome in the first 20 days and advised that babies be given honey or honey with goat's milk. He added that breastfeeding could be withheld until the mother recovered (Gunnlangsson, 1993). However, several beliefs vary concerning breast milk among cultures. In some cultures, beliefs succumb colostrum. In India and Suscuta colostrum is believed to consist of unhealthy foods, dirty milk, sick milk, and poison milk, old and stale milk that has resided in the breast since the last breastfeeding period and during pregnancy (Morse, et al; 1990).

Other cultural beliefs are to do with mature milk of a pregnant mother (this includes Lenje people of Chibombo District-undocumented fact). In Nigeria, the woman is advised to refrain from sex during breastfeeding period because it is believed that the man's sperms contaminates the breast milk hence cause the baby to be sick. This shows how breast milk/breastfeeding is associated with child's health.

With the coming of HIV and the fact that breastfeeding is one of ways that transmit HIV to the child. It has complicated the advice to be given to the mother concerning breastfeeding. World Health Organization (WHO) has stipulated standards on how mothers can breastfeed exclusively or exclusive replacement of feeds to the infant. It is therefore important to ensure that the mother knows her HIV status before the infant feeding method could be advised. Knowledge on issues relating to HIV transmission and exclusive breastfeeding is therefore, the only basis on decision making by mothers is the only hope of prevention of mother to child transmission of HIV.

2.2 GLOBAL PERSPECTIVE

UNAIDS, 1998 report estimates that by beginning of 1998, over 30 million people were infected with HIV, the virus that causes AIDS. 11.7 million People around the world had already lost their lives due to this disease .The virus continued to spread causing new infections, in 2001, adults were 4.3 million; women were 1.8 million, children 800,000. Resulting in people living with HIV/AIDS being; adults – 37.2 million women – 17.6 million. With minimal or no preventive strategies, these women transmitted HIV to children (2.7 million) infected adding to a total number of 40 million. During the same year, deaths occurred affecting 2.4 million adults, 1.1 million women and 580, 000 children (ZNA-NNA, 2002).

Unless knowledge is increased among women or life prolonging therapy is made more available, the majority of those now living with HIV will continue dying.

2.3 REGIONAL PERSPECTIVE

The June, 1998, UNAIDS report highlighting that two thirds (2/3) of all people now living with HIV in the world, live in sub-Saharan Africa. 70% of 16,000 world new infections are in this region, while 85% of world AIDS deaths have been in sub-Saharan region. In addition, 78% of the world children with HIV are also found in subSaharaAfrica (http://www.unesco.org/education/educprog/paed/GB/AIDSGB/AIDSGBtx/FemGB/livrGB. HIV in sub-Saharan Africa has mostly spread through heterosexual transmission. This is so because according to Musonda etal (1987) wives' bargaining power in marriage is the lowest in the area of deciding on and when to have sexual intercourse. This increases the vulnerability of women to HIV/AIDS.

According to (http://www.unesco.org/education/educprog/paed/GB/AIDSGB/AIDSGBtx/FemGB/livrGB), women have 2-4 chances higher of contracting HIV during unprotected sexual intercourse.

A woman's HIV status has a direct effect on a child's survival more especially that a mother can transmit HIV to the baby during pregnancy, delivery and breastfeeding period. In the absence of specific interventions, the estimates rate of MTCT ranges from 15-45% with differences in MTCT rates between populations. Most additional risks are associated with breastfeeding. Currently, close to 90% of pediatric infections occur in sub-Saharan Africa, where prevalence of HIV infection among women of childbearing age reaches 35% or more in some parts of Southern Africa. Most HIV is already contributing to increased childhood mortality rates.

A study conducted in Uganda by Marie et al (2004) on mortality of HIV infected children revealed that, there are more than 50% chances of HIV infected children born from HIV infected mothers and breastfeed while there are reduced death rates on infected mothers but opted not to breastfeed. Most children die before their 2nd birthday. This simply means adequate knowledge should be equipped to the mothers on HIV transmission and breastfeeding if we are to save most lives of children.

Examining the time acquisition of HIV infection in peri-partum period. Several studies have been done in different countries such as Rwanda, Kenya, Tanzania and Zimbabwe. All the studies confirmed that truly most infections occur in peri-partum period observing the non-breastfed babies. Study in Rwanda showed that there are higher chances of death in children who acquire the infection early than those who get infected later through breastfeeding. The risk of death is 5 times higher than the later infected (peripartum infection implies infection occurring in late pregnancy, during delivery and postpartum period).

In Tanzania, a study to determine the importance of good nutrition and HIV transmission to baby when multivitamin drug was given to pregnant and lactation period revealed slight reduction in breastfeeding transmission and significant reduction through breastfeeding after 6 weeks. This is taken to imply a possible benefit of multivitamins on breastfeeding-induced pathogenesis.

In Kenya, another study done on early infected babies and late infected babies showed increased mortality on early infected babies more than late infected baby (71/100 and 12/100 respectively). The same study was repeated in Zimbabwe and same picture results were obtained. This indicates that late infected infants have a lower peak viral load and a lower vital set point than those infected early. However, much effort is still required in the area of maternal knowledge on HIV transmission and infant feeding (breastfeeding) to most African mothers.

Other studies conducted in Kenya-Nairobi on estimate of morbidity rate of children who are breastfed and formula fed revealed that no difference in incidence of diarrhea and pneumonia except the breastfed baby were better nourished in the first 6 months (Basia et al, 2004). On the other hand the study done on the risk of mortality in HIV positive mothers who chose to breastfeed despite their HIV status revealed higher mortality rate in those who breastfeed than those who use formula fed. In Durban, South Africa the mothers who were counseled and made informed choice on either exclusive breastfeeding or exclusive formula feeding showed no differences in morbidity and mortality (between the two different types of mothers). Hence HIV transmission and breastfeeding still remains a dilemma.

Oguta (2005) in her study in South West Kenya on maternal knowledge of Mother to Child Transmission of HIV and breast milk alternatives for HIV-positive mothers revealed that only 8.9% mothers had knowledge on MTCT of HIV, while 13.5% had no knowledge at all. The knowledge on MTCT by these women in this area had shown no significant effect on the breastfeeding practices like initiation, frequency and duration of breastfeeding. This shows how entrenched the norm of breastfeeding in Kenya mothers and perhaps anywhere else in Africa.

The effort of anti retro viral therapy will be in vain if nothing is done concerning infant feeding. UNAIDS (2002) reports that owing to 1/3 of HIV transmission of Mother to Child being attributed to breastfeeding, many countries like

Botswana, Ivory Cost and South Africa have national policy on HIV and infant feeding as per UN guidelines. The programmes in these countries include providing the mothers with replacement feeding when mothers are counseled and opt for exclusive replacement feeding.

2.4 ZAMBIAN (NATIONAL) PERSPECTIVE

Zambia has been not spared with HIV ever since it was noticed in 1980s. HIV has spread throughout the country and to all parts of society. Mother to Child Transmission (MTCT) is an important mode of HIV transmission to children in Zambia. More than 20% of annual new infection is as a result of MTCT. Most likely, between 50 and 60 babies become newly infected with HIV each day in Zambia (NAC, 2004). Babies become infected during pregnancy or delivery or while breastfeeding. Careful examination of this HIV transmission, not all children of HIV positive mothers become infected with HIV if preventive measures are undertaken by the mother, however the risk is much greater in rural areas where maternal knowledge is minimal (CBoH, 1998). In recognizing this issue, Zambia has developed a policy on breastfeeding in prevention of Mother to Child Transmission of HIV. The policy is based on recommendations and protocols of the World Health Organization and other United National Agencies which stipulate that:

- Informed choice for HIV positive mothers so that HIV infected women have complete information and support to empower them to make fully informed decisions on how best to feed their babies.
- Guidelines on various feeding options for HIV infected women.
- Exclusive breastfeeding for the first six months of life for HIV positive mothers, where replacement feeding is not acceptable, feasible, affordable, sustainable and /or safe as WHO recommends
- Discontinuing of breastfeeding as rapid as possible once other foods have started.

In attempting to prevent MTCT Zambia has developed 5 core PMTCT interventions such as:

- Comprehensive maternal and Child health services

- Voluntary counseling and testing
- Use of antiretroviral drugs
- Safe infant feeding practices and
- Precautionary obstetric practices

Of all, UNAIDS recommends VCT as a critical entry point to MTCT prevention programmes. UNICEF recognized Zambia to be one the few countries who have integrated VCT in ANC (UNAIDS 2002). Zambia has recorded the range of 22%-65% of ANC attendance to have tested and appropriate intervention sought thereafter. However, much more is still required in the area of knowledge acquisition among mothers if good PMTCT is to be achieved, more especially in rural areas, if studies are still showing inadequate knowledge in urban areas. Such arose from the study by Kanene (1999) on maternal knowledge attitude and practice towards HIV transmission through breastfeeding in Lusaka –urban showing that 12% of mothers did not have any knowledge at all on how children get HIV. With further examination of knowledge attitude and practice of breastfeeding in the same study, revealed that mothers with higher parity (3-5 children) still insisted that they would breastfeed even if they were found HIV positive. Only young mothers (less than 2 children) suggested that they would not breastfeed if were found positive despite the benefit of breast milk. From this study one learns that the multiparus mother's decisions are based on their previous experience that breastfeeding form a good bond between the mother and baby.

Multiparus mothers would be associated with several encounters with health care providers and one would then take assumptions that correct adequate knowledge has been acquired to influence the attitude and practice concerning breastfeeding, but this is the opposite. Phiri as quoted by the Post Newspaper (June, 2005) admits that for a long time information concerning breastfeeding have been over emphasized on the benefits ignoring the harm it causes in terms of HIV transmission. He therefore has called all health care providers to take good time to explain to mothers on one to one basis on how HIV transmission can be prevented during breastfeeding. He has advised

abstinence or condom use so as to prevent HIV infection during this period (breastfeeding) which could be transmitted to the child.

Another study by Mpabalwani, et al (1993) done in Zambia on the role of breastfeeding in transmission of HIV, concluded that other factors like alternative infant feeding should be studied if HIV MTCT could be prevented through breastfeeding, Aggleton (2001) in another study on knowledge on MTCT has discovered that women in rural areas still have mixed information on infant feeding. This was alluded to information, which was given by health care providers. Health care providers are said to have inadequate information as well.

2.5 CONCLUSION

From the literature, it is evident that many studies have been done and more information has been generated but much more effort is required to disseminate the information to the mothers if the mothers are to make correct informed decision concerning infant feeding in relation to HIV transmission. It has been recognized from the literature that breast-feeding practices are generally influenced by the knowledge and experience that is occluded through the previous childcare. It is further recognized that it is difficult to change mother's thinking due to firm foundation of this knowledge. The literature further reveals that even in time in memorial, mother's health, the state of milk, and the child's health are closely linked. This promoted the ideas of separating the parents at the time of child delivery and breast-feeding period (in view of avoiding sex). This was for the purpose of breast-feeding and nursing the child well. With the idea in mind, it is then right for Phiri (2005) to advocate abstinence and use condoms during the period of breast-feeding.

It is further revealed that there is higher chances of acquiring HIV infection if breast-feeding is started early than if is started later. This information then calls for further research as exclusive breast-feeding requires putting the baby on breast shortly after delivery. In addition, colostrum has been taught to be of great importance where immunity is concern, but literature reveals mature milk contains less viral load as compared to colostrum.

As the literature shows that health workers have mixed information concerning breast-feeding, it then means that additional training should be given to health workers so that proper and adequate information should transferred to mothers to enable them make sound decisions.

Finally, literature clearly shows that mothers have inadequate, incorrect and mixed information concerning breast-feeding and HIV transmission. This plainly compels the investigator to take the study to determine the maternal knowledge in relation to breast-feeding practices.

CHARPTER 3

3.0 RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter gives an overview of the research methodology which comprises of a series of steps.

3.2 RESEARCH DESIGN

A research design is a set of procedures that guides the researcher in the process of verifying a particular hypothesis and excluding all other possible hypothesis, or explanations about the relationship between variables study design (Bless and Higson, 2000). A study design ,a cross-sectional, which was exploratory in nature, was used. The design was appropriate for generating data on current maternal knowledge of mother to child transmission of HIV as well as practices related to breast- feeding.

3.3 RESEARCH SETTING

The study was conducted in a quasi- naturalistic setting in Chibombo district (rural health centres). Chibombo district is situated on the northern part of Lusaka, 100km along the great north road (it is between Lusaka south-end and Kabwe north-end). The district is largely a farm block. The majority of people are peasant farmers or workers on farms of large scale farmers. The district has a population of about 285925 including those in the child-bearing age. The density population is 20 inhabitants per square kilometer. The district has a total 23 of health centres. Chibombo district was chosen because this is where the investigator worked and had observed the incorrect methods of breast-feeding by mothers. The study was conducted in four different health centres namely Chikobo, Chibombo, Golden Valley and Mwachisompola Health Demonstration Zone health centre.

3.3.1 Services in research setting:

The four health centres offer preventive and curative services. Among other preventive services, the health centres offer maternal and child health (MCH) services, which include, antenatal, intranatal and postnatal services except for Chikobo health centre which does not offer delivery (intranatal) services. All the four health centres are able to offer routine antenatal tests such as RPR, Hb, and grouping of blood. They all have facilities for HIV tests and counselors.

3.3.2 Location:

Golden valley health centre: This is located about 16km south east of Chibombo District Health Offices, about 20km south of Liteta district hospital and 3km west of great north road.

Mwachisompola health demonstration zone: This health centre is located adjacent to Chibombo district health offices, which is about 100km along great north road going up north of Lusaka and 10km west the great north road

Chikobo health centre: Situated about 20km north of district health offices, 5km west of Liteta district hospital and 4km west the Great North Road.

Chibombo health centre: Situated 33km north of district health offices and 10km west of the great north road.

3.3.5 infrastructure

The three health centre except Chikobo health centre have different antenatal examination rooms and delivery rooms, spacious enough able to offer privacy. But for Chikobo it is different thus clients are sent clients to Liteta hospital for delivery.

3.4 STUDY POPULATION

The study population is the total group of individuals or things meeting the designated criteria of interest to the researcher, (Dempsey and Dempsey 2000). In this study, the study population was pregnant mothers attending

antenatal clinic at the time of the study. Pregnant mothers were selected because they were potential breast feeding mothers to be. Hence their knowledge in relation to HIV and breast feeding practices play a major role in survival of children. These included any pregnant mother whether primgravida or has been pregnant before. The trimester did not matter as well.

3.5 SAMPLE SELECTION

Sample selection is also termed sampling. Sampling is the process by which the study subjects are chosen from larger population (pilot & Hungler1997). It is presumed that the sample always has the characteristics that the whole population has. A simple random sampling procedure was used to select the sample. This employed the lottery technique. Small pieces of papers with numbers on them were picked and only those who picked a piece of paper with a number 3 were considered as study units. This technique automatically excluded some antenatal mothers while others were taken as study subjects. However this method accorded everyone the chance of participating in study.

3.6 SAMPLE SIZE

A sample size is a subset of a population selected to participate in a research study (Polit &Hungler, 2001). A sample of fifty pregnant women was selected. Antenatal mothers were the most appropriate sample in study as they were potential breast-feeders. All categories of pregnant mothers were represented, that is primigravidae, multiparas, and grandmultiparas pregnant in first, second third trimester. The sample size (50) was considered due to limitation of time and finances.

3.7 DATA COLLECTION TOOL

Data collection is gathering of information needed to address a research problem (Polit and Hungler, 1997). A tool is a device or an instrument that helps to do a particular job (Delahunty & McDonald, 2002). In this study, the instrument that was used to collect data was an interview schedule (see appendix 1). This interview schedule contained structured questions, and wording fixed and identical. This enabled to obtain clear responses from

people with different views. The interview schedule was chosen because the population in the rural area is largely not educated to read and write. The tool also helped to reduce the low non-response rate. However the instrument has disadvantages of respondents not giving accurate information because of the interviewer's presence, it was costly in time and money as an interviewer had to spend a number of hours interviewing each person separately and she also travelled extensively to reach respondents. At times, it required making arrangements for the interview. The limitations were addressed by creating a good relationship with the respondents, and interviews were undertaken at clinics as mothers came for antenatal clinic.

3.8 VALIDITY AND RELIABILITY

Validity is the degree to which an instrument measures what it is intended to measure (Polit and Hungler, 2001). Reliability is the degree of consistency or accuracy with which an instrument measures the attributes it is designed to measure (Polit and Hungler, 2001). To ensure validity and reliability of the data collecting tool, the investigator used experts to review the tool before going ahead to administer it. Making questions simple, concise and brief further ensured validity and reliability and the subjects were only exposed to the tool once. The same instrument was used to all respondents and subjects were randomly selected. A pilot study was also conducted prior to the main study.

3.9 DATA COLLECTION TECHNIQUE

A technique is the method of doing something skillfully (Delahunty & McDonald, 2002). Data was collected through face to face interview. Face to face interview is an interaction between the interviewer and interviewee. The interview was conducted in a favorable room after making the respondent comfortable. The room provided privacy and enhanced good interaction and expression of views. The interviewer introduced herself and explained clearly the purpose of the interview. This helped in getting consent from the respondent. Before the interview, rapport was created to make the interviewee at ease. During the interview, questions were repeated to clarify any misunderstanding. Paraphrasing and some degree of explanations were

done to enhance clear understanding. Both verbal and non verbal cues were noted. Responses were recorded instantly during the interview after verifications of answers. After the interview, the interviewer thanked the respondent and terminated the relationship. The interview took approximately 30-45minutes.

3.10 PILOT STUDY

A plot study is defined as a small scale version or trial run of a major study whose main function is to obtain information for project or for assessing its feasibility (Polit & Hungler, 1997). For this study, a pilot study was conducted at River side health centre, in Chibombo district. River side health centre was chosen because it was not included in the main study, but the clients to this clinic had the same characteristic as those in the main study. This was done to avoid the subjects be aware of content of the study and modify the responses, meanwhile testing whether the interview schedule was fit to be used was done. The interview was conducted on five randomly selected pregnant mothers, which was 10% of the main study. The pilot study aimed at testing the accuracy and suitability of the tool. The pilot study helped the investigator to make necessary adjustments to the interview schedule.

3.10 ETHICAL CONSIDERATIONS

Ethics can be defined as a system of moral values that is concerned with the degree to which research procedures adhere to professional legal and social obligations to the study participants (Polit and Hungler, 2001). Written permission to carry out the study was obtained sequentially from the District Director of Health, Health Center In-Charge and Headmen in the area (see Appendix 5). Informed consent was obtained from the antenatal mother to participate in the study after explaining to the objective of the study. All information collected from each individual was held in confidence, concealing the identity of source subjects.

CHAPTER 4

4.0 DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 INTRODUCTION

Data presented in this chapter was collected from 50 respondents who were all antenatal mothers, using a structured interview schedule during the month of August and September, 2005. The respondents (antenatal mothers) were chosen using a lottery sampling method.

4.2 DATA ANALYSIS

Data analysis is the systematic organization and synthesis of research data and the testing of research hypothesis using data (Polit and Hungler, 2001).
All interview schedules were checked for accuracy, completeness and consistency in responses. Responses from open ended questions were categorized and coded. All data was then entered on data master sheet. Responses to variables were analyzed manually with the aid of a pocket calculator. Discriptive statistics such as percentages and frequency distributions have been used.

4.3 PRESENTATION OF FINDINGS

Data has been presented in the form of pie charts and tables. Cross tabulated have been used for easy interpretation and for the purpose of drawing meaningful inferences.

FREQUENCY TABLES

TABLE 2: DEMOGRAPHIC DATA

AGE DISTRIBUTION	FREQUENCY	PERCENTAGE
15-19	10	20
20-24	17	34
25-29	12	24
30-34	04	08
35-39	05	10
40 years and above	02	04
Total	50	100
PARITY		
CHILDREN		
0-2	34	68
3-5	12	24
6-8	03	06
9+	01	02
TOTAL	50	100
EDUCATIONAL LEVEL		
None	04	08
Primary	29	58
Secondary	16	32
College	01	02
TOTAL	50	100
OCCUPATION		
Farmer	09	18
Housewife	29	58
Others	12	24
MARITAL STATUS		
Single	04	08
Married	44	88
Divorced	00	00
Widow	02	04

The above table gives summary statistics on age, parity, educational levels, occupation, and marital status. Main age is 20-24 which is 17 out of 50 (34%), majority parity 0-2 is 34 of 50 (68%), educational level majority group is primary school level with 29 out of 50 (58%), main occupation being housewives 29 out of 50 (58%) and main marital status being married with 44 out of 50 (88%).

KNOWLEDGE DATA

TABLE 3: HEARD ABOUT BREAST FEEDING

VARIABLE	FREQUENCY	PERCENTAGE
Yes	38	76
No	12	24
Total	50	100

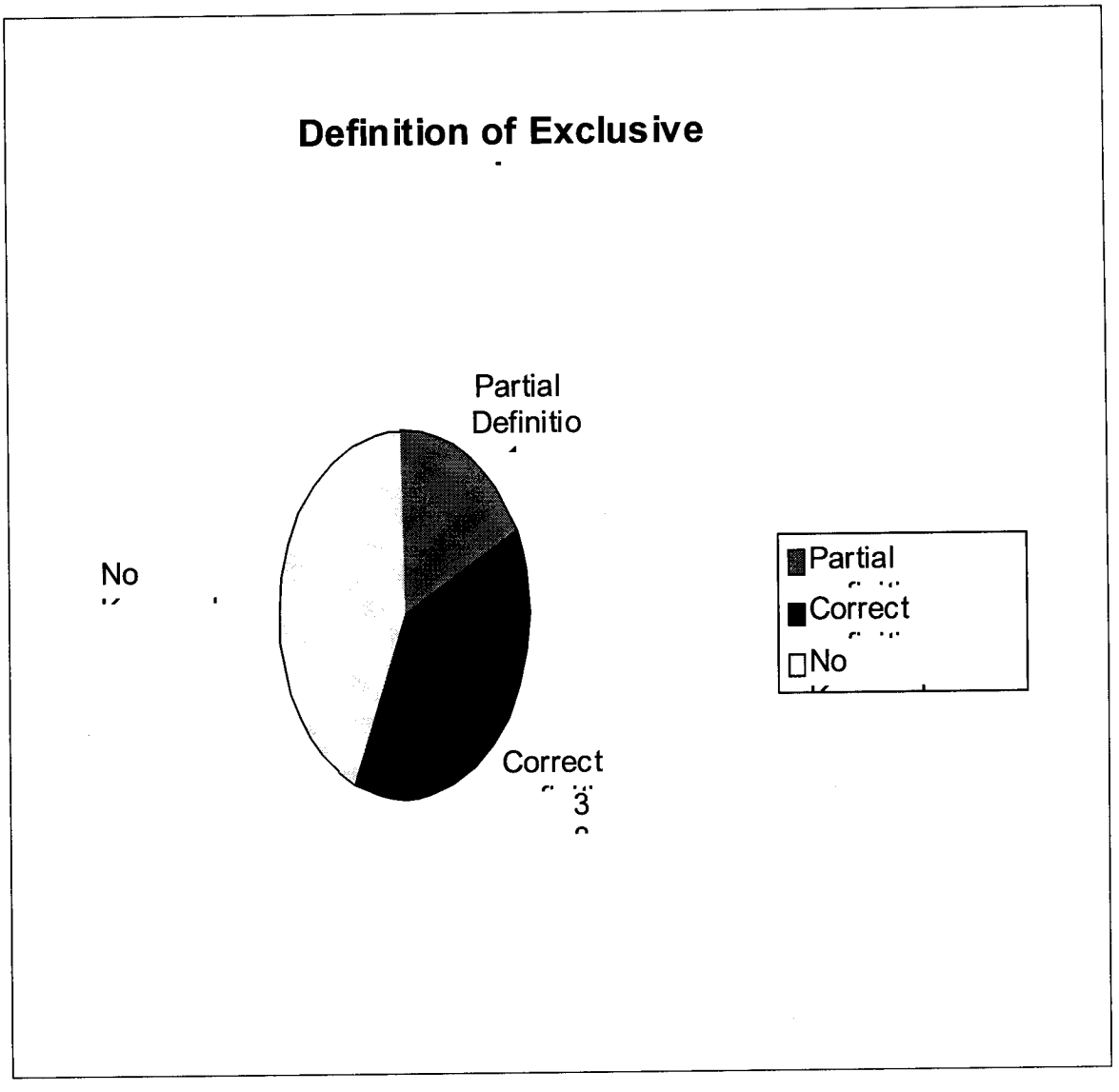
Most respondents (76%) had heard about breastfeeding while 24% had never heard about breastfeeding.

TABLE 4: SOURCE OF INFORMATION

SOURCE	FREQUENCY	PERCENTAGE
Friends	04	08
Relatives	12	24
Health personnel	20	40
Media	01	02
Other	01	02
N/A	12	24
TOTAL	50	100

40% of respondents revealed that health personnel were the source of information and 24% obtained information from relatives.

Figure 2:



44% of respondents had no knowledge about what exclusive breastfeeding is, while 38% know the correct definition of exclusive breastfeeding.

Figure 3

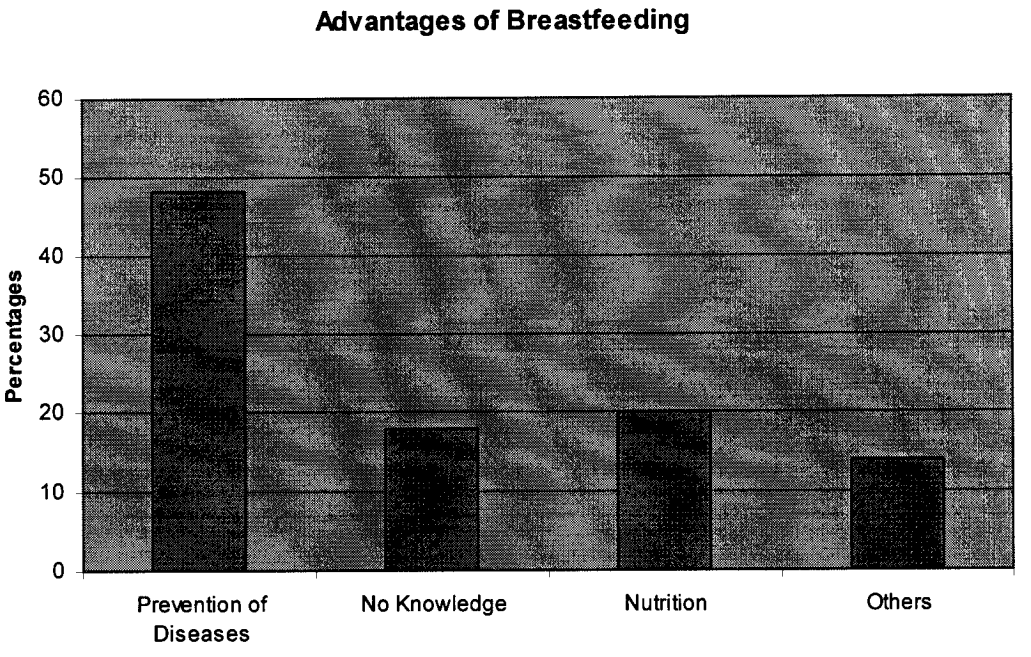


Figure 3 illustrates that 48% of respondents held a view that breastfeeding prevents diseases, 20% hold the view that breast milk is nutritious, 18% had no knowledge about the advantages of breastfeeding.

Table 5: HEARD ABOUT HIV/AIDS

Variable	Frequency	Percentage
Yes	48	96
No	02	04
Total	50	100

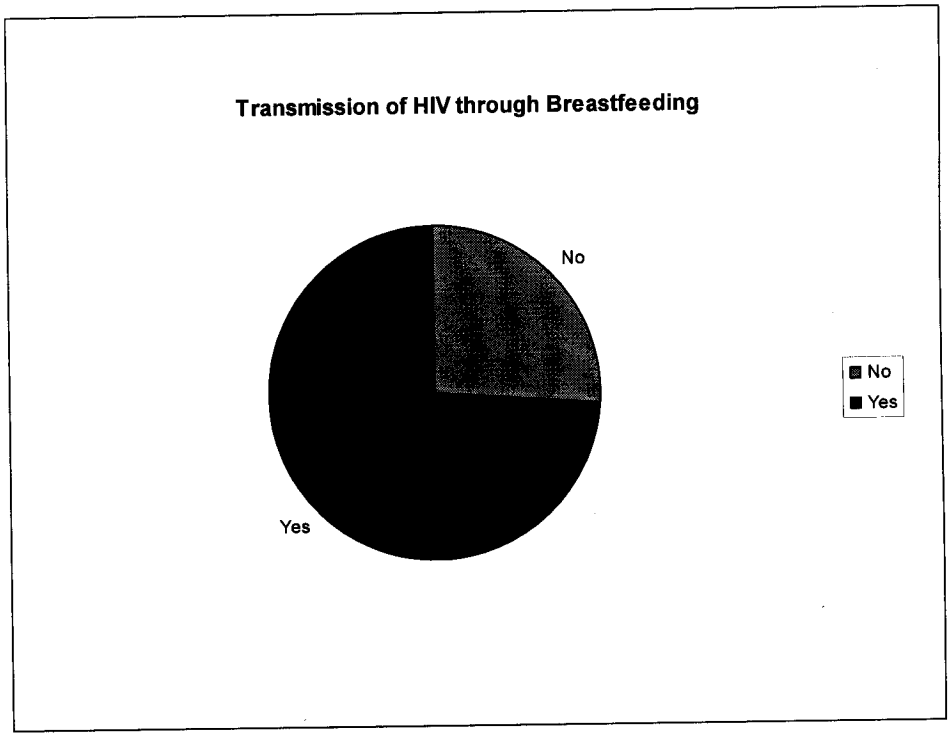
96% of respondents had heard about HIV/AIDS and only 4% had not heard about HIV/AIDS

Table 6: Methods of HIV Transmission in Adults

Variable	Frequency	Percentage
Razor blades only	04	08
Sex only	23	46
Sex, razor blades and infections	11	22
Others	08	16
N/A (those who did not answer preceding questions)	04	08
Total	50	100

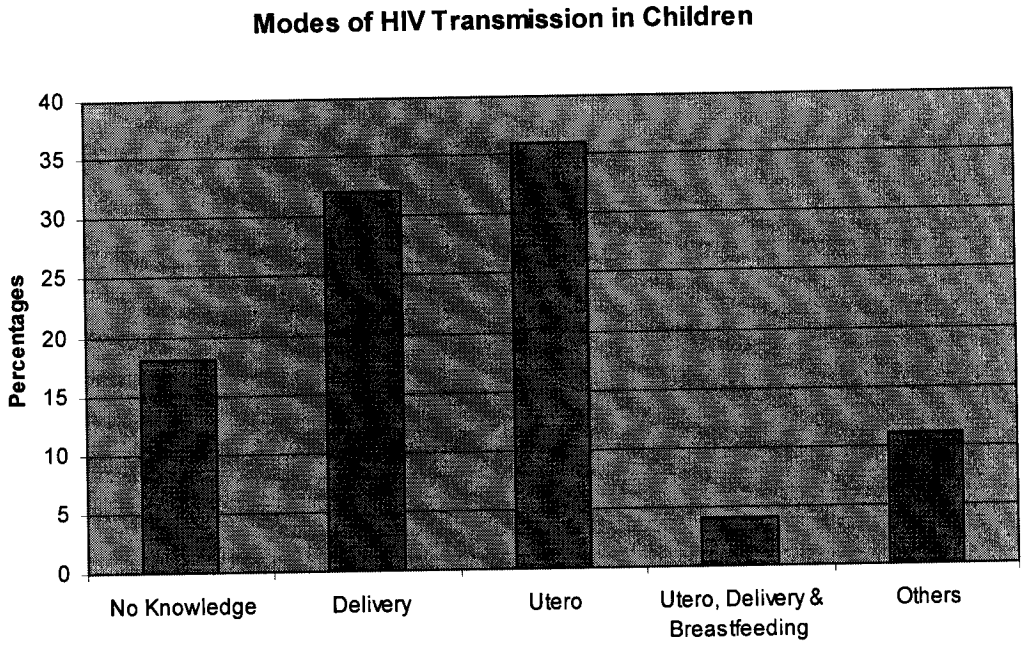
46% of respondents revealed that HIV/AIDS could be transmitted through sex only and 22% said that HIV/AIDS transmission occurs through sex, contaminated razor blades and infections.

Figure 4: Transmission of HIV/AIDS through breastfeeding



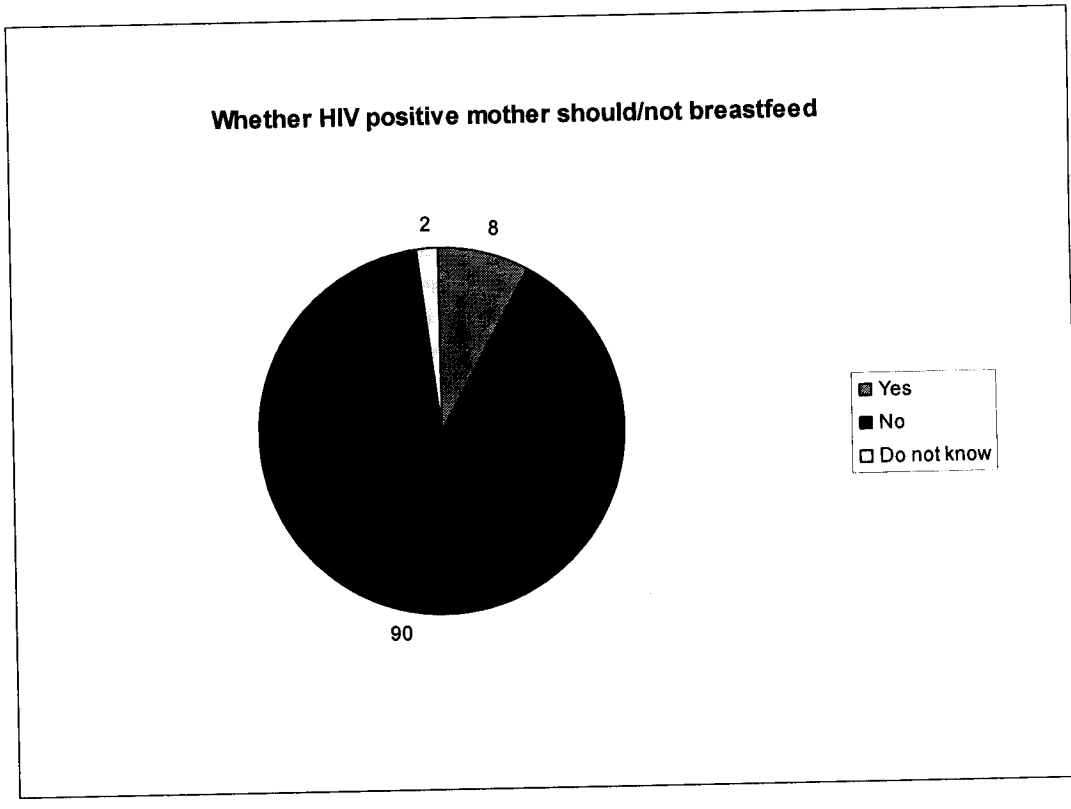
74% of respondents revealed that HIV/AIDS transmission occurs through breastfeeding while 26% had no knowledge

Figure 5



36% of respondents were of the view that HIV/AIDS is transmitted whilst in uterus, 32% revealed that HIV/AIDS transmission during delivery and 18% of respondents had no knowledge about how HIV/AIDS is transmitted in children.

Figure 6: Whether HIV/AIDS positive mother should not breastfeeding



Majority of respondents (90%) were of the view that an HIV/AIDS infected mother should not be allowed to breast feed while 8% supported the notion that HIV/AIDS positive mother should be allowed to breastfeed.

Table 7: Permission of the relative to /not breastfeed the child on behalf of HIV/AIDS infected mother.

Variable	Frequency	Percentage
Yes	16	32
No	33	66
Do not know	01	02
Total	50	100

Table 6 shows that 66% of respondents did not support the view of allowing the relative to breastfeed the child on behalf of an infected mother. However, 32% supported the view that a relative should breastfeed a child on behalf of an infected relative

Table 8: Reasons for/not allowing the relative to breastfeed

Variable	Frequency	Percentage
Not sure of relative' HIV/AIDS status	25	50
Same blood (Genes) with the mother	15	30
Prefer introduction of other foods	04	08
Others (not sure of baby's care)	06	12
Total	50	100

Half (50%) of the respondents stated that they would not allow their relative to breastfeed their children because they would be sure of their relative's HIV/AIDS status, 30% of respondents were of the view to allow a relative to breastfeed a baby.

Table 9: Preferred alternative infant food

Variable	Frequency	Percentage
Powdered milk	20	40
Goat milk	02	04
Cow milk	15	30
Porridge	03	06
Others (Soya)	10	20
Total	50	100

Table 8 shows that 40% of respondents indicated that they prefer to give powdered milk to the baby, 30% stated that cow milk should be given while 20% preferred to give Soya products (Soya milk or Soya porridge) to the baby.

Table 10: Assistance to be given to HIV/AIDS positive mothers who opt to breastfeed

Variable	Frequency	Percentage
VCT to mothers	12	24
Give ARVs	09	18
No breastfeeding	13	26
Health education on care of baby	10	20
Others	06	12
Total	50	100

Table 9 shows that 26% of respondents suggested that HIV/AIDS positive mother should be stopped from breastfeeding, 24% stated that VCT should be made compulsory to mothers and 20% suggested that health education on care of baby on alternative foods be taught.

CROSS TABULATIONS

Table 11: AGE IN RELATION TO DEFINITION OF EXCLUSIVE BREASTFEEDING

AGE (Years)	Definition of exclusive Breastfeeding			Total
	Correct Definition	No Knowledge	Partial definition	
15-19	03 (22.7%)	05 (26.3%)	2 (22.2%)	10 (20%)
20-24	08 (42.1%)	06 (27.3%)	3 (33.3%)	17 (34%)
25-29	02 (10.5%)	08 (36.4%)	2 (22.2%)	12 (24%)
30-34	04 (21.1%)	00 (00%)	0 (00%)	04 (08%)
35-39	02 (10.5%)	02 (9.1%)	1 (11.1%)	05 (10%)
40+	00 (00%)	01 (4.5%)	1 (11.1%)	02 (04%)
Total	19 (38%)	22 (44%)	9 (18%)	50 (100%)

42.1% (8) of respondents aged 20-24 years gave the correct definition of exclusive breastfeeding, while 36.4% (8) of women aged 25-29 years did not know.

Table 12: AGE IN RELATION TO METHODS OF HIV/AIDS TRANSMISSION IN ADULTS

AGE (Years)	Methods of HIV/AIDS Transmission in Adults					Total
	Razor	Sex only	Sex, Razor blade and injection	Others	N/A	
15-19	2(50%)	6 (26.1%)	01 (9.1%)	00 (00%)	01 (25%)	10 (20%)
20-24	1 (25%)	8 (34.8%)	06 (54.5%)	1 (12.5%)	01 (025%)	17 (34%)
25-29	1 (25%)	6 (26.1%)	01 (9.1%)	04 (50%)	00 (00%)	12 (24%)
30-34	0 (0%)	01 (4.3%)	01 (09.1%)	1 (12.5%)	01 (025%)	04 (08%)
35-39	0 (0%)	02 (8.7%)	01 (09.1%)	1 (12.5%)	01 (025%)	05 (10%)
40+	0 (0%)	00 (00%)	01 (09.1%)	01 (2.5%)	00 (00%)	02 (04%)
Total	4 (8%)	23 (43%)	11 (22%)	08 (16%)	04 (08%)	50 (100%)

34.8% (8) respondents aged 20-24 years indicated that HIV/AIDS in adults is transmitted only through sex.

Table 13: AGE IN RELATION TO MODES OF HIV/AIDS TRANSMISSION IN CHILDREN

AGE (Years)	METHOD OF HIV/AIDS TRANSMISSION IN CHILDREN					Total
	No knowledge	Through delivery	In uterus	Uterus, delivery and breastfeeding	Others	
15-19	03 (33.3%)	00 (00%)	4(22.2%)	01 (50%)	02 (40%)	10 (10%)
20-24	04 (44.4%)	6 (37.5%)	5 (27.8%)	01 (52%)	01 (20%)	17 (34%)
25-29	00 (00%)	6 (37.5%)	4 (22.2%)	00 (00%)	02 (40%)	12 (24%)
30-34	02 (22.2%)	01 (6.3%)	1(5.6%)	00 (00%)	00 (00%)	04 (08%)
35-39	00(00%)	3 (18.8%)	2 (11.1%)	00 (00%)	00 (00%)	05 (10%)
40+	00 (00%)	00 (00%)	2 (11.1%)	00 (00%)	00 (00%)	05 (10%)
Total	09 (18%)	16 (32%)	18 (36%)	02 (04%)	05 (10%)	50 (100%)

37.5% (6) of respondents aged between 20-24 years said that HIV/AIDS could be transmitted to children through delivery, but 44.4% of the same age had no knowledge.

Table 14: OCCUPATION IN RELATION TO DEFINITION OF EXCLUSIVE BREASTFEEDING

OCCUPATION	DEFINITION OF EXCLUSIVE BREASTFEEDING			Total
	Correct Definition	No Knowledge	Partial Knowledge	
Farmer	01 (5.3%)	07 (31.8%)	01 (11.1%)	09 (18%)
Housewife	14 (73.7%)	11 (50%)	04 (44.4%)	29 (58%)
Others	04 (21.1%)	04 (18.2%)	04 (44.4%)	12 (24%)
Total	19 (38%)	22 (44%)	09 (18%)	50 (100%)

73.7% (14) of the housewives gave the correct definition of exclusive breastfeeding while 50% did not know.

Table 15: OCCUPATION IN RELATION TO METHODS OF HIV/AIDS TRANSMISSION IN ADULTS

OCCUPATION	METHODS OF HIV/AIDS TRANSMISSION					Total
	Razor blades	Sex only	Sex, Razor blades, injections	Others	N/A	
Farmer	1(25%)	03(13%)	3 (27.3%)	0 (0%)	2(50%)	09 (18%)
Housewife	3 (75%)	14(60.9%)	5 (45.5%)	5(62.5%)	2(50%)	29 (58%)
Others	0 (00%)	06(26.1%)	3 (27.3%)	3(37.5%)	0(00%)	12 (24%)
Total	4 (08%)	23(46%)	11 (22%)	8 (16%)	4(08%)	50(100%)

60.9% of housewives said that HIV/AIDS in adults is transmitted only through sex

Table 16: OCCUPATION IN RELATION TO MODES OF HIV/AIDS TRANSMISSION IN CHILDREN

OCCUPATION	MODES OF HIV/AIDS TRANSMISSION IN CHILDREN					Total
	No knowledge	Delivery	Uterus	Uterus, Delivery, Breastfeeding	Others	
Farmer	2 (22.2%)	5(31.3%)	2(11.1%)	00 (00%)	00(00%)	09(18%)
Housewife	6 (66.7%)	7(43.8%)	12(66.7%)	01 (50%)	03(60%)	29(58%)
Others	1 (11.1%)	4 (25%)	4 (22.2%)	01 (50%)	02(40%)	12(24%)
Total	9 (18%)	16 (32%)	18(36%)	02 (04%)	05(10%)	50(100%)

66.7% (12) of the housewives stated that HIV/AIDS is transmitted to children whilst in the uterus.

Table 17: EDUCATIONAL LEVEL IN RELATION TO DEFINITION OF EXCLUSIVE BREASTFEEDING

EDUCATIONAL LEVEL	DEFINITION OF EXCLUSIVE BREASTFEEDING			TOTAL
	Correct definition	No knowledge	Partial definition	
None	02 (10.5%)	01 (4.5%)	01 (11.1%)	04 (08%)
Primary	12 (63.2%)	13 (59.1%)	04 (44.4%)	29 (58%)
Secondary	04 (21.1%)	08 (36.4%)	04 (44.4%)	16 (32%)
College/University	01 (5.2%)	00 (00%)	00 (00%)	01 (02%)
Total	19 (38%)	22 (44%)	09 (18%)	50 (100%)

59.1% (13) of respondents with primary school education had no knowledge of exclusive breastfeeding.

Table 18: EDUCATIONAL LEVEL IN RELATION TO MODES OF HIV/AIDS TRANSMISSION IN CHILDREN

EDUCATIONAL LEVEL	MODES OF HIV/AIDS TRANSMISSION					Total
	No knowledge	Through delivery	In uterus	Uterus, Delivery, Breastfeeding	Others	
None	1 (11.1%)	2(12.5%)	1(5.6%)	00 (00%)	00(00%)	04(08%)
Primary	5 (55.6%)	8(50%)	12(66.7%)	01 (50%)	03(60%)	29(58%)
Secondary	3 (33.3%)	6(37.5%)	5(27.8%)	00 (00%)	02(40%)	16(32%)
College/University	0 (00%)	0(00%)	0(00%)	01 (50%)	00(00%)	01(02%)
Total	9 (18%)	16(32%)	18(36%)	02 (04%)	05(10%)	50(100%)

66.7 (12) of respondents with primary education said that HIV/AIDS could be transmitted to the baby while it is in the uterus but 55.6% (5) did not know how HIV/AIDS is transmitted

Table 19: EDUCATIONAL LEVEL IN RELATION TO METHODS OF HIV/AIDS TRANSMISSION IN ADULTS

EDUCATION LEVEL	METHODS OF HIV/AIDS TRANSMISSION IN ADULTS					Total
	Razor blades only	Sex only	Sex, Razor blade, injections	Others	N/A	
None	01 (25%)	02(8.7%)	00 (00%)	00(00%)	1(25%)	04(08%)
Primary	02 (50%)	13(56.5%)	4 (36.4%)	7(87.5%)	3(75%)	29(58%)
Secondary	01 (25%)	07(30.4%)	7 (63.6%)	1 12.5%)	00(00%)	16(32%)
College /University	00 (00%)	01(4.3%)	00 (00%)	00 (00%)	00(00%)	01(02%)
Total	04 (08%)	23(26%)	11 (22%)	08(16%)	04(08%)	50(100%)

56.5% of respondents with primary education said that HIV/AIDS in adults could be transmitted through sex only.

Table 20: PARITY IN RELATION WITH DEFINITION OF EXCLUSIVE BREASTFEEDING

PARITY	DEFINITION OF EXCLUSIVE BREASTFEEDING			Total
	Correct definition	No knowledge	Partial knowledge	
0-2	13 (68.4%)	15 (68.2%)	06 (66.7%)	34 (68%)
3-5	04 (21.1%)	06 (27.3%)	02 (22.2%)	12 (24%)
6-8	02 (10.5%)	00 (00%)	01 (11.1%)	03 (06%)
9+	00 (00%)	01 (4.5%)	00 (00%)	01 (02%)
Total	19 (38%)	22 (44%)	09 (18%)	50 (100%)

68.2% of respondents with less than 2 children did not know what exclusive breastfeeding is.

Table 21: PARITY IN RELATION TO METHODS OF HIV/AIDS TRANSMISSION IN CHILDREN

PARITY	**METHODS OF HIV/AIDS TRANSMISSION IN CHILDREN**					**Total**
	No knowledge	Delivery	Uterus	Uterus, delivery, Breastfeeding	Others	
0-2	07 (77.8%)	08 (50%)	13 (72.2%)	02 (100%)	4 (80%)	34 (68%)
3-5	02 (22.2%)	08 (50%)	1 (5.6%)	00 (00%)	1 (20%)	12 (24%)
6-8	00 (00%)	00 (00%)	3 16.7%)	00 (00%)	00(00%)	03 (06%)
9+	00 (00%)	00 (00%)	1 (5.6%)	00 (00%)	00 (00%)	01 (02%)
Total	09 (18%)	16 (32%)	18 (36%)	02 (4%)	05 (10%)	50(100%)

72.2% of respondents with less than 2 children said that HIV/AIDS could be transmitted in the uterus.

Table 22: PARITY IN RELATION TO MODES OF HIV/AIDS TRANSMISSION IN ADULTS

Parity	MODES OF HIV/AIDS TRANSMISSION IN ADULTS					Total
	Razor blades only	Sex only	Sex, Blades, injection	Others	N/A	
0-2	03 (75%)	19 (82.6%)	7 (63.6%)	4 (50%)	01 (25%)	34 (68%)
3-5	01 (25%)	03 (13%)	3 (27.3%)	02 (25%)	03 (75%)	12 (24%)
6-8	00 (00%)	01 (4.3%)	00 (00%)	02 (25%)	00 (00%)	03 (06%)
9+	00 (00%)	00 (00%)	01 (9.1%)	00 (00%)	00 (00%)	01 (02%)
Total	04 (08%)	23 (46%)	11 (22%)	08 (16%)	04 (08%)	50 (100%)

82.6% of respondents with less than 2 children said that HIV/AIDS in adults could be transmitted through sex only.

Table 23: PARITY IN RELATION TO KNOWLEDGE ABOUT HIV/AIDS AND BREASTFEEDING

PARITY	KNOWLEDGE ABOUT HIV/AIDS AND BREASTFEEDING		TOTAL
	Knowledgeable	No knowledge	
0-2	24 (68.6%)	10 (66.7%)	34 (68%)
3-5	07 (20%)	05 (33.3%)	12 (24%)
6-8	03 (8.6%)	00 (00%)	03 (06%)
9+	01 (2.6%)	00 (00%)	01 (02%)
Total	35 (70%)	15 (30%)	50 (100%)

68.6% of respondents with less than 2 children wee knowledgeable about HIV/AIDS and breastfeeding.

Table 24: OCCUPATION IN RELATION TO KNOWLEDGE ABOUT HIV/AIDS AND BREASTFEEDING

OCCUPATION	KNOWLEDGE ABOUT HIV/AIDS AND BREASTFEEDING		TOTAL
	Knowledgeable	No knowledge	
Farmer	06 (17.1%)	03 (20%)	09 (18%)
Housewife	20 (57.1%)	09 (60%)	29 (58%)
Others	09 (25.7%)	03 (20%)	12 (24%)
Total	35 (70%)	15 (30%)	50 (100%)

57.1% of respondents (housewives) were knowledgeable about HIV/AIDS and breastfeeding but 60% did not have knowledge.

Table 25: AGE IN RELATION TO KNOWLEDGE ABOUT HIV/AIDS AND BREASTFEEDING

AGE (Years)	KNOWLEDGE ABOUT HIV/AIDS AND BREASTFEEDING		TOTAL
	Knowledgeable	No knowledge	
15-19	04 (11.4%)	06 (40%)	10 (20%)
20-24	14 (40%)	03 (20%)	17 (34%)
25-29	09 (25.7%)	03 (20%)	12 (24%)
30-34	03 (8.6%)	01 (6.7%)	04 (08%)
35-39	03 (8.6%)	02 (13.3%)	05 (10%)
40+	02 (5.7%)	00 (00%)	02 (04%)
Total	35 (70%)	15 (30%)	50 (100%)

40% of respondents aged 20-24 years said that they had knowledge but 40% of those aged 15-19 years did not have knowledge.

Table 26: EDUCATIONAL LEVEL IN RELATION TO KNOWLEDGE ABOUT HIV/AIDS AND BREASTFEEDING

EDUCATIONAL LEVEL	KNOWLEDGE ABOUT HIV/AIDS AND BREASTFEEDING		TOTAL
	Knowledgeable	No knowledge	
None	03 (8.6%)	01 (6.7%)	04 (08%)
Primary	20 (57.1%)	09 (60%)	29 (58%)
Secondary	11 (31.4%)	05 (33.3%)	16 (32%)
College/University	01 (2.9%)	00 (00%)	01 (02%)
Total	35 (70%)	15 (30%)	50 (100%)

57.1% of respondents with primary education revealed that they were knowledgeable about HIV/AIDS and breastfeeding and 31.4% with secondary education said the same.

Table 27: EDUCATIONAL LEVEL IN RELATION TO PREFERRED ALTERNATIVE FOOD TO BE FED TO INFANTS

EDUCATION LEVEL	ALTERNATIVE INFANT FOODS				TOTAL
	Powdered milk	Goat milk	Cow milk	Porridge	
None	0 (00%)	0(00%)	4(26.7%)	0(00%)	04 (08%)
Primary	22(73.3%)	2(100%)	4(26.7%)	1(33.3%)	29 (58%)
Secondary	7 (23.3%)	0(00%)	7(46.7%)	2(66.7%)	16 (32%)
College/ University	1 (3.3%)	0(00%)	0(00%)	0(00%)	01 (02%)
Total	30 (60%)	2(04%)	15(30%)	3(06%)	50(100%)

73.3% of respondents with primary school education stated that powdered milk was the best alternative food for infants.

Table 28: EDUCATIONAL LEVEL IN RELATION TO ASSISTANCE TO BE GIVEN TO HIV/AIDS POSITIVE MOTHER WHO OPTS TO BREASTFEED

EDUCATIONAL LEVEL	ASSISTANCE TO BE GIVEN TO HIV/AIDS MOTHERS				TOTAL
	Stop breastfeeding	ARVs	Health education	Others	
None	00 (00%)	00 (00%)	01 (9.1%)	03 (25%)	04 (08%)
Primary	13 (68.4%)	04 (50%)	06 (54.5%)	06 (50%)	29 (58%)
Secondary	05 (26.3%)	04 (50%)	04 (36.4%)	03 (25%)	16 (32%)
College/University	01 (5.3%)	00 (00%)	00 (00%)	00 (00%)	01 (02%)
Total	19 (38%)	08 (16%)	11 (22%)	12 (24%)	50 (100%)

68.4% of respondents with primary education suggested advice to stop the mother from breastfeeding the baby to be the best assistance.

Table 29: EDUCATIONAL LEVEL IN RELATION TO SUGGESTED STRATEGY TO PREVENT HIV/AIDS TRANSMISSION THROUGH BREASTFEEDING

EDUCATION LEVEL	STRATEGY TO PREVENT HIV/AIDS TRANSMISSION					TOTAL
	VCT	ARVs	No breastfeeding	Health education on HIV/AIDS + breastfeeding	Others	
None	1 8.3%)	00(00%)	02 (15.4%)	00 (00%)	01(16.7%)	04(08%)
Primary	6 (50%)	07(77.8%)	05 (38.5%)	08 (80%)	03(50%)	29(58%)
Secondary	5(41.7%)	02(22.2%)	05 (38.5%)	02 (20%)	02(33.3%)	16(32%)
College/ University	00 (00%)	00(00%)	01 (7.7%)	00 (00%)	00(00%)	01(02%)
Total	12 (24%)	09(18%)	13 (26%)	10 (20%)	06(12%)	50(100%

80% of respondents with primary education stated that health education on HIV/AIDS and breastfeeding could be the best strategy to prevent HIV/AIDS transmission through breastfeeding.

Table 30: EDUCATIONAL LEVEL IN RELATION TO REASONS FOR/NOT ALLOWING A RELATIVE TO BREAST FEED ON BEHALF OF HIV/AIDS POSITIVE MOTHER

EDUCATIONAL LEVEL	REASONS FOR/NOT ALLOWING RELATIVE TO BREASTFEED				TOTAL
	Others	Not sure if relative' HIV/AIDS status	Same blood (Genes)	Introduction of other foods	
None	01 (16.7%)	01 (04%)	01 (6.7%)	01 (25%)	04 (08%)
Primary	05 (83.3%)	13 (52%)	10 (66.7%)	01 (25%)	29 (58%)
Secondary	00 (00%)	10 (40%)	04 (26.7%)	02 (50%)	16 (32%)
College /University	00 (00%)	01 (04%)	00 (00%)	00 (00%)	01 (02%)
Total	06 (12%)	25 (50%)	15 (30%)	04 (08%)	50 (100%)

52% of respondents with primary education stated that they could not allow the relative to breastfeed the child because they were not sure of the relative' HIV/AIDS status, but 66.7% agreed to allow the relative to breastfeed because they were of the same blood (genes).

Table 31: OCCUPATION IN RELATION TO REASONS FOR/NOT ALLOWING A RELATIVE TO BREASTFEED A CHILD ON BEHALF OF HIV/AIDS INFECTED MOTHER

OCCUPATION	REASONS FOR/NOT ALLOWING RELATIVE TO BREASTFEED				TOTAL
	Not sure of relative' HIV/AIDS status	Same blood (Genes)	Introduction of other foods	Others	
Farmer	01 (04%)	05 (33.3%)	02 (50%)	01 (16.7%)	09 (18%)
Housewife	15 (60%)	08 (53.3%)	02 (50%)	04 (66.7%)	29 (58%)
Others	09 (36%)	02 (13.3%)	00 (00%)	01 (16.7%)	12 (24%)
Total	25 (50%)	15 (30%)	04 (08%)	06 (12%)	50 (100%)

60% of respondents (housewives) revealed that they could not allow the relative to breastfeed the child on their behalf because they were not sure of the relative's HIV/AIDS status, but 53.3% (housewives) stated that they would allow because they are of same blood (genes).

Table 32: OCCUPATION IN RELATION TO SUGGESTED STRATEGY OF PREVENTING HIV/AIDS TRANSMISSION THROUGH BREASTFEEDING

OCCUPATION	SUGGESTED STRATEGY OF PREVENTING HIV/AIDS TRANSMISSION					TOTAL
	VCT	ARV	No breastfeeding	Health education	Others	
Farmer	01 (8.3%)	1(11.1%)	03 (23.1%)	03 (30%)	1(16.7%)	09 (18%)
Housewife	7 (58.3%)	7(77.8%)	08 (61.5%)	06 (60%)	1(16.7%)	29 (58%)
Others	4 (33.3%)	1(11.1%)	02 (15.4%)	01 (10%)	4(66.7%)	12 (24%)
Total	12 (24%)	09(18%)	13 (26%)	10 (20%)	06(12%)	50(100%)

61.5% of respondents (housewives) suggested no breastfeeding as the best strategy of preventing HIV/AIDS transmission, 77.8% suggested ARVs could prevent HIV/AIDS transmission and 14% said that VCT would prevent HIV/AIDS transmission.

Table 33: OCCUPATION IN RELATION TO PREFERRED ALTERNATIVE INFANT FOODS

OCCUPATION	ALTERNATIVE INFANT FOODS				TOTAL
	Powdered milk	Goat milk	Cow milk	Porridge	
Farmer	06 (20%)	00 (00%)	03 (20%)	00 (00%)	09 (18%)
Housewife	19 (63.3%)	01 (50%)	07 (46.7%)	02 (66.7%)	29 (58%)
Others	05 (16.7%)	01 (50%)	05 (33.3%)	01 (33.3%)	12 (24%)
Total	30 (60%)	02 (04%)	15 (30%)	03 (06%)	50 (100%)

63.3% of respondents (housewives) suggested powdered milk to be the best alternative infant food.

Table 34: OCCUPATION IN RELATION TO ASSISTANCE TO BE GIVEN TO HIV/AIDS POSITIVE MOTHER WHO OPTS TO BREASTFEED

OCCUPATION	ASSISTANCE TO BE GIVEN TO HIV/AIDS POSITIVE MOTHER				TOTAL
	Stop breastfeeding	Give ARVs	Health education on HIV/AIDS and breastfeeding	Others	
Farmer	04 (21.1%)	01 (12.5%)	00 (00%)	04 (33.3%)	09 (18%)
Housewife	12 (63.2%)	06 (75%)	06 (54.5%)	05 (41.7%)	29 (58%)
Others	03 (15.7%)	01 (12.5%)	5 (45.5%)	03 (25%)	12 (24%)
Total	19 (38%)	08 (16%)	11 (22%)	12 (24%)	50 (100%)

63.2% of respondents (housewives) suggested advice to stop HIV/AIDS positive mother from breastfeeding to be the best assistance.

Table 35: AGE IN RELATION TO BREASTFEEDING PRACTICES

AGE (Years)	BREASTFEEDING PRACTICES		TOTAL
	GOOD	BAD	
15-19	04 (16.8%)	06 (23.1%)	10 (20%)
20-24	07 (29.2%)	10 (38.5%)	17 (34%)
25-29	06 (25%)	06 (23.1%)	12 (24%)
30-34	03 (12.5%)	01 (3.8%)	04 (08%)
35-39	03 (12.5%)	02 (7.7%)	05 (10%)
40+	01 (4.1%)	01 (3.8%)	02 (04%)
Total	24 (48%)	26 (52%)	50 (100%)

38.5% of respondents' ages between 20-24 years revealed bad breastfeeding practices, 14% of the same age showed good breastfeeding practices.

Table 36: EDUCATIONAL LEVEL IN RELATION TO BREASTFEEDING PRACTICES

EDUCATIONAL LEVEL	BREASTFEEDING PRACTICES		TOTAL
	GOOD	BAD	
None	02 (8.3%)	02 (7.7%)	04 (08%)
Primary	12 (50%)	17 (65.3%)	29 (58%)
Secondary	09 (37.5%)	07 (26.9%)	16 (34%)
College/University	01 (4.2%)	00 (00%)	01 (02%)
Total	24 (48%)	26 (52%)	50 (100%)

65.3% of respondents with primary education revealed bad breastfeeding practices while 50% of the same group indicated good breastfeeding practices.

Table 37: OCCUPATION IN RELATION TO BREASTFEEDING PRACTICES

OCCUPATION	BREASTFEEDING		TOTAL
	GOOD	BAD	
Farmer	02 (8.3%)	07 (26.9%)	09 (18%)
Housewife	15 (62.5%)	14 (53.8%)	29 (58%)
Others	07 (29.2%)	05 (19.2%)	12 (24%)
Total	24 (48%)	26 (52%)	50 (100%)

62.5% of respondents (housewives) revealed good breastfeeding practices while 53.8% of housewives showed bad breastfeeding practices.

Table 38: PARITY IN RELATION TO BREASTFEEDING PRACTICES

PARITY	BREASTFEEDING PRACTICES		TOTAL
	GOOD	BAD	
0-2	15 (62.5%)	19 (73.1%)	34 (68%)
3-5	07 (29.2%)	05 (19.2%)	12 (24%)
6-8	02 (8.3%)	01 (3.8%)	03 (06%)
9+	00 (00%)	01 (3.8%)	01 (02%)
Total	24 (48%)	26 (52%)	50 (100%)

73.1% of respondents with less than 2 children had bad breastfeeding practices but 62.5% showed good breastfeeding practices.

Table 39: AGE IN RELATION TO KNOWLEDGE ABOUT HIV/AIDS, BREASTFEEDING AND BREASTFEEDING PRACTICES

AGE (Years)	KNOWLEDGE ABOUT HIV/AIDS, BREASTFEEDING AND BREASTFEEDING PRACTICES				TOTAL
	Knowledgeable and Good breastfeeding practices	Not knowledgeable and bad breastfeeding practices	Knowledgeable and bad breastfeeding practices	Not knowledgeable and good breastfeeding practices	
15-19	03 (14.3%)	05 (41.7%)	01 (7.1%)	01 (33.3%)	10 (20%)
20-24	06 (28.6%)	02 (16.7%)	08 (57.1%)	01 (33.3%)	17 (34%)
25-29	06 (28.6%)	03 (25%)	03 (21.4%)	00 (00%)	12 (24%)
30-34	03 (14.3%)	01 (8.3%)	00 (00%)	00 (00%)	04 (08%)
35-39	02 (9.5%)	01 (8.3%)	01 (7.1%)	01 (33.3%)	05 (10%)
40+	01 (4.7%)	00 (00%)	01 (7.1%)	00 (00%)	01 (02%)
Total	21 (42%)	12 (24%)	14 (28%)	03 (06%)	50 (100%)

57.1% of respondents who were aged between 20-24 years had knowledge about HIV/AIDS and breastfeeding but their breastfeeding practices were bad. 28.6% of the same age group was knowledgeable and their breastfeeding practices were good.

Table 40: EDUCATIONAL LEVEL IN RELATION TO KNOWLEDGE ABOUT HIV/AIDS, BREASTFEEDING AND BREASTFEEDING PRACTICES

EDUCATIONAL LEVEL	KNOWLEDGE ABOUT HIV/AIDS, BREASTFEEDING AND BREASTFEEDING PRACTICES				TOTAL
	Knowledge and good breastfeeding practice	Not knowledgeable and bad breastfeeding practices	Knowledgeable and bad breastfeeding practices	Not knowledgeable and good breastfeeding practices	
None	02 (9.5%)	01 (8.3%)	01 (7.1%)	00 (00%)	04(08%)
Primary	11 (52.3%)	08 (66.7%)	09 (64.2%)	01 (33.3%)	29(58%)
Secondary	07 (33.3%)	03 (25%)	04 (28.6%)	02 (66.7%)	16(32%)
College /University	01 (4.8%)	00 (00%)	00 (00%)	00 (00%)	01(02%)
Total	21 (42%)	12 (24%)	14 (28%)	03 (06%)	50(100%)

52.3% of respondents with primary education showed knowledge on HIV/AIDS and breastfeeding, and had good breastfeeding practices. But 64.2% of the same group of respondents showed some knowledge with bad breastfeeding practices.

Table 41: PARITY IN RELATION TO KNOWLEDGE ABOUT HIV/AIDS, BREASTFEEDING AND BREASTFEEDING PRACTICES

PARITY	Knowledge about HIV/AIDS, breastfeeding and breastfeeding practices				TOTAL
	Knowledgeable and Good breastfeeding practices	Not knowledgeable and bad breastfeeding practices	Knowledgeable and bad breastfeeding practices	Not knowledgeable and good breastfeeding practices	
0-2	13 (61.9%)	08 (66.7%)	11 (78.6%)	02 (66.7%)	34 (68%)
3-6	06 (28.6%)	04 (33.3%)	01 (7.1%)	01 (33.3%)	12 (24%)
6-8	02 (9.5%)	00 (00%)	01 (7.1%)	00 (00%)	03 (06%)
9+	00 (00%)	00 (00%)	01 (7.1%)	00 (00%)	01 (02%)
Total	21 (42%)	12 (24%)	14 (28%)	03 (06%)	50 (100%)

61.9% of respondents with less than 2 children stated that they were knowledgeable about HIV/AIDS and breastfeeding and indicated good breastfeeding practices but 78.6% of the same age group showed good knowledge but bad breastfeeding practices.

Table 42: OCCUPATION IN RELATION TO KNOWLEDGE ABOUT HIV/AIDS, BREASTFEEDING AND BREASTFEEDING PRACTICES

OCCUPATION	KNOWLEDGE OF HIV/AIDS. BREASTFEEDING AND BREASTFEEDING PRACTICES				TOTAL
	Knowledgeable and Good breastfeeding practices	Not knowledgeable and bad breastfeeding practices	Knowledgeable and bad breastfeeding practices	Not knowledgeable And Good breastfeeding practices	
Farmer	02(9.5%)	03 (25%)	04 (28.6%)	00 (00%)	09 (18%)
Housewife	13 (61.9%)	07 (58.3%)	07 (50%)	02 (66.7%)	29 (58%)
Others	06 (28.6%)	02 (16.7%)	03 (21.4%)	01 (33.3%)	12 (24%)
Total	21 (42%)	12 (24%)	14 (28%)	03 (06%)	50 (100%)

61.9% of respondents (housewives) had knowledge about HIV/AIDS and breastfeeding and indicated good breastfeeding practices while 50% of the same occupation class did not have knowledge and indicated bad breastfeeding practices.

CHAPTER 5

5.0 DISCUSSION OF FINDINGS

5.1 INTRODUCTION

The discussion of findings is based on the analysis of data collected from an interview of 50 pregnant mothers. The aim of the study was to determine the maternal knowledge and breastfeeding practices in relation to HIV transmission in Chibombo district, Central Province. Data was collected from antenatal clinic in the month of August-September 2005 in four (4) health centers.

5.2 DEMOGRAPHIC INFORMATION

The sample included antenatal mothers aged between 15 and 40 years old. The majority of respondents, 34%, were aged between 20-24 years, 24% of respondents were between 25-29 years and 20% of the respondents were aged between 15-19 years (table 2, page 29). This shows that there were more young women than older women attending antenatal clinic. This also could mean that older women were either practicing family planning or not utilizing antenatal services. It therefore calls for the need to assess their knowledge in the area of HIV transmission through Breastfeeding , because young mother are said not to have adequate knowledge in the same subject.

The majority of respondents (88%) were married, 8% were single parents and 4% widowed (table 2, page29). This signifies the strong entrenched Zambian culture among women that regards marriage as a great achievement. Additionally, this study was done in a traditional setting where the main role of a woman is to get married and bear children as per tradition and norms of the society. The high young number of respondents who were married also entails that, girls are married off early and thus, they have a longer reproductive life. Hence the importance of assess their knowledge of HIV transmission through breastfeeding, as knowledge would directly affect their breastfeeding practices.

Chibombo District has three (3) government and one (1) private high school and 89 primary/basic schools. One expects the area to have a highly educated population. Unfortunately, this is different, for instance Chibombo action plan 2005-2007, indicates that literacy levels are less than 50%. This was confirmed by the study which revealed that 58% of respondents attained only primary education and 8% have never been to school. This could be attributed to the fact that traditionally girls and women are disadvantaged from the beginning as far as education is concerned. This partly explains the high unemployment levels found in the area. The study showed that more than half (58%) of pregnant mothers interviewed were unemployed (housewives). Only 24% of the respondents were involved in various activities to earn a living, and 18% were farmers. Educational level has direct relationship with the ability to understand different concepts of infant feeding, hence preventing HIV transmission.

The demographic data further revealed that 68% of respondents had less than two (2) children and 24% of those with 3-5 children. This correlated with the young antenatal mothers involved in the study as most of them could have been first time mothers. However, the study showed 2% of respondents had more than nine (9) children (table 2, page29). It therefore means that It is necessary that knowledge in concerned subjects requires to be assessed as these mothers have longer life of reproductive live.

5.3 DISCUSSION OF VARIABLES

5.3.1 KNOWLEDGE IN RELATION TO HIV AND BREAST FEEDING

According to the maternal and neonatal mortality survey in Zambia done in 1998, knowledge about good health in antenatal period is almost a universal phenomenon for almost all groups. The antenatal period offers an opportunity to health workers and pregnant mothers to work together in order to ensure that pregnancies are protected through thorough examination, screening and treatment of possible related dangers of pregnancy. It is a period when women receive a lot of health education concerning their care and the 15 babies (ZDHS, 2000). Knowledge is said to be power. This is because a well

informed woman is more likely to make well informed decision regarding her health and the health of her family. Therefore when the mothers know that HIV can be transmitted through breastfeeding, will either modify their breastfeeding practices or alternatively use other infant foods.

In this study, 76% of respondents had heard about breast feeding while 24% had not (table 3, page 30). Majority (96%) had heard about HIV/AIDS while 4% had not heard about HIV/AIDS (table 5, page 31). This showed relatively low levels of awareness compared to the study done by Nyimbili (1998) on factors contributing to low sustenance of exclusive breast feeding among mothers in Lusaka, where he found that 78.3% of respondents had heard about exclusive breastfeeding. Similarly, Oguta (2005) in her study to determine maternal knowledge of HIV and breast milk alternatives for HIV positive mothers in south-west Kenya (rural- Kenya) found that 99.8% of respondents had heard about HIV/AIDS and breastfeeding.

The study findings further revealed that 40% and 52% of respondents heard about breast feeding and HIV from the health center respectively. This suggested that the health centres play a major role in information education and communication to antenatal mothers on both breastfeeding and HIV.

The study further found that the majority (82%) of respondents were knowledgeable about the benefits of breastfeeding while 18% were not knowledgeable (figure3, page 32). This means that those women who had heard about breast feeding and HIV understood the benefits of breast feeding. According to Chisenga (2002) who conducted a similar study, he found that knowledge about breast feeding was high (94%) compared to MTCT knowledge. He also reported that knowledge about mother to child transmission of HIV has hitherto not been documented. In this study, most of the respondents (90%) knew HIV as a killer disease with no cure. However, knowledge on MTCT of HIV through breast-feeding was comparatively lower (74%).

The study also sought to establish the relationship between respondents' level of education and the knowledge on HIV and breast-feeding (table 26, page 45). It was found that the level of education had a significant relationship with the knowledge about HIV and breast feeding, because of the 70% of the respondents who were knowledgeable, 57.1% had attained primary school education and 31.4% had secondary school education. Therefore, this entails that women with some degree of education are more likely to understand the concept of breast feeding and HIV than those with no education at all. This is contrary to the study conducted by Chipaya (2000) who sought to determine the factors affecting productivity among breast feeding working mothers. In this study, it was found that educational level did not have significant effect on the level of knowledge concerning the exclusive breastfeeding. This is because there were a high percentage of the respondents with inadequate knowledge among those who had secondary level of education as well as among those who had attained college/university education. This therefore means that, mothers need specific specialized information concerning infant feeding if HIV is to prevented from being transmitted from such kind of mothers to children.

The study further examined age in relation to the knowledge levels about HIV and breast feeding. The findings showed that 40% of respondents who were knowledgeable about HIV and breast-feeding were aged between 20-24 years (table 25, page 44). This could be due to the fact that these women have had children before, hence, were already exposed to the information on the subject, because IEC is given routinely during antenatal clinic. However, 40% of women aged between 15-19 years were not knowledgeable. This in addition to the previous point confirms that little or nothing at all is taught at school, hence antenatal clinic becomes the only source of HIV and infant feeding information.

In terms of parity in relation to knowledge about HIV and breast-feeding, the study revealed that only 68.6% of respondents with less than two (2) children were knowledgeable (table 23, page 43). Further analysis of occupation in relation to knowledge about HIV and breast feeding revealed that of the 70%

who were knowledgeable 57.1% were housewives. This could be related to prior exposure to information on breast milk at the antenatal clinics.

The study further sought to assess the knowledge of mode of HIV transmission in children from the respondents. The findings showed that 84% of respondents were knowledgeable and only 18% had no knowledge about mode of HIV transmission in children (figure 5, page 34). However, the most common mode of HIV transmission in children mentioned by women was that when the baby is still in utero (36%).This mode of transmission was mentioned by women with less than two (2) children (72.2%).This simply shows that the information concerning HIV transmission is limited,If not improved,HIV transmission would not be prevented.

Regarding educational levels and mode of HIV transmission in children, the study suggested that of the 82% of respondents with knowledge, 66.7% were those with primary education who said HIV was transmitted to the baby whilst in utero (table 18, page 41). This is because mothers with primary education were largely the participants in this study. Contrary to the expectations that knowledge on exclusive breast feeding and HIV/AIDS (70%) could modify mothers' breast feeding practices to prevent HIV transmission in children, the study results revealed that only 48% of the respondents had good breastfeeding practices. Of those who had good breastfeeding practices, 29.2% were aged between 20-24 years, largely housewives (62.5%), and those with less than two children. This calls for further study to examine other factors that determine the breastfeeding practices.

Further analysis in relation to the occupation of the respondents, the study revealed that 73.7% of those who were housewives (table 14, page39). Considering the educational level of respondents, the study indicated that 63.2% had primary school education (table 17, page 40). In relation to parity the results showed 68.4% with less than two (2) children had knowledge.

However, this shows different findings from the study by Chisenga (2002) who sought to determine the knowledge attitude and practices of antenatal

mothers towards exclusive breast feeding in M'tendere, Lusaka, who found the knowledge levels to be high (94%). Yet in Chibombo district it was 38%. Nevertheless, the difference could be accepted because the studies were done in two different environments (one urban – M'tendere, and one rural-Chibombo).This entails how much rural women are under privileged in terms of knowledge which further endangers the lives of the children.

5.3.2 **BREAST FEEDING PRACTICES IN HIV TRANSMISSION**

It is assumed that mothers who are educated or at least have gone higher in their education, assimilate information better than those who did not progress to a higher level of education (CSO, 2003), thus it may well be assumed that the educated mother having knowledge or better understanding of issues related to their health in pregnancy and that of their unborn babies, will as well have good attitude and practices that relate to the care of baby after delivery. Knowledge is the basis upon most good practices of baby's care originate. It is also assumed that women who are older and have more than two (2) pregnancies before may or are likely to have good levels of knowledge, practices therefore towards their own health and that of their babies will be good.

Ministry of Health (MoH) in conjunction with W.H.O. has recommended that infants whose mothers are HIV infected can only breast feed exclusively or exclusively alternatively. Avoidance of breast feeding by HIV infected mothers is recommended. Mixed feeding is not recommended as it increases the risk of HIV transmission through breast-feeding (MoH/NFNC, 2004). This is because mixed feeding has potential danger of damaging the gastro-intestinal mucosa hence allowing easy penetration of the virus in the blood stream.

Hence the study sought to determine the maternal breast feeding practices in relation to HIV transmission. The study findings revealed that the majority (90%) of respondents were not of the view that the HIV mother could breast feed their baby while 8% held a view that HIV infected mothers could breast feed (figure 6, page 35). The main reason given was that HIV could be

transmitted to the baby if an HIV positive mother breast fed her baby. This could be attributed to the awareness on HIV (74%). This is not in line with the findings by Oguta (2005) in South Western Kenya who found that 98.2% of respondents preferred to breast-feed their babies despite their HIV status. However, this could mean that adequate techniques on how to breastfeed despite one's HIV status has not been taught enough, unlike our friends in Kenya. This calls for intensified health education on techniques of breastfeeding in HIV infected mothers.

The study further sought to assess whether respondents could allow wet nursing by the relative if found HIV positive. The results revealed that 66% of respondents could not consent to the relative to breast feed while 32% of respondents said that they could consent (table 7, page 35) because they were of the same blood (genes), and for the baby's survival (for food source). These findings showed how entrenched the norm of breastfeeding is, in rural traditional settings in Zambia.

The study further sought to identify alternative infant food that respondents could give to the infants if they were not to breast feed. The study findings revealed that 40% of respondents preferred to give to the baby dried powdered milk. 30% settled for cow milk and only 2% of respondents stated they could prefer goat milk (table 9, page 36). The statistic shows how limited is the knowledge on the alternative infant foods. Additionally, it equally shows the inadequate IEC offered to them on best alternative infant foods. However, in the same analysis many respondents expressed some worries, as they did not own cows to get recommended 750 mls/day for a baby of about 5-kg as recommended by MoH/NFNC (2004). Powdered milk was very expensive for them, as the majority (63.3%) of respondents had no source of income (table33, page49). Furthermore, the findings revealed that the respondents could not exclusively breast feed because mothers feared stigmatization by their family members and the community as a whole. Similarly, in a place like Chibombo District where VCT in antenatal clinic was not compulsory and not routinely done, mothers continue to breast feed haphazardly (both exclusively

breast feeding and exclusive alternative feeding were not observed).Hence it means that children's HIV transmission is still possible.

These findings agree with the study by UNICEF (2001) in the pilot study done in Zambia, India, Ukraine and Burkina Faso on stigma, HIV/AIDS and prevention of MTCT. Here it was found that stigma in relation to exclusive alternative infant feeding was pronounced. This study revealed that exclusive alternative infant feeding indicated that mother was HIV infected, yet, breast feeding was also killing their babies.

The study further assessed the level of education in relation to preferred alternative foods. The findings indicated that, of the 60% respondents who opted for powdered milk 73.3% had primary school education (table 27, page 45). Further analysis in relation to occupation, the results indicated that 63.3% (housewives) suggested powdered milk. This implied powdered milk was the most preferred alternative infant food. This entails the limited knowledge on various forms of alternative feeds.

Examining Age in relation to breast feeding practices, of the 52% of those who had bad breast feeding practices 38.5% were aged 20-24 years while 29.2% of the same age group had good breast feeding practices (table 35, page 50). Considering educational level, it was realized that 65.3% of the 52% (bad breast feeding practices) had attained primary education, while 50% of same educational group had good breast feeding practices. Focusing on parity in relation to breast feeding practices, results showed 73.7% of respondents with less that two (2) children had bad breast feeding practices while 62.5% of the same parity group had good breast feeding practices. However, except for housewives, 62.5% of the respondents indicated good breast feeding practices, while 53.8% showed bad breast feeding practices.

This study revealed that the age group of 20-24 years, primary educated group, women with less that two (2) children and housewives were the most involved in the study, with 52% of respondents who indicated bad breast feeding practices(tables 35, 36, 37, 38, page 50, 51 and 52 respectively).

Contrary to the expectations, the findings indicated that maternal knowledge had no significant effect on breast feeding practices. This could be attributed to high-entrenched norms of breast-feeding in rural Zambia and an indicative of the fact that a majority of the people does not know their sero-status to actually change their child feeding practices.

It is therefore interesting to see that maternal knowledge was not found to have a positive influence on breast feeding practices. Only 42% of respondents had good knowledge on HIV and breast feeding, indicated good breast feeding practices as well (tables 39, 40, 41, 42, page 52, 53,54 and 55). This is in line with Oguta (2005) study who found that MTCT knowledge of HIV had a negative correlation with the time of introduction of complementary foods.

Focusing on the assistance to be given to HIV positive mother who opts to breast feed, 38% of respondents suggested that advice to the mother to stop breast feeding while 22% supported the view that health education on HIV and breast feeding could be intensified in health centers and 16% opted for ARVs to be administered to both the mothers and their children (table 10, page 37).

Further assessment on the strategies to prevent HIV transmission through breast feeding, 26% of respondents suggested that HIV infected mothers could be stopped to breast feed, 24% of respondents stated that VCT could be made compulsory to mothers antenatally and 20% suggested that health education on care of the baby on alternative feeds could be intensified (table 29, page 46).

Determining what could be put in place to prevent HIV/AIDS transmission to children through breast feeding, the same responses were suggested with 18% of respondents supporting the view that ARVs could be made available to mothers and their babies. This implies that there was a desire by

respondents to prevent HIV transmission to children and a suitable prevention strategy could be welcomed.

Considering the study findings in relation to the hypotheses stated in chapter One. The study findings revealed that there is no relationship between the maternal knowledge levels about HIV and breast feeding and breast feeding practices (supporting the null hypothesis) as the study result revealed 58% of respondents who could not match their knowledge on HIV, breast feeding with breast feeding practices.

IMPLICATIONS TO THE HEALTH CARE SYSTEM

Taking all the above findings of the study, it therefore means that there is still danger to the lives of the children in Chibombo District, as the level of maternal knowledge is not corresponding to the breastfeeding practices. If this problem is not tackled seriously, the HIV infection rate would not be controlled. Consequently infant mortality rate would not reduce. It therefore calls for the health care system to take these findings seriously, if the health care system is to contribute towards meeting the millenium goals.

CHAPTER 6

6.0 CONCLUSION, RECOMMENDATIONS AND LIMITATIONS OF THE STUDY

6.1 CONCLUSION

The study sought to determine the maternal knowledge on HIV, and breast feeding practices in relation to HIV transmission in Chibombo district. This was done in the light of exploring the service gaps that existed. The study was done with the aim to assist health providers to examine themselves with regard to IEC and counseling services being offered. The findings of this study should aid mothers to re-adjust in the area of infant feeding to prevent MTCT of HIV.

From this study, the findings revealed that majority (96%) of respondents had heard about HIV and 76% of respondents had heard about exclusive breast feeding. Only 38% of respondents had correct knowledge on what exclusive breast feeding is. While 74% of respondents had knowledge that HIV could be transmitted through breast feeding. Actually, 70% of respondents had general knowledge on HIV and breast feeding. Unfortunately, 58% of respondents could not match their knowledge on HIV, and breastfeeding with the breastfeeding practices. Worse still, 52% indicated bad breast feeding practices, with 30% of respondents revealing that they could consent in wet nursing. The majority (60%) of respondents viewed dried powdered milk as the best alternative infant feeding.

The above findings indicated that there was no direct relationship between maternal knowledge and breast feeding practices as earlier assumed. It therefore means that, there are other factors that control the breast-feeding practices worth investigating. The study further revealed that knowledge on infant feeding alternatives is limited. To the larger extent, It was further revealed that dried powdered milk with some external intervention was the most viable breast milk alternative in the area of study. Similarly, wet nursing

is a viable breast feeding alternative at family level among the HIV positive mothers.

Lastly, information on breast feeding with HIV is not very clear in the area of study. Therefore, there is needed for health care providers to take an initiative in dissemination of information education and communication about breast feeding in relation to HIV transmission.

6.2 RECOMMENDATIONS

In view of the above findings of the study findings, the following are the recommendations:

6.2.1 THE HEALTH CENTRE

- Any intervention / program undertaken by health care providers on MTCT prevention should intensify health/ nutrition education. Mothers going for antenatal care should be sensitized on vertical transmission of HIV and the risks faced by forth coming baby. In addition, voluntary counseling on infant feeding options should be provided.
- A program that involves and supports the mothers in the community in feeding and caring of the babies born from HIV infected mothers (breast feeding/ alternative feeding supporters) be initiated by health centre staff. Such a program should promote the supply of affordable alternative infant feeds.

  The health centres should become "baby friendly" by implementing baby friendly hospital initiative (BFHI) activities. This will make mothers want to practise and support exclusive breast feeding.

6.2.2 THE DISTRICT HEALTH MANAGEMENT

- To organize seminars /workshops for health care providers (especially the midwives) to re-sensitize them on issues to do with breast feeding practices to prevent HIV transmission and teach (sensitize) front line health workers on alternative infant foods.

- The DHMT to enhance HIV and breastfeeding teachings in other groups (such as churches, clubs etc) to widen the source of information for parents. This will lessen the stigma attached to HIV in the traditional setting such as Chibombo district.
- To provide IEC materials to the community through health centre to enable any of those literate to read for themselves.
- The DHMT to provide/ strengthen VCT and ART to provide all antenatal clinics in Chibombo district.
- The DMHT to collaborate with NFNC to teach (sensitize) frontline health workers on alternative infant foods.

6.2.3. MINISTRY OF HEALTH AND CENTRAL BOARD OF HEALTH

- Ministry of health should work in collaboration with ministry of education so that the curriculae in schools and colleges can be reviewed to integrate. HIV and infant feeding (breast feeding and alternative feeds) so that the school dropouts and leavers could be knowledgeable before they start to reproduce.
- Ministry of health should undertake or sponsor studies on HIV and breast feeding so that new ideas can be found and gaps filled. Since findings from smaller studies can not be generalized to the public.

6.2.4. RECOMMENDATIONS FOR FURTHER STUDY

Further research should include the following areas of study:

- To determine the factors influencing the breastfeeding practices.
- To determine the maternal perception on milk bank as an alternative source of infant feeding in view of HIV prevention.
- A longitudinal study on maternal breast feeding practices in relation to HIV transmission.

6.3 PLAN FOR DISSEMINATION OF FINDING

The findings of this study, was firstly presented to the department of post basic nursing (UNZA) in form of a written report. The report will also be presented to the District Health Management Team (DHMT). The respective health centre where the study took place will be informed of the results (summary of results will be presented). The results to be reported will focus on the maternal knowledge and practices concerning HIV transmission and the view of breast-feeding. However, chance of workshop and seminar will be utilized to disseminate the findings to all members of staff so that they are aware of the results and encourage them to make use of the recommendations. The respondents will be informed of the findings through their health centre in charges, as information will prepared and stuck on the notice board, UNZA library, presentation during research day to where health workers attend.

6.4 LIMITATIONS OF THE STUDY

During fieldwork, the researcher encountered a number of difficulties. These included the following:

6.4.1 **Inadequate time:** Time allocated to take up the study was inadequate for a research beginner. This was because the beginner researcher was still learning a lot of things to do with research work.

6.4.2 **Inadequate literature:** It was difficult to find literature on maternal knowledge on HIV and breast feeding practices in relation to HIV transmission. Internet search revealed limited documents published in Zambia and else where.

6.4.3 **Inadequate resources:** Funds allocated for the study by the sponsor was inadequate to support the whole study program especially during the data collection phase in which the interview schedule required moving to meet the respondents in their varied places of residence.

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Appendix 1

INTERVIEW SCHEDULE

Interview schedule for antenatal mothers:

Topic: to determine the maternal knowledge level in relation HIV transmission and breast-feeding practices in Chibombo district.

Serial number .....

Date.....

Duration of interview.....

Location code.....

Signature for consent.....

INSTRUCTION TO INTERVIEWEES

1. Answer all questions according to instructions given or according to their structures.

2. Please give honest answers in each question.

3. Be aware that all your answers will be treated with utmost confidentiality and information provided is for academic purposes only.

SECTION: A

DEMOGRAPHIC INFORMATION:

1. How old were you on your last birthday?

(i) 15-19yrs.....
(ii) 20-24yrs.....
(iii) 25-29yrs.....
(iv) 30-34yrs.....
(v) 35-39yrs.....
(vi) 40 yrs and above.....

2. What is your highest level of education?

(i) Never been in school.....
(ii) Primary school.....
(iii) Secondary school.....
(iv) College/University.....

3. Where do you live?

(i) Low density.....
(ii) Medium density.....
(iii) High density.....

4. What is your religion?

(i) Moslem.....
(ii) Christian.....
(iii) Bahai.....
(iv) Buddhist.....
(v) Other (specify).....

5. What is your occupation?

(i) Farmer.....

(ii) Housewife.....

(iii) Other (specify).....

6. What is your marital state?

(i) Single.....

(ii) Married.....

(iii) Divorced.....

(iv) Widowed.....

7. How many children do you have?

(i) 0-2.....

(ii) 3-5.....

(iii) 6-8.....

(iv) 9 and above.....

8. What is your husband's educational level?

(i) Primary school.....

(ii) Junior secondary.....

(iii) Senior secondary.....

(iv) College/University.....

(v) None.....

9. If married what is your husband's occupation? Please state...

SECTION B: KNOWLEDGE

10. Have you ever heard of breast-feeding?

(i) Yes.....

(ii) No.....

11. If your answer is yes, what is your source of information?

(i) Friends.....

(ii) Relatives.....

(iii) Health personnel.....

(iv) Media personnel.....

(v) Other (specify).....

12. What do you understand by exclusive breast-feeding?

.....

.....

.....

13. Do you think exclusive breast-feeding is good for your baby?

(i) Yes.....

(ii) No.....

14. How is breast-feeding good to your child?.....

.....

.....

15. Have you ever heard of HIV/AIDS?

(i) Yes.....

(ii) No.....

16. Who was the source of your information about HIV/AIDS?

(i) Friends.....

(ii) Relatives.....

(iii) Health personnel.....

(iv) Media.....

(v) Other (specify).....

17. Do you know how HIV/AIDS is transmitted in adults?

(i) Yes.....

(ii) No.....

18. If yes, explain.....

19. Do you know that children can get HIV/AIDS through breast-feeding?

(i) Yes.....

(ii) No.....

20. Is there another way you think children can get HIV/AIDS? Explain

.....

.....

21. Is there a cure for HIV/AIDS?

(i) Yes.....

(ii) No.....

22. Explain your answer in question .....

.....

.....

SECTION C

PRACTICE CONCERNING BREAST-FEEDING IN RELATION TO HIV/AIDS TRANSMISSION:

23. Is it good to breast-feed a baby when the mother is HIV/AIDS positive?

    (i) Yes.....

    (ii) No.....

24. Give reasons for your answer to question .....

    .....

    .....

25. Would you breast-feed your baby if you were found to be HIV/AIDS Positive?

    (i) Yes.....

    (ii) No.....

26. Would you permit your relative to breast-feed your baby if you are found to be HIV/AIDS positive?

    (i) Yes.....

    (ii) No.....

27. Explain your answer in 26 above.....

    .....

    .....

28. What alternative feeding would you give to your baby instead of breast milk if you decided not to breast-feed?

(i) Powdered milk.....

(ii) Goat milk.....

(iii) Cow milk.....

(iv) Porridge.....

(v) Other, specify.....

29. What type of help would you like to be given to a mother, who wants to exclusively breast-feed her baby even when she is HIV/AIDS positive...?

.....

.....

.....

30. What do you think should be put in place to prevent HIV/AIDS transmission to the children through breast-feeding.

.....

.....

.....

.....

.....

31. Do you have anything else to say about the transmission of HIV/AIDS from mother to child especially at breast-feeding stage.....

.....

Thank you very much for answering these questions and spending time to do my work. Once again, please be assured that all information elicited from this interview will be used purely for academic purposes.

Communications should be
dressed to the Office of the
trict Director of Health

lephone:
legrams:

REPUBLIC OF ZAMBIA

In reply please quote :

No.....

HIBOMBO DISTRCT HEALTH MANAGEMENT BOARD

P.O. BOX 37595
TEL: 01-233990
TEL/FAX: 233990

15th September, 2005

Attention to In – Charges:

Chikobo RHC
Chibombo RHC
Golden Valley RHC
Mwachisompola RHC

RE: PERMISSION FOR DATA COLLECTION

This is to certify that the bear of this letter Angelina N. Malambo, a 4th year student at University of Zambia, School of Medicine Dept of Post Basic Nursing has been granted permission by Chibombo DHMT to collect Data from antenatal mothers from the above selected RHCs.

This exercise will facilitate her study on the knowledge and Breastfeeding practices in relation to HIV transmission.

Your cooperation over the mention subject will be highly appreciated

Yours faithfully,

M.Shankanga
Ag/District Director of Health

Appendix 2: Gantt Chart

TASK PERFORMED	RESPONSIBLE PERSON	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB
Proposal- development	Researcher											
Permission to conduct Study	Researcher											
Data Collection	Researcher											
Data analysis	Researcher											
Report writing	Researcher											
Submission of draft report	Researcher											
Submission of research report	Researcher											
Dissemination of results	Researcher											
Monitoring and Evaluation	Researcher											

APPENDIX 3: WORK SCHEDULE

TASK TO PERFORMED	WEEKS	DATES	PERSONEL ASSIGNED TO TASK	PERSONEL DAYS REQUIRED
Formulation of research proposal	Week 1 to Week 12	18/04/05 to 08/07/05	Researcher	7 X 12= 84 Days
Formulation of data collection tool	Week 13 to Week 15	11/07/05 to 29/07/05	Researcher	3 X 7 = 21 Days
Pilot study	Week 16	01/08/05	Researcher	1 X 7 = 7 Days
Data collection	Week 17 to Week 19	29/ 08/ 05 to 16/09/05	Researcher	3 X 7 = 21 Days
Data analysis	Week 20 to Week 22	19/09/05 to 07/10/05	Researcher	3 X 7 = 21 Days
Draft report	Week 23 to Week 26	10/10/05 to 04/11/05	Researcher	4 X 7 = 28 Days
Preparation of final report	Week 27 to Week 30	07/11/05 to 02/ 12/05	Researcher	4 X 7 = 28 Days
Monitoring the project	Continuous process		Researcher	

APPENDIX 4:

RESEARCH BUDGET

SERIAL	BUDGET CATEGORY	UNIT COST IN KWACHA	QUANTITY	TOTAL
1	STATIONARY			
	Typing/Bond paper	30,000=00	3reams	90,000=00
	Pens	1,500=00	10	15,000=00
	Pencils	1,000=00	10	10,000=00
	Note-book	4,000=00	7	28,000=00
	Tippex	8,500=00	7	8,500=00
	Stapler	20,500=00	1	20,500=00
	Staples	5,000=00	1	5,000=00
	Perforator	22,000=00	1	22,000=00
	Scientific calculator	70,000=00	1	70,000=00
	Tape recorder	150,000=00	1	150,000=00
TOTAL				419,000=00
2	PERSONNEL			
	Lunch	50,000=00	21 days	1,050,000=00
	Research bag	40,000=00	1	40,000=00
	transport	5,600=00	10L/day x 21days	1,176,000=00
TOTAL				2,266,000=00
3	TYPNG SERVICES			
	Typing the proposal	100,000=00	1	100,000=00
	Typing the questionnaire	7,000=00	1	7,500=00
	Photocopying report	7,500=00	50	35,500=00
	Binding report	100,000=00	1	100,000=00
	Binding proposal	10,000=00	4	40,000=00
		40,000=00	4	160,000=00
		20,000=00	4	80,000=00
		TOTAL		**525,000=00**
		GRAND TOTAL		**3,210,000=00**

JUSTIFICATION FOR THE BUDGET

The budget above is the basis for the success of the intended study. Stationary will be needed for questionnaires, field notes and other research requirements both in the preparation stage, execution stage and the aftermath. Money will be required to pay research assistants, transport when visiting various rural health centers in Chibombo District, typing expenses, photocopying, printing and other related costs. Since the researcher does not have a computer of her own, she will need typing service support from others-a cost which will have to be paid for. Through using this tabulation of expected costs the researcher is convinced that the fieldwork will be successful.