University of Free State

Male involvement in the Prevention of Mother-to-Child Transmission (PMTCT) of HIV in Kasama district, Zambia

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DECLARATION

I am aware that plagiarism is wrong and I confirm that the work submitted on **"Male involvement in the Prevention of Mother-to-child transmission (PMTCT) of HIV in Kasama district, Zambia"** is my own unaided work and all sources or ideas that I have used is acknowledged by use of correct referencing.

Signature_____ **Date:**_____

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Approval

This research paper has been submitted with my approval as university supervisor.

Signed ..... Date .....

Dr. Michelle Engelbrecht

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ABBREVIATIONS

3TC	Lamuvidine
AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
ART	Anti-Retroviral Therapy
ARVs	Antiretrovirals
AZT	Zidovudine
CD4	Cluster of Differentiation 4
CDC	Centre for Disease Control
CHCWs	Community Health Care Workers
CSO	Central Statistics Office
CTX	Co-trimoxazole Prophylaxis
DRC	Democratic Republic of Congo
EBF	Exclusive Breast Feeding
EHT	Environmental Health Technician
eMTCT	Elimination of Mother-to-child transmission
ERF	Exclusive Replacement Feeding
FGD	Focus Group Discussion
FHI	Family Health International
HAART	Highly Active Antiretroviral Treatment

HIV	Human Immunodeficiency Virus
HR	Human Resources
HTC	HIV Testing and Counselling
ICPD	International Conference on Population and Development
MCH	Maternal Child Health
MNCH	Maternal, Neonatal Child Health
MoH	Ministry of Health
MTCT	Mother-to-Child Transmission
NAC	Zambia National HIV/AIDS/STI/TB Council
NGO	Non-Governmental Organization
PCR	Polymerase Chain Reaction
PHC	Primary Health Care
PHO	Provincial Health Office
PMTCT	Prevention of Mother-to-Child Transmission
QDA	Qualitative Data Anlaysis
Sd-NVP	Single Dose Neviripine
STIs	Sexual Transmitted Infections
SPSS	Statistical Package for Social Sciences
TDRC	Tropical Diseases Research Centre
UNAIDS	United Nations Programme on HIV/AIDS
UNICEF	United Nations Children's Fund

VCT	Voluntary Counselling and Testing
WHO	World Health Organisation
ZDHS	Zambia Demographic and Health Survey

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Abstract

Background: There is ample evidence that male involvement in prevention of mother-to-child transmission (PMTCT) programmes results in positive health outcomes and as a result it has been recognised as a priority area of intervention within this woman-centred approach. When male partners are involved, both partners get tested for HIV, know their status, and therefore improve the baby's chances of being free from HIV. However, despite all the positive outcomes associated with this, male partner involvement in PMTCT programmes, remains low in Kasama urban clinic. This study assessed what factors influence male partner participation in PMTCT of HIV in Kasama urban clinic in Kasama district, Zambia.

Methods: This study used a descriptive, cross-sectional study design to describe perceived factors associated with male involvement in PMTCT. Three groups of participants were selected, using convenience and purposive sampling: men who accompanied their partners for ANC (hereafter referred to as the male participants); women who attended ANC without their partners (hereafter referred to as female participants); and health care workers providing ANC (hereafter referred to as key informants). A total of 80 males, 18 females and 3 health providers were interviewed. This study utilised a questionnaire survey for partners of antenatal care clients (ANC) which was administered through a face-to-face interview. It also utilised semi-structured interviews with women attending the ANC clinic but not accompanied by their partners; and semi-structured interviews with Kasama urban clinic facility staff providing PMTCT services. All data collection tools focussed on identifying barriers to male participation in PMTCT programmes.

Results: The men had high levels of knowledge about Mother-To-Child Transmission (MTCT) and they seemed willing to participate in PMTCT activities. They also considered ANC as male friendly and were satisfied with the treatment from the health providers. The results also showed that the majority of male respondents did not think that there was lack of confidentiality during ANC clinics.

However, some barriers to participation were mentioned among them the PMTCT programmatic/health systems factors and societal/sociocultural factors. Tight work schedules and long queues at the clinic were cited as one of the major barriers to male participation in PMTCT/ANC. This was associated with human resource (HR) constraints at the clinic which resulted in providing the service only twice a week. This was cited hy the health providers as one of the contributing factors for long queues. It was perceived that the current schedule of ANC does not seem to be accommodative to those who were employed with tight schedules. Other barriers identified by female respondents included the belief that it was the duty of women and not men to go for ANC; the belief that men were jealous if they accompanied their wives to the clinic; and fear of knowing their HIV results.

Conclusion: Almost all men interviewed had a better understanding of PMTCT and were ready to provide support to their female partners in any PMTCT interventions. Doing an HIV test was perceived as a motivating factor for HIV positive and negative people alike to adopt safer sexual behaviour. The study revealed that a combination of poor knowledge and also some socio-cultural and health system related factors affected the participation of males in ANC/PMTCT programmes.

As a way of responding to some of the barriers identified, and also to encourage men to participate in ANC/PMTCT programmes, recommendations were proposed. One of the key recommendations was to increase or spread the number of days dedicated to ANC service provision during the week. The flexibility in the provision of ANC was perceived as an opportunity to improve male involvement. It was also recommended that increasing the number of staff at the facility would reduce the time spent at the clinic.

Other recommendations included prioritising women who come with their partners so that they spend less time at the clinic. It was also recommended that couple counselling and testing should be encouraged because men believed that it was important for the couple to know one's serostatus.

CHAPTER ONE: INTRODUCTION, BACKGROUND, RATIONALE, AIM AND OBJECTIVES

1.1 INTRODUCTION

This chapter describes the research background and outlines the rationale for conducting the study. It describes the aim and objectives of the study, defines the most frequently recurring concepts and provides an outline of the mini-dissertation.

1.2 BACKGROUND

Recent reports have shown that the number of people newly infected with Human Immunodeficiency Virus (HIV) has continued to decline globally. However, despite this decline, HIV continues to pose a serious threat to the health of many people across the world. Globally, about 78 million people have been infected with HIV and almost 39 million people have died as a result of the disease since the beginning of the epidemic (UNAIDS, 2013; WHO, 2013). Sub-Saharan Africa, the region worst affected by HIV/ Acquired Immune-Deficiency Syndrome (AIDS), accounts for about 70% of the people living with HIV/AIDS (UNAIDS, 2015).

Zambia, a Southern African country, with a population of approximately 13 million has a 13% HIV prevalence rate among adults between 15 - 49 years of age (CSO, 2014). Although recent reports indicate that Zambia has made significant progress in terms of reducing new HIV infections by 58% and achieved more than 80% anti-retroviral therapy (ART) coverage, HIV/AIDS continues to be a major threat to the lives of women in the reproductive age group (15-49 years) and their children (UNAIDS, 2012). Literature shows that females in the reproductive age group (15 – 49 years) are more likely to be HIV positive (15%) than males (11%) of the same age

category (ZDHS, 2014). This is because women tend to be more vulnerable to HIV than men due to their greater physiological susceptibility to heterosexual transmission and also the social, legal and economic disadvantages that they are often confronted with (UNAIDS, UNICEF and WHO 2009). With this vulnerability to the disease, HIV positive mothers have a high risk of passing the infection to their baby during pregnancy, vaginal childbirth (delivery) and/or breastfeeding, especially if they do not receive any interventions such as Prevention of Mother-To-Child Transmission (PMTCT).

With 88% of the world's HIV-related deaths for children under the age of 15 taking place in sub-Saharan Africa, the region bears a disproportionate burden of paediatric HIV infections that will continue to persist until new HIV infections in children are eliminated (UNAIDS, 2010; UNAIDS, 2015). Prevention of Mother-To-Child Transmission forms a vital eomponent of HIV prevention strategies in paediatrics, worldwide. Evidence shows that it can reduce the chances of transmitting the virus to infants to as low as 2% in non-breastfeeding and 5% in breastfeeding populations (Torpey et al., 2010; WHO, 2010a).

1.3 RATIONALE

In 2012, 260 000 children were infected with HIV in low and middle income countries (UNAIDS, 2012). Though infection rates reported in 2012 showed a 35% decline compared to that of 2009, almost all of these children were infected through Mother-To-Child Transmission (MTCT) largely due to low access and utilisation of PMTCT services in most Sub-Saharan Africa countries (UNAIDS, 2013). With an estimated 15% HIV prevalence among women in the reproductive age group in Zambia, over 80,000 infants born annually are at risk of acquiring the virus from their mothers through MTCT (Zambia National HIV/AIDS/STI/TB Council [NAC], 2012; Zambian CSO, 2014). This is despite the recent positive gains in the reduction of paediatric HIV infections.

According to Byamugisha et al., (2010), the utilisation of PMTCT services by pregnant women is influenced by factors related to the health system such as accessibility to voluntary counselling and testing (VCT) services, and by individual factors such as fear of disclosure of HIV results, lack of male partner support, fear of domestic violence, abandonment and stigmatization. There is documented evidence that involving men in PMTCT programmes through couple counselling and mutual disclosure (Kalembo et al., 2012; WHO 2012) for example, results in positive health outcomes for both women and children (WHO 2012; Auvinen et al., 2013; Morfaw et al., 2013). This is because male partners are considered to be decision makers in African families (Kalembo, et al., 2012; Byamugisha et al., 2010). Recent studies have shown that most women in sub-Saharan Africa need to request their male partner's approval and support before an HIV test is done to avoid stigmatization, fear of abandonment and violence (Kalembo, 2012; WHO, 2012). It is therefore critical to consider or recognise male involvement as an important component of PMTCT programmes in sub-Saharan Africa if the utilisation of PMTCT services is to improve (Byamugisha et al., 2010).

The World Health Organisation ([WHO], 2012) recognises that men play an important role in supporting HIV positive pregnant women by creating a more conducive environment for seeking treatment and being adherent to medications. Research conducted in Zambia and Kenya (Auvinen et al., 2013) found that couple HIV counselling contributed to the acceptability rate of HIV testing, uptake of ART and adherence to prolonged exclusive breastfeeding. In addition, it was found that involving males in PMTCT could prevent women and infants from being infected with HIV. This is because the risk behaviours among couples change dramatically as their understanding of HIV prevention increases (Kalembo et al., 2012). Similarly, other studies in Uganda, Malawi and Nigeria have shown that the utilisation of PMTCT services by pregnant women is influenced by male partner support (Byamugisha et al., 2010; Kalembo et al., 2012; WHO, 2012).

Despite this evidence, PMTCT uptake in Zambia leaves much to be desired (Sifile, 2013). This is largely attributed to poor male partner involvement in PMTCT programmes, which varies between 12.5% and 18.7% in many sub-Saharan African countries including Zambia (Kalembo, 2012).

With the current HIV prevalence among women of reproductive age at 15% and about 10% for infants in Zambia, there is a need to improve on the integration of male partner involvement and support in PMTCT programmes.

According to WHO (2012) the most significant obstacles in involving male partners in PMTCT are the conceptual and policy barriers that inadvertently support men's exclusion from PMTCT and other reproductive health services. Furthermore, the historic institutionalisation of reproductive health as women's health has also contributed to men's perception of clinic spaces as "women's spaces", and reproductive health as women's work, and has generally produced health services that are not welcoming of men and couples (WHO, 2012). The reason for this could be that, men in the past were presented as an obstacle and not as part of the solution. It is evident that if men are not informed of the benefits of PMTCT they will not become a supportive force for PMTCT uptake and compliance (Kalembo et al., 2012). When male partners are involved, both partners get tested for HIV, know their status, and therefore improve the baby's chances of being free from HIV.

Globally, male involvement is a critical success factor in Elimination of Mother-To-Child Transmission [eMTCT] (Morfaw et al, 2013). Therefore there is a need to identify what factors influence male partner participation in PMTCT and hence suggest better ways to engage male partners. In particular, this study investigated male's knowledge of MTCT of HIV as well as possible barriers and facilitators that influence their involvement in PMTCT in Kasama district, Zambia.

1.4 AIMS AND OBJECTIVES

The aim of this study was to determine what factors influence male partner participation in PMTCT of HIV in Kasama district of Zambia, More specifically, the objectives were to:

- Investigate male awareness and knowledge of MTCT of HIV
- Determine what factors could influence male participation in PMTCT
- Establish the level of male involvement on PMTCT

1.5 SCOPE OF THE STUDY

The study was conducted at one health facility providing antenatal care (ANC) and PMTCT services in Kasama district in Zambia. The research findings should prove useful to both MoH and other non-governmental organizations (NGOs) such as Family Health International (FHI) which closely support the MoH both technically and financially in all aspects of HIV service provision, including PMTCT.

1.6 CONCEPTUALIZATION OF KEY TERMS

The following key concepts are used in this study:

HIV

HIV targets and ultimately affects specific cells of the immune system, called the Cluster of Différentiation 4 (CD4) cells, or T cells (Centre for Disease Control and prevention [CDC], 2015).

Lowering or damaging of CD4 cells by HIV makes the body become more vulnerable to"opportunistic infections". This is because HIV continues to destroy the immune system and hence lowering its capacity to fight off infections and diseases. HIV is spread through unprotected sexual intercourse (anal or vaginal), transfusion of contaminated blood, sharing of contaminated needles, and between a mother and her infant during pregnancy, childbirth and breastfeeding (WHO, 2015). Literature indicates that advanced HIV infections ultimately lead to the development of AIDS although this can take 10 - 15 years; ART can slow down the process even further (AVERT, 2015)

AIDS

This is a term which applies to the most advanced stages of HIV infection. AIDS is caused by HIV that weakens the immune system, making the body susceptible and unable to recover from other opportunistic diseases. As a result of the weakened immune systems, secondary/opportunistic infections can lead to death (WHO, 2015).

PMTCT

PMTCT generally refers to a package of interventions including HIV testing, ARVs for vertical prophylaxis, breastfeeding advice, and family planning (Wilson, 2012). It should however be noted that the term is used because the immediate source of the infection is the mother, and does not imply to blame the mother.

HIV exposed baby

These are infants born to an HIV positive woman.

HIV negative

People who have taken an HIV test and whose results have been confirmed negative.

HIV positive

People who have taken an HIV test and whose results have been confirmed positive.

HIV status unknown

People who have not taken an HIV test or who do not want to know the result of their test.

Community health care worker

According to WHO (2007:1) "Community health care workers (CHCW) should be members of the communities where they work, should be selected by the communities, should be answerable to the communities for their activities, should be supported by the health system but not necessarily a part of its organization, and have shorter training than professional worker". Therefore a CHCW is person who is involved in the provision of health services to a user, but does not include

professionally trained health care providers. This includes lay counsellors and community caregivers.

Infant

WHO (2015) defines an infant/or neonate as a child under 28 days of age.

1.7 STRUCTURE OF THE MINI-DISSERTATION

The mini-dissertation is divided into five chapters:

Chapter 1: The research background, rationale, aims and objectives are discussed in this chapter. Furthermore the, scope of the study and definition of concepts used in the study, are also outlined.

Chapter 2: Literature is reviewed and provides information on existing data on HIV/AIDS, MTCT, PMTCT and male involvement in PMTCT at the global, regional and national level. Greater emphasis is made on how PMTCT works and how the involvement of male partners can contribute to the high uptake of PMTCT and hence reduce the number of babies infected through MTCT.

Chapter 3: Research methodology: The chapter is describes the research design, sampling procedures, research instruments, data collection and analysis, as well as the ethical considerations.

Chapter 4: Research findings: This chapter focuses on the research findings of data. The findings are presented in the form of statements, tables and graphs.

Chapter 5: Discussions, conclusions and recommendations: The discussion presented in this chapter is based on the objectives of the study as well as the analysed and interpreted data. Recommendations are also formulated based on the findings and the proposed conceptual framework.

CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

In this chapter, a review of the literature on male involvement in PMTCT is presented. More specifically, the chapter reports on global, regional and national perspectives of HIV/AIDS, and MTCT of HIV. The PMTCT process is described, as well as how PMTCT can effectively contribute to the elimination of HIV in infants. The remainder of the chapter focuses on the role of men in PMTCT, as well as the benefits and challenges of involving males in PMTCT/Maternal Child Health (MCH) activities.

2.2 HIV/AIDS AND MOTHER-TO-CHILD-TRANSMISSION OF HIV: THE SITUATION GLOBALLY, IN SUB SAHARAN AND ZAMBIA

The spread of the HIV/AIDS pandemic has emerged as one of the biggest and most serious threats to development, affecting the health of the poor and many aspects of social and economic development around the world. According to the 2013 United Nations Programme on HIV/AIDS (UNAIDS) Global Report (UNAIDS 2013), about 36.9 million people were living with HIV/AIDS by the end of 2014, of whom approximately 51% were adult women (WHO, 2015). The situation regarding children is as dire. Approximately 2.6 million children were living with HIV by the end of 2014 (UNAIDS, 2015). Whilst new HIV infections among children were reported to have declined by 58% since 2000, there is still an unacceptably high number of new HIV infections and AIDS-related deaths occurring each year. There were 220,000 new infections among children by the end of 2014 and 150,000 AIDS deaths (UNAIDS, 2015). More than 90% of these infections were as a result of MTCT (WHO, 2010b).

Sub-Saharan African is one of the worst affected regions, accounting for more than two-thirds (70%) of all people living with HIV, including 88% of the world's HIV positive children. Slightly more than half (58%) of those living with HIV in sub-Saharan Africa are women (UNAIDS, 2015). MTCT of HIV constitutes a substantial burden of new HIV infections among infants in sub-Saharan Africa and it is still considered to be a significant problem in developing countries despite the growing availability of effective prevention methods such as PMTCT (Chinkonde et al., 2009; Katz et al., 2009).

Zambia is one of the sub-Saharan African countries that is adversely affected by the HIV/AIDS pandemic, with an HIV prevalence rate among adults (aged 15–49) of 13%, (UNAIDS, 2012; ZDHS, 2014). The most common transmission of HIV in Zambia is through heterosexual intercourse (CSO, 2014). HIV transmission in children is predominantly through vertical transmission from mother-to-child (MTCT) at birth or during breastfeeding, and accounts for 90% of HIV infection in children aged between 0-14 years in Zambia. According to the UNAIDS Country Report (2013), the rates of HIV transmission through MTCT have been halved by increased coverage of ART to both mothers and infants. More specifically, MTCT significantly dropped between 2009 and 2014 from 24% to less than 9% respectively (UNAIDS, 2014). The decline in HIV infections among children was predominantly due to significant progress made in increasing and improving access to and the use of HIV treatment services in Zambia. This can further be evidenced by the adoption/implementation of the 2013 Zambia Consolidated Guidelines for Treatment and Prevention, which are based on the 2013 WHO treatment guidelines. It is expected that this will further contribute to ART scale up in the country. With the development and implementation of diverse programmes to prevent new infections and improve the quality of life of those infected and affected by HIV and AIDS, it is evident that Zambia has scored tremendous achievements in halting and beginning to reverse the effects of the epidemic.

Whilst positive strides have been recorded over the past two years in halting and beginning to reverse the effects of the epidemic, there is still a need to quickly find more effective ways of reducing HIV transmission in both adults and children. The integration of MTCT and ART

services into MCH has been recognized as one of the most efficient and cost effective way to reduce the HIV transmission during pregnancy, labour, delivery and breastfeeding.

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

In Zambia, PMTCT was introduced in 1998 as a comprehensive package of interventions. This included; improved ANC services, opt-out HIV counselling and testing of pregnant women for HIV, ARV prophylaxis for HIV positive pregnant women and new-borns, referral to support groups, and counselling on options for safer infant feeding practices. The primary aim of the PMTCT program is to decrease the number of exposed babies from becoming infected with HIV through the provision of ARV prophylaxis to both the mother and the baby. With the estimation of 15% to 45% chance of passing on the virus from the mother to the baby during pregnancy, labour or delivery in the absence of treatment, Horwood et al., (2011) suggests that this can be reduced to as low as 2% in non-breast feeding population if the mother is put on treatment; either lifelong treatment or short term prophylaxis for PMTCT. With the treatment in place the viral load is substantially reduced and hence reduce the risk of transmitting the virus to the unborn child (WHO, 2014).

PMTCT can be offered at stand-alone or co-located sites. Stand-alone refers to sites that only provide PMTCT, while co-located/full packaged sites offer both ART and PMTCT services. Both stand-alone and full package sites provide dual ARV and single dose Nevirapine (sd-NVP) regimens, but only full package sites offer therapeutic Highly Active Antiretroviral Therapy (HAART) and short-course HAART.

During the past year, Zambia has been transitioning from offering less effective to more effective regimens such as Atripla (favirenz, Tenofovir, FTC). There has been a policy shift in the

administration of ART in Zambia as a country where both WHO option B+ and WHO option B are still being implemented alongside each other.

WHO recommends three treatment options: Option A, Option B and now the most recent, Option B+ (citation). According to Option A, women receive antenatal and intrapartum ARV prophylaxis along with an ARV postpartum "tail" regimen to reduce risk of drug resistance, while infants receive postpartum ARV prophylaxis throughout the duration of breast feeding (see Table 1). Option B has a simpler clinical flow in which all pregnant and lactating women with HIV are initially offered ART, beginning in the antenatal period and continuing throughout the duration of breastfeeding. At the end of breastfeeding, those women who do not become eligible for ART discontinue the prophylaxis and continue to monitor their CD4 count, eventually re-starting ART when their CD4 falls below 350 cells/mm^3 (UNICEF, 2012).

Under option B+, all pregnant HIV positive women are started on triple ARVs regardless of their CD4 cell count and this is continued for life. As for the infant, daily NVP or AZT (Zidovidine) is administered from birth to 4 – 6 weeks of age (Coutsoudis et al., 2013). Option B+ makes the eMTCT much simpler and more effective: all positive pregnant women receive treatment immediately and for life regardless of CD4 count and all infants are provided with NVP/or AZT syrup, once a day from birth through four to six weeks regardless of the feeding method. Option B+ also entails that, regardless of the service delivery model (co-located or stand-alone sites) all health facilities offering eMTCT services in the country will be enhanced to be able to initiate positive pregnant women on treatment for life soon after completion of required baseline laboratory tests. In this regard, the Zambian Ministry of Community Development, Mother and Child Health (MCDMCH) began implementing the Joint eMTCT and ART National Strategy and Operational plan in 2013 to upgrade all 1,200 PMTCT sites to deliver PMTCT and ART services. In February 2014, Zambia adopted Consolidated Guidelines for Treatment and Prevention of HIV Infections that simplifies and standardizes treatment and prevention protocols to allow as many providers as possible to provide these services (UNAIDS, 2014).

Table 1: Summary of PMTCT options

PMTCT options	
Option A	
Mother	• CD4 count ≤350 cells/µl: triple ARVs starting as soon as diagnosed; continued for life • CD4 count >350 cells/µl: Antepartum: AZT from 14 weeks' gestation • Intrapartum: single-dose (sd) NVP and AZT + 3TC
Infant	• Postpartum: AZT + 3TC for 7 days. • Daily sd NVP for 6 weeks in non-BF infants or mother receiving ART or until 1 week after all BF has stopped.
Option B	
Mother	• All pregnant women started on triple ARVs regardless of CD4 cell count. • CD4 count ≤350 cells/µl: triple ARVs will be continued for life • CD4 count >350 cells/µl: triple ARVs will be started as early as 14 weeks' gestation, continued intrapartum and through childbirth and stopped if not breastfeeding or continued until 1 week after cessation of all breastfeeding.
Infant	• Daily NVP or AZT from birth to 4 - 6 weeks of age.
Option B+	
Mother	• All pregnant women will be started on triple ARVs regardless of CD4 cell count and this will be continued for life.
Infant	• Daily NVP or AZT from birth to 4 - 6 weeks of age.

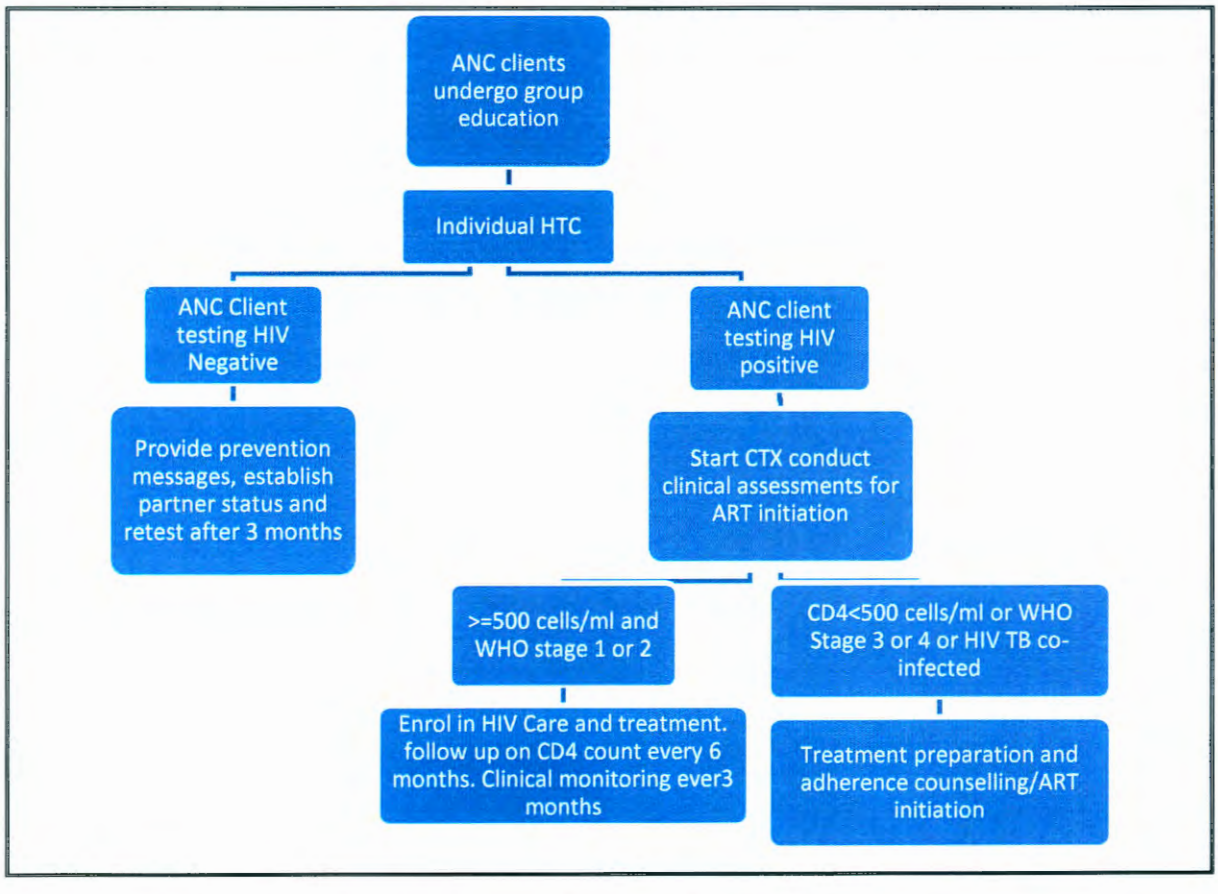
Source: Coutsoudis et al., 2013

2.4 STEPS INVOLVED IN PMTCT

PMTCT interventions can be seen as a series of consecutive steps/cascade (see Figure 1): HIV testing during pregnancy, the uptake of ART by pregnant women living with HIV; safe childbirth

practices; appropriate infant feeding; and uptake of infant HIV testing and other post-natal healthcare services (Padian, 2011).

Figure 1: PMTCT Cascade



Source: MoH, (2014) - Policy Guidelines for Health Facilities in Zambia.

Unfortunately, the uptake of each successive step in the PMTCT cascade decreases as a result of economic, educational, political, social-cultural and/or health system factors (Torpey et al., 2010).

2.4.1 HIV pre- and post-test counselling

Zambia's policy guidelines for PMTCT (2014) recommend that all pregnant women receive HIV testing and counselling (HTC) regardless of the model of service delivery. During ANC, pregnant women are sensitized to the importance of knowing their HIV status prior to delivery and how HIV can be prevented. They are encouraged to come with their male partners so that they can go through the counselling process as a couple. Katz et al (2009) suggest that offering voluntary HIV counselling and testing services to men in ANC is a viable strategy for increasing male involvement and promoting male testing as a way to improve health outcomes for the mother and baby.

Pre-counselling sessions are used as a means of sharing information and providing education on Maternal, Neonatal and Child Health (MNCH). They are conducted in a group setting and male partners are encouraged to attend. During the session some of the topics that are discussed include feeding practices and the importance of involving male partners in PMTCT. Group counselling is followed up with individual sessions prior to conducting the HIV test. Once counselling has been completed, those who are willing are tested for HIV using a rapid HIV test. An opt-out approach is used to ensure that all pregnant women are offered an HIV test during their first ANC visit (UNGAS, 2011; Zambia policy guidelines, 2014).

Once the HIV test results are available, women (and their partners if they were also tested) receive post-test counselling, regardless of their status. During this session, pregnant women are told how to maintain their negative status in the event that they are negative. However, they are also encouraged to have another test before delivery in case they seroconvert. Once a pregnant woman tests HIV positive, she is informed about PMTCT and offered an opportunity to join the program (MoH, 2014). However, due to fear of disclosure to their partners, most pregnant women tend to drop out at this stage and hence the need for emotional support from family members and their male partners (Torpey et al., 2010).

2.4.2 Provision of ARVs for PMTCT

Studies have shown that the provision of ARVs to the mother during pregnancy can reduce HIV infection rates in newborn babies to less than 5% (Chinkonde et al., 2009; WHO, 2014). According to MoH (2011), Zambia endorsed the global goal of eMTCT of HIV, which was defined as a 90% reduction of new HIV infections among children by 2015. Whilst WHO acknowledges three PMTCT antiretroviral program options, Zambia has adopted WHO Option B+ to supplement Option B.

ARV prophylaxis (NVP syrup) in infants is administered at birth, or within 72 hours of birth and thereafter AZT syrup is administered to them for the first 28 days as part of the prophylaxis. The administration of Co-trimoxazole Prophylaxis (CTX) starts at six weeks for 28 days (WHO, 2014). However, with the recent changes in policy direction in terms of eMTCT, Zambia adopted Option B+ to eliminate paediatric HIV and keep HIV+ mothers alive by initiating them on lifelong ART, alongside the WHO option B. According to Zambian policy, exposed infants undergo a series of HIV tests after birth: at 6 weeks, (Polymerase Chain Reaction [PCR]), 6 months, 12 months and 18 months (rapid HIV test). PCR is used as the first test to avoid getting incorrect results from the baby. If the PCR result comes out HIV positive, babies are put on full ART, otherwise they are discontinued with the ARV prophylaxis and CTX. However, babies are still followed up at 18 months for a rapid HIV test (MoH, 2014).

The programme continues to follow up HIV positive women and their infants monthly from six weeks after birth until the infant is 18 months old. During this time, women continue to receive infant feeding support and risk reduction counselling, including family planning and dual protection (MoH, 2014). Their CD4 counts are taken and clinical staging repeated every six months. They are referred for ART when indicated and are linked to support groups. Children testing positive are referred for paediatric HIV care while those who are negative are discharged. It is assumed that all HIV positive women agree to attend these visits.

2.4.3 Infant feeding

Safe feeding options help reduce the chances of transmitting HIV from mother-to-child. Depending on the duration of breastfeeding and other risk factors such as mixed feeding, it is estimated that 10% - 20% of exposed babies may acquire HIV through breastfeeding (WHO, 2004). It should, however, be noted that in the absence of ART, the risk of HIV transmission through breastfeeding is between 20-45% (Dun et al., 1992, Shapiro et al, 2007; WHO, 2011). Appropriate infant practices in the context of HIV should therefore balance the risk of MTCT of the virus and morbidity and mortality from other causes (Haile et al., 2014). In Zambia, "EBF is recommended for HIV-infected women for the first six months of life unless replacement feeding is acceptable, feasible, affordable, sustainable and safe (AFASS) for them and their infants before that time" (MOH & NFNC 2007:3). Exclusive breastfeeding (EBF) carries lower risk for HIV infection than combined with other fluids or foods (i.e. mixed feeding) (WHO, 2007a). However, the chances of the baby being infected with HIV through EBF increases with the number of breastfeeding months (WHO, 2004). WHO (2007a), estimates that breastfeeding for six months puts the baby at an extra risk of 10% of getting infected with HIV whilst 18 – 24 months of breastfeeding leads to approximately 17.5% increased risk of transmission of HIV.

While it is normal in many societies, especially in sub-Saharan Africa, for a baby to be exposed to mixed-feeding, failure to completely adhere to EBF may contribute to the transmission of HIV to the baby (UNICEF 2007). Mixed feeding makes infants under 6 months more likely to acquire HIV since it harms the infants' digestive systems or damage the already delicate and permeable gut wall of the small infant and allow the virus to be transmitted more easily (UNICEF, 2005). Mixed feeding also poses the same risks of contamination and diarrhoea as formula feeding, and diminishing the chances of survival. Another feeding option for exposed babies is exclusive replacement feeding (ERF) which entails that the child is only given milk formula (MoH, 2009). Lack of access to clean water in Zambia makes formula/or ERF an unsafe alternative to breast milk for children as this may cause diarrhoea. Furthermore, with the current poverty levels in the country, the use of milk formula as an optional infant feeding method is not sustainable. WHO

(2004), however, recommends that all mothers, regardless of their HIV status practice EBF for the first six months of an infant's life.

Collective decision making is critical when it comes to infant feeding. Infant feeding has cost implications that may need the support of the male partner, especially if the family opts for ERF. This is because males are considered providers and decision makers in African communities and as such, their involvement becomes very important in making decisions associated with infant feeding (Chinkonde et al., 2012; Kwambai et al., 2013).

2.5 CHALLENGES IN THE PROVISION OF PMTCT PROGRAMMES

Despite the effectiveness of PMTCT in greatly reducing the risk of MTCT of HIV, a number of challenges have been identified affecting the implementation of the programme. Some of the main challenges include: fear of stigmatisation; poor uptake of ARVs; and the lack of male involvement in PMTCT programmes.

2.5.1 Fear of stigmatisation

Family and community support is a critical element in enhancing the uptake of treatment among HIV positive clients. However, in some instances, social support from family members and communities tends to be inadequate and as a result women fail to adhere to the drugs prescribed to them (Morfaw et al., 2013). This is because of fear of stigmatisation regarding their HIV status and as a result they fear disclosing their HIV status to partners or family members (Gourlay et al., 2013). The absence of community support has been associated with low uptake of PMTCT interventions in several studies (Gourlay et al., 2013; Morfaw et al., 2013; Van Lettow et al., 2011).

A study conducted in Zambia indicated that a high proportion (sometimes up to 70%) of pregnant women testing HIV positive choose not to tell their partners, mostly because they are afraid of violence or abandonment (Muyanza, 2009). In many societies it is common for men to blame their partners for being infected, even if they too have HIV. Lack of disclosure becomes a barrier to achieving the objectives of PMTCT, as women are less likely to accept preventive drugs and to practice unconventional methods of infant feeding for fear of revealing that they are infected with the virus. This also results in high dropout rates during the different steps of the PMTCT cascade of interventions (Torpey et al., 2010).

2.5.2 Poor uptake of ARVs

Over 94% of pregnant women attend ANC at least once, whilst about 60% deliver at home. Furthermore, only 19% of women attend antenatal care by their fourth month of pregnancy, as recommended by WHO (Band et al., 2012). This already shows some challenges in ensuring that all the necessary PMTCT interventions are done in a more effective way to save the lives of babies. It also affects the infants born from HIV positive women, as they are brought back to the clinic too late for NVP syrup (recommended 72 hours post-delivery) to be administered.

2.5.3 Lack of male involvement in PMTCT programmes

Whilst male involvement in PMTCT has shown evidence that it improves women's uptake of core PMTCT services and is also a key contributor to community acceptance and support of PMTCT, male involvement still remains a challenge. Though no randomized clinical trials has been done to establish the factors that influence male partners as key contributors to acceptance and PMTCT uptake, literature suggests that the need for male involvement in the PMTCT process has been increasingly encouraged to improve adherence to ARV prophylaxis (Peltzer et al., 2011).

In 1999, the Zambian MoH added the promotion of male involvement as part of the minimum package for PMTCT as a way of reducing the increasing rates of HIV infections among infants and young children in the country. However, the uptake of male involvement is generally still low in most health facilities across the country. Northern Province is not an exception. The proportion of women attending ANC with their partner in Northern Province of Zambia, is very low. In Kasama district, about half of all ANC clients are accompanied by their male partner (FHI database, 2014).

2.6 MALE INVOLVEMENT IN PMTCT

2.6.1 Background – International Conference on Population and Development

Historically, most reproductive health programmes focused exclusively on women. This is because most reproductive health programmes viewed women as the primary target and as a result, paid little attention to the roles that men might play in women's reproductive health decision making and behaviour. Interest and recognition of involving men in women's' reproductive health services started to attract a lot of interest after the 1994 International Conference on Population and Development (ICPD) in Cairo and the 1995 women's conference in Beijing (Drennan 1998; Ntabona 2002). During the ICPD, representatives from 180 countries formally recognized the importance and influence of male involvement in women's reproductive health (Kwambai et al., 2013). As a result, after the ICPD the number of reproductive health programmes that involved men spiked. In fact, one of the critical outputs of the ICPD meeting, was the emphasis on the role that male partners would play in successful implementation of PMTCT (WHO, 2012).

In recent years, studies have shown that involvement of males in reproductive health programmes, including PMTCT has resulted in positive health outcomes (Brusamento et al., 2012; Morfaw et al., 2013; Asefa et al., 2014). With the positive evidence from these studies and also the ICPD's

statements which re-emphasized the need to recognize men's shared responsibility and involvement in responsible parenthood and sexual reproductive behaviour, the Zambian Government through the MoH, started promoting male involvement in PMTCT (Nakamboa, 2008). This was with the view that the uptake of ART amongst ANC mothers would improve with the involvement of the male partners in the programme.

2.6.2 Definition of male involvement in PMTCT

There is no standard definition or approach to male involvement in PMTCT. The involvement of males throughout the PMTCT cascade is often used as a proxy measure of support a woman receives from the partner during ANC and postpartum periods. This includes HTC and ARV uptake, decision on infant feeding and attendance of ANC visits. However, the definition of "male involvement" varies according to different authors. Some authors define male involvement as simply taking up counselling and HIV test individually whilst others define it as being part of the couple counselling (Diketema et al., 2012). For the purpose of this study, male involvement is defined as male partners escorting and supporting their partners during ANC in terms of HTC, providing emotional support and also the uptake of ARVs in an event that the woman is found to be HIV positive. This means that male involvement goes beyond simple participation in HTC and also includes being a supporting partner in ensuring that the health outcomes for both the mother and child are positive.

2.7 IMPORTANCE OF MALE INVOLVEMENT IN PMTCT

Bolu et al., (2007) found that a major factor that prevents some women from accepting HIV testing is the need to seek their partners' consent. Studies have shown that providing HTC to both partners together can lead to greater acceptance and less abuse and abandonment of HIV-infected women (Katz et al, 2009; Akaro et al., 2012; Ditekemena et al., 2012). It also allows couples to make

informed decisions on living positively with HIV; preventing HIV transmission to the unborn child; deciding on safe sex practices; and making informed decisions to access care and treatment (Medley et al., 2004). Kalembo et al., (2013) also found that men can play a crucial role in supporting HIV positive pregnant women by assisting them to get to clinics or hospitals where chances of safe delivery are higher and to choose a safe infant feeding method. Furthermore, when men participate in PMTCT programmes, their knowledge of HIV increases, and their behavior becomes supportive, and their receptiveness to HIV testing increases (Godlove et al., 2010).

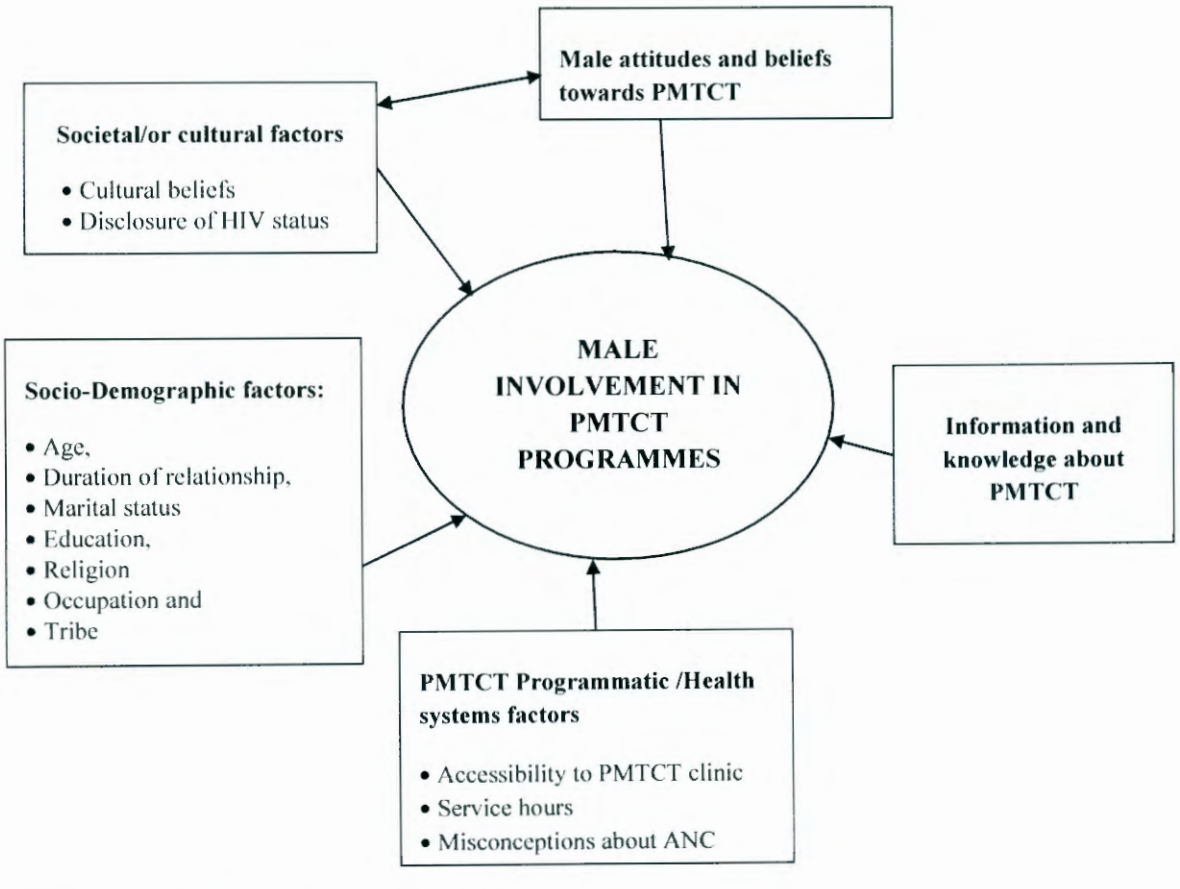
A Tanzanian study found that HIV-seropositive women whose partners were involved in PMTCT were three times more likely to use NVP prophylaxis, and six times more likely to adhere to the infant feeding method selected than those whose partners were uninvolved (Burke et al, 2004:15). This was consistent with another study conducted in Tanzania and Kenya, which showed that involvement of male partners in PMTCT programmes, led to increased acceptance/uptake of NVP among HIV positive women during their ANC follow up visits and adherence to infant feeding methods chosen than those whose partners were not involved (Nyondo et al., 2014). According to the prospective cohort study undertaken between 1999 and 2005 in Nairobi, the combined risk for vertical transmission or infant death was significantly lower, by more than 40%, if males attended ANC with their partner (Aluiso et al., 2011).

Men's role in HIV prevention is pivotal to changing the course of the epidemic. To improve on male involvement, it is therefore critical that men are provided with information among others, about the importance and benefits of getting involved in reproductive health issues such as PMTCT.

2.8 CONCEPTUAL FRAMEWORK: FACTORS INFLUENCING MALE INVOLVEMENT IN PMTCT

Despite international agreements on the importance of men in maternal and newborn health programmes, the involvement of male partners remains a major challenge. Poor/or low male involvement during ANC visits has been evidenced with the low uptake of PMTCT interventions among women who test HIV positive (Asefa et al., 2014). Their failure to participate or be part of this process has been associated with a number of factors/ or reasons. The conceptual frame work in Figure 2 is based on the literature reviewed and categorises the factors that could potentially influence male participation in PMTCT services.

Figure 2: Factors contributing to low male involvement in PMTCT



Source: Adopted from *Sevalan et al (2001:781)*

2.8.1 Societal/cultural factors, attitudes and beliefs

Societal/cultural factors, attitudes and beliefs play a critical role in women's' reproductive health. In Zambia, men are usually perceived as decision makers in the home (Nyirenda, 2015). They feel that their position as the household head is undermined if they are expected to escort their partner for ANC, which they consider to be a "woman's clinic program", leading them to decline to attend ANC and PMTCT with their partners (Peltzer et al., 2011). Morfaw et al., (2013), Asefa et al., (2014) and Kwambai et al., (2013) also found that ANC clinics are perceived to be women's spaces and thus it is considered shameful for a man to be found in such clinics. Men perceived their roles to be predominantly focused on economic activities and as a provider to the family (Peltzer et al., 2011). Furthermore poor male participation in the ANC service was also associated with a lack of perceived benefits coupled with other competing needs; need to provide for the family versus the demand for involvement in PMTCT services. As such, a man would rarely seek permission from work in order for him to accompany his wife for ANC. As a result, having a woman telling her male partner what to do, was considered ludicrous (Morfaw et al., 2013; Nyondo et al., 2014). This perception or belief discourages men from participating in PMTCT activities (Morfaw et al., 2013; Osoti et al., 2014). Research has also found that men who escort their partner to ANC are seen as being jealous, over protective and lacking confidence (Aarnio et al., 2009; Homsy et al., 2006)..

Ditekemena et al., (2012) and Morfaw et al., (2013) found that male reluctance to know their HIV status was another limiting factor for men to get involved in ANC/PMTCT activities. This was associated with stigmatisation in the community especially if the results were positive. A similar study conducted in Malawi indicated that men were afraid of knowing their HIV status, and preferred to use their wives' HIV status as a proxy for themselves (Nyondo et al., 2014). Male reluctance to have an HIV test is further exacerbated by their self-perception of being in good health (Morfaw et al., 2013). As men knew that attending ANC services entailed taking an HIV test; most men opted for non-involvement in order for them to avoid the test. Apart from being reluctant in knowing their HIV status, the fear of knowing was associated with their past risky sexual behaviours.

Other barriers reported by Nkuoh et al. (2010) is that of childcare. In the case where both parents were to go for antenatal care, there would be no one left at home to look after the other children. Cultural communication patterns between men and women was also noted as a barrier. A study in Cameroon revealed that 69.9% of women were asked to bring their partner for PMTCT/VCT and only 42.8% of the partners came (Nsagha et al., 2014). This shows that partners do not freely engage with each other on important matters and it therefore takes more than just an invitation to have the men come to the clinic. Similarly, Falnes et al., (2011:34) reported that "a woman cannot tell a man what to do even though the advice comes from the doctor and worse still for him to consent to what she says". This was also highlighted by Nkuoh et al (2010) from a study in Cameroon as one of the factors hindering men from participating in ANC.

2.8.2 Health systems factors

Various factors associated with health systems that negatively affect the uptake of health services and male participation in PMTCT have been reported. The attitudes of health care providers towards men, the timing of ANC service provision, and the ANC environment tend to discourage men from participating in PMTCT activities (Byamugisha et al., 2010; Ditekemena et al., 2012; Nyondo et al., 2014).

Health providers' attitudes towards men have been described as harsh in terms of how they treated men who accompanied the female partners for ANC. Studies conducted in Uganda and Malawi found that men were discouraged to attend ANC services because of the harsh treatment and the unwelcoming attitudes of health care workers during ANC clinics (Byamugisha et al., 2010; Nyondo et al., 2014).

The operating hours and timing of ANC clinics was also problematic. Morfaw et al., (2013) and Kwambai et al., (2014) noted that the timing of ANC activities conflicted with other economic activities that men were involved in and as a result, they prioritized other activities rather than

accompanying their partner to ANC. Similar findings by Borniphace (2008) also revealed that men are too busy with other work and yet health providers at health facilities do not recognize and respect the presence of males at ANC. This discourages men from participating in ANC and PMTCT activities.

Morfaw et al., (2013) suggests that there is need to accommodate male partners who are heavily burdened with earning a family's substance, by offering ANC activities over the weekend or after working hours. Similarly, a study from Cameroon (Nsagha et al., 2014) found that lack of time and non-invitation to clinics were the major reasons that contributed to low uptake of male participation in PMTCT. The study conducted in Kinshasa revealed that male involvement in HTC uptake and couple counselling improved when the service was available between 5pm and 6pm (Diketemena et al., 2011). Morfaw et al., (2013) further identified long waiting time as another barrier to male involvement in PMTCT.

Furthermore, most health staff working in ANC are female and as a result males tend to feel uncomfortable when having to access information about reproductive health from them (Borniphace, 2008). This led to ANC clinics being perceived as male unfriendly, which also discourages men from attending ANC with their partners (Falnes et al., 2011; Nkuoh et al 2010; Nsagha et al., 2014).

2.8.3 Information/ knowledge barriers

Falnes et al., (2011) and Abuhay et al., (2014) found that a lack of knowledge about PMTCT services tends to be a barrier for male involvement in PMTCT programmes. Fear of knowing their HIV status, traditional gender roles and cultural norms and inadequate appropriate knowledge among health providers about PMTCT partially explains the unwillingness of men to become involved in the PMTCT programme (Nsagha et al., 2014; Nyondo et al., 2014). However, while there is an indication that some men were willing to participate in PMTCT activities, lack of

knowledge about where to access HTC or PMTCT services deterred the participation of males in such programmes. Research also found that men were unaware of their roles in PMTCT services and the benefits thereof; not knowing their partners HIV status and rationale for testing when they had no signs of sickness (Nyondo et al., 2014). A study conducted in Cameroon which explored the role of male partner involvement in PMTCT of HIV revealed that women had more knowledge about PMTCT than men most likely because women had direct contact with the health care providers (Nsagha et al., 2014). The fact that health facilities are the "main sources of information on PMTCT for women exposes them to first-hand information while men get incomplete information from the media" (Nsagha et al., 2014:57). Very few men (2.9%) cited female partners as their main source of information, re-confirming the gap in communication between partners (Nsagha et al., 2014). This gap in information among men contributes to the low uptake of male involvement in PMTCT as men do not fully understand the need to support their partners (Nyondo et al., 2014).

2.8.4 Demographic factors

Byamugisha et al., (2010) identified demographic factors as one of the major predictors of male involvement. According to the study conducted in Mbale District in Uganda, Byamugisha et al., (2010) found that men who had had 8 or more years of education were two times more likely to get involved in PMTCT programme than those with less education. Type of occupation was also identified as one of the barriers to male involvement. Nsangha et al., (2014) also identified some of the demographic factors that affected different aspects of respondents knowledge, attitudes and practices in PMTC and this included; marital status, age and education level. This was also congruent with a similar study that was conducted in Ethiopia. The findings revealed that socio-demographic variables had a statistically significance association with the outcome variable with the exception of age duration of relationship and ethnicity (Abuhay et al., 2014). This was also supported by a study of systematic review done in sub-Saharan region where marital status; education and professionalism was found to have statistically significant association with male involvement (John et al., 2012).

A combination of all these factors, negatively affects the involvement of male partners/partners in PMTCT programmes.

2.9 SUMMARY OF KEY ISSUES

PMTCT remains the most effective way of eliminating HIV in paediatrics as it can reduce the risk of HIV transmission to as low as 2%. This includes the provision of ARV prophylaxis to both the mother and the baby, avoidance of breastfeeding or EBF and giving birth through caesarean section. In Zambia, an opt-out approach has been adopted where every pregnant woman is offered an HIV test. This has increased access to HTC for a number of women during ANC. However, literature reviewed revealed that women's uptake of these services are influenced by the attitudes of their male partners because men are the key decision makers in most African societies. It is therefore critical that strategies to enhance male participation in routine ANC/PMTCT services are established to reduce on maternal morbidity and mortality rates.

Various challenges or barriers that influence male participation in ANC/PMTCT have been identified based on the literature reviewed. These barriers include: societal/cultural factors; attitudes and beliefs; health systems factors; lack of information/knowledge about PMTCT; and demographic factors.

The literature review on societal/cultural factors, attitudes and belief, revealed that female uptake of PMTCT is influenced by the attitudes of their male partners because men are the key decision makers in most African settings. Societal perception towards men who escort their partners as being jealousy and over protective was also identified as a deterrent to male participation. The health systems has also shown that men are often made to wait for long hours before their partners can be attended to. This makes male partners to avoid participation in ANC/PMTCT. The timing of ANC services has also been cited as one of the deterrent factors to male participation in PMTCT

because men are expected to escort their partners at the time when they are supposed to be financially productive so as to have income to provide for their families. These competing factors were identified as a barrier to male participation. Furthermore, literature reviewed, revealed that health service providers are viewed as being unfriendly and harsh to males who escort their partners for ANC/PMTCT services.

Lack of information on maternal health was also identified as a hindrance to male involvement in ANC/PMTCT. The reviewed literature also indicated that demographic factors were major predictors of male participation in PMTCT. Notably, marital status, age and economic status of male partners was statistically significantly associated with male involvement

CHAPTER THREE: RESEARCH METHODS

3.1 INTRODUCTION

Bryman (2008) defines research methods as a technique for collecting data which may involve specific research instruments such as self-administered questionnaires, a structured interview schedule or participant observation where the researcher listens to and watches others.

This chapter starts with a general overview of Zambia and more specifically Kasama district in the Northern Province where the study was conducted. This is followed by an overview of the study design, sampling, research instruments, data gathering, analysis and ethical considerations.

3.2 DELIMITATION OF THE STUDY

The study was limited to three groups of participants: men who accompanied their partners for ANC (hereafter referred to as the male participants); women who attended ANC without their partners (hereafter referred to as female participants); and health care workers providing ANC (hereafter referred to as key informants) at Kasama urban clinic in the Northern Province of Zambia. Due to the sensitive nature of HIV, men and women attending ANC were selected and not PMTCT clients. This ensured that the researcher and research assistants never found out the HIV status of the respondents.

3.3 GENERAL OVERVIEW - ZAMBIA

Zambia is a land-locked country spanning a total area of 752,612 square kilometres with an estimated population of 13 million people (CSO, 2010). Zambia, shares its boarders with the Democratic Republic of Congo (DRC) and Tanzania in the north; Malawi and Mozambique in the east; Zimbabwe and Botswana in the south; Namibia in the southwest and Angola in the west. Administratively, the country is divided into nine provinces and 72 districts. Lusaka and Copperbelt provinces are predominantly urban, whilst the remaining provinces—Central, Eastern, Northern, Luapula, North-Western, Western, and Southern—are predominantly rural (CSO, 2010).

3.4 STUDY AREA

This study was conducted in Kasama district in Northern Province of Zambia. Northern Province is the largest province in Zambia with twelve districts. The province has a total of 145 health centres, one mission hospital and eight government hospitals and it shares international borders with Tanzania, Malawi, and DRC. Within the country, the province shares provincial boundaries with Luapula and Muchinga provinces. The province consists of eight districts namely; Chilubi, Kaputa, Kasama, Luwingu, Mbala, Mporokoso, Mpulungu and Mungwi. Northern Province is widely considered to be the heartland of the Bemba, one of the largest tribes in Zambia.

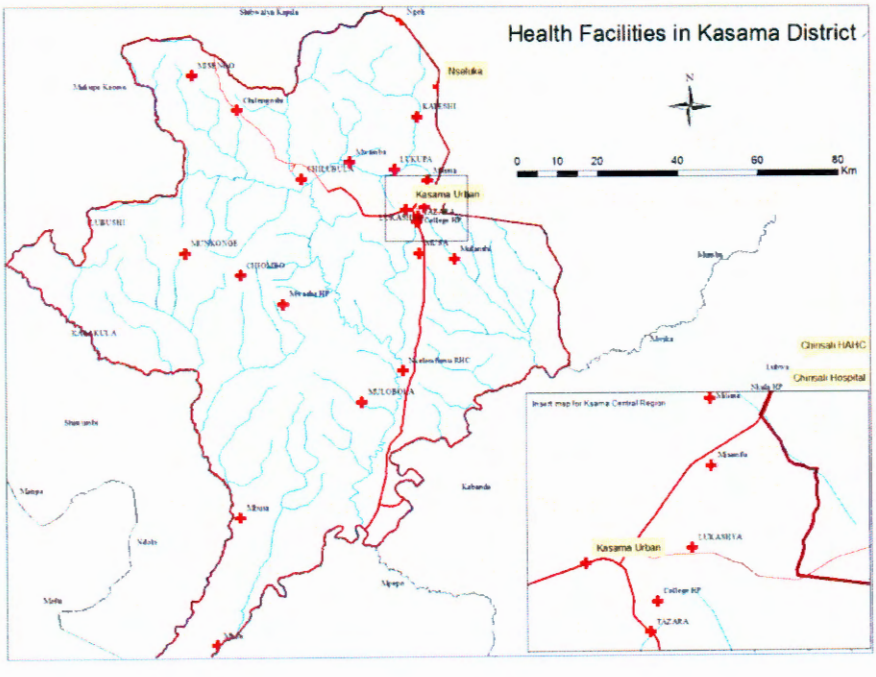
The population of Northern Province is estimated at 1,759,600 of which 49% are males and 51% are females (CSO, 2010). It has an average population growth rate of 3.4%, making it the second fastest growing province in the country (CSO, 2010). However the population in the province is generally said to be poor with limited income generating ventures.

The HIV prevalence rate in Northern Province is estimated at 6.8% among adults in reproductive age group of 15 – 49 years (CS0, 2010). The HIV prevalence rate was higher among females (7.7%) than males (5.7%) of the same age category of 15 – 49 years.

Kasama district is the provincial capital as well as administrative and commercial headquarters of Northern Province. The district has a population of approximately 237,546 people representing 13.5% of the total provincial population (CSO, 2011). Kasama has 32 health facilities, one of which is a district hospital and the rest are primary health centres.

The map in figure 4 below shows all the districts in Zambia, and highlights Kasama district in Northern Province where the study was conducted.

Figure 3: Map of Zambia indicating the study area



3.5 STUDY DESIGN

A research design is defined as a plan or strategy which moves from the underlying philosophical assumptions to specifying the selection of respondents, deciding on the data gathering techniques to be used and the data analysis to be done (Maree, 2007). The research design provides a framework for the collection and analysis of data (Bryman, 2008).

This study followed a descriptive, cross-sectional study design to describe factors perceived to be associated with male involvement in PMTCT. A descriptive study design according to Bryman (2008) is "one in which the primary goal is to assess a sample at one specific point in time without trying to make inferences or causal statements". Cross sectional designs are conducted in the present time to examine what currently exists and they are fundamentally characterised by the fact that all data are collected at one time (Brink et al., 1988). One of the advantages of the cross-sectional design is that it allows researchers to compare many different variables at the same time. However, cross-sectional studies may not provide definite information about cause-and-effect relationships since they only offer a snapshot of a single moment in time and do not consider what happens before or after the snapshot is taken. Cross-sectional study designs are usually associated with a survey. A survey according to Mouton (2001) is quantitative in nature and aims to provide a broad overview of a representative sample of a large population. Data gathered through a survey from a sample of male respondents was used to describe how men perceive male participation in PMTCT. This data was further used to determine factors that hinder and/or encourage male participation and make recommendations based on research findings that could improve male participation in PMTCT.

Both quantitative (a survey) and qualitative (interviews) methods were used to collect data for this study. The rationale for using mixed methods is that when used in combination, quantitative and qualitative methods complement each other and allow for more complete analysis (Green et al., 1989; Tashakkori and Teddlie, 1998). Quantitative research is about quantifying relationships

between variables. It is commonly argued that using quantitative data collection is more reliable and can easily be checked or verified by another researcher conducting the same research (Bryman, 2008; Dunsmuir et al, 1991). Quantitative methods involve measurements, statistics and numerical figures. The survey questionnaire in this study, comprised of closed-ended questions that were coded numerically and were therefore analysed statistically. The open-ended questions in the questionnaire were categorized, coded and analysed statistically. As opposed to quantitative research/or methods, qualitative research is characterised by its aims, which relate to understanding some aspect of social life, and its methods which generate words, rather than numbers, as data for analysis (Patton et al., 2002). The interview guides used in this study comprised of open ended questions for both the key informants (providers) and also female participants. This generated qualitative understanding of how men may perceive participation in PMTCT, factors which hinder and /or encourage men to participate as well as recommendations to improve male participation.

3.6 SAMPLING

It is generally impossible to include the entire population in most studies, due to time and resource constraints such as finances and manpower. This has resulted in most social surveys using a random sample of the population where generalisations can be made to the general population. Sampling therefore refers to a process of selecting a portion of the population for a study (Maree, 2007).

Kasama district has 32 facilities: one district hospital, five health posts (HP), three urban centres and 23 rural health clinics. Due to resource constraints, purposive sampling was used to select Kasama urban clinic because it is centrally located, easily accessed by clients and offers ANC and PMTCT services among other primary health care (PHC) services. Furthermore, despite the fact that Kasama urban clinic has been implementing a PMTCT programme for some time now, male involvement is still very low. It has a catchment population of 27, 696 and is less than one kilometer from the District Medical Health Office (DMHO). According to MoH (2013), urban

health centres are expected to serve a population of 30 000 to 50,000. In terms of staffing, Kasama urban clinic has 11 trained staff: six nurses, one doctor, three clinical officers and one Environment Health Technician (EHT).

Purposive sampling was used to select the three targeted groups of respondents. Purposive sampling entails selecting respondents because of certain characteristic, for example age, gender, use of a particular teaching strategy, specific learning barrier etc. (Bryman, 2008). The criteria used often helps to select participants most likely to possess the experience, or know about, or have insights into the research topic. This sampling method was used to select study subjects because it was affordable financially and was quick to get the desired sample size. The following procedure was followed to select the required study participants;

3.6.1 Male participants

Male study participants were purposively recruited at the health facility by health providers between 1 January and 31 March 2015. They were recruited during ANC group and/or individual counselling sessions. ANC providers informed "potential study participants" during these sessions about the research study. Those who showed an interest were referred to data collectors for consent and enrolment. A sample of 80 men was achieved.

3.6.2 Female participants

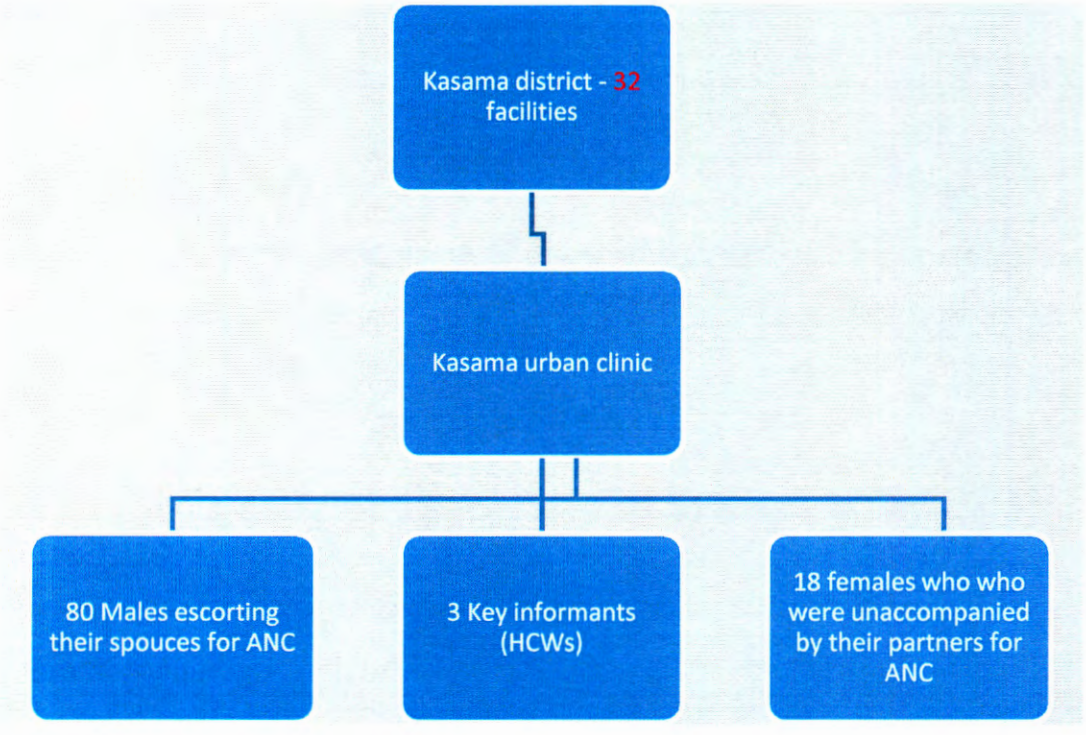
Women who were not accompanied by their male partners were purposively selected during the ANC group and/or individual counselling sessions. The recruitment of female participants took place between 1st January and 31st March 2015. The ANC providers informed the women about the study and those who showed interest were referred to the data collectors for consent and enrolment in the study. A total of 18 women agreed to participate in the study.

3.6.3 Key informants

Kasama urban clinic has three health care providers working in MNCH. These health care providers were purposively selected to participate in the study as they were the only health professionals trained to provide ANC.

Figure 4 below summarises how the selection of the health facility and respondents were reached.

Figure 4: Sample



3.7 RESEARCH INSTRUMENTS

This study utilised a structured survey questionnaire for male participants (see Annexure A); a semi-structured interview schedule for female participants (see Annexure B); and a semi-structured interview guide for the key informants (see Annexure C).

3.7.1 The structured survey questionnaire for male participants

The structured questionnaire for male participants was adapted from a questionnaire that was used in a similar study conducted in Mambwe district in Zambia (Tshibumbu, 2006). The questionnaire was revised to address the issue of how men perceive male participation in PMTCT, the factors that hinder and/or encourage male participation in PMTCT as well as recommendations on how men could be encouraged to participate in PMTCT. An advantage of using a structured questionnaire is that all the questions are standardised and therefore all respondents are asked the same questions in the same order. As a result, the responses are comparable based on the assumption that they were all responding to the same questions. Both open- and closed-ended questions were included in the questionnaire. Data obtained from the administration of closed questions (quantitative) is simpler to analyse than data obtained from open questions (Maree, 2007). On the other hand, the use of open-ended questions provides much deeper and rich information as people are able to express their own views more so than where the researcher has pre-coded data.

More specifically, to investigate the aim of the study, namely to determine what factors influence male partner participation in PMTCT of HIV in Kasama district, the structured questionnaire for male participants collected information on:

- Basic demographics including age, education, marital status, and tribe.

- Knowledge and awareness of MTCT of HIV was measured by a series of six questions. A knowledge index was constructed using these questions. The scores ranged from 1 to 6, 1 being the lowest and 6 being the highest. Each question/or statement was given an equal weight of 1.

- Factors that influence the participation of males in PMTCT programmes including; social-cultural factors (e.g. are there any cultural beliefs that discourages men from participating in ANC activities?), and programmatic factors (e.g. what are the programmatic factors that affect male participation in ANC?)

- Levels of male involvement in PMTCT (e.g. what type of support do women receive from their partners as they attend ANC activities?)

The questionnaires were translated into the local language (Bemba) and pre-coded for easy data analysis and entry. Before implementing the actual data collection, the tools were pilot-tested at Kasama urban clinic with five males who accompanied their partners for ANC at the time. This data was not included in the study. Piloting data collection tools or research instruments is critical when conducting any research study. This is done so as to identify potential problem areas and deficiencies in the research instruments prior to actual data collection (Zailinawati, 2006). Pilot-testing of data collection tools also allows the researcher to assess if the respondents understood the questions and to assess the practicality of asking questions by enumerators.

3.7.2 Semi- structured interview schedule for female participants

Semi-structured interviews can be used to corroborate data emerging from other data sources (Maree, 2007). It allows the interviewer to explore particular themes or responses further as it is not limited to pre-determined answers. It also allows participants the freedom to express their

views on their own terms. Another advantage of semi-structured interviews is that they can provide reliable, comparable qualitative data. However, semi-structured interview are time consuming in terms of data collection and analysis.

The qualitative semi-structured interview schedule collected information on perceived barriers/enablers to male involvement in PMTCT as well as whether the ANC client would like to be accompanied by her partner to a PMTCT clinic at the next visit. The interview collected information about reasons why male partners did not attend PMTCT services. It included questions such as:

- What encourages men to accompany their partners for PMTCT?
- What discourages men from accompanying their partners for PMTCT?
- Do you think that men should accompany their partners to ANC clinics offering PMTCT?

3.7.3 Key informant semi-structured-interview

The key informant interviews targeted the health care providers who were offering PMTCT services at the time of the study. Information was collected on the health provider's perceptions of what encourages men to participate in PMTCT programmes and what discourages them. More specifically some of the questions included were as below:

- What factors encourage men to attend PMTCT services with their partners?
- What factors discourage men from attending PMTCT services with their partners?

- What recommendations could you make to improve male participation in PMTCT services?

The interview guide for health care workers also collected basic demographic data, which included age, gender, education and their position at the time of the interview. Other information collected was the general perception of male involvement in PMTCT and also programmatic factors influencing the participation of male partners in PMTCT.

3.8 DATA COLLECTION

Data collection took place from 1st January to March 27th 2015. Due to ANC services only being offered twice a week, data collection took longer than initially anticipated. Permission to conduct the research was obtained from the Provincial Medical Health Office (PMHO) and the purpose of the study was shared with the health staff at the clinic, including other key informants.

Two (one male and one female) research assistants were contracted to undertake data collection. They were recruited based on their past experience in data collection as well as academic qualifications so as to ensure that the data collected was of good quality. Both research assistants underwent a one day orientation and training session before going into the field. During this session, the rationale and aims of the study were discussed as well as interviewing techniques and a careful revision of the research instruments. This process helped the research assistants became familiar with questions and how to phrase them at the time of data collection. The training also ensured consistency among the data collectors.

Because of the sensitivity nature of the study, the female research assistant interviewed the female participants only and the male research assistant interviewed male participants. This was done to

ensure that the participants were comfortable during the survey interview and also ensure that they answer the questions as honestly as possible.

3.8.1 Survey - male study participants

Potential male study participants were contacted during ANC visits. The health providers informed the ANC attendees of the study and encouraged those who would want to get more information and potentially participate in the study to see the research assistant. The interviews were conducted at Kasama urban clinic as it was the most convenient place for the respondents.

After ANC, men who showed interest in participating in the study approached the research assistant for more information about the study. The research assistant explained what the study was about and what the interview would entail. Before participating in the interview, the male participants were asked to read through a summary of the study and were then asked to sign the consent form (See Annexure D) agreeing to take part in an interview.

Upon recruitment into the study, the research assistant made appointments with the participants, so that immediately after attending ANC activities, the interviews could commence. In instances where the respondents were not available at the time, research assistants made appointments with them and conducted interviews later at a time and place most convenient for the participant.

The face-to-face interviews were conducted by a trained research assistant using the survey questionnaire. Interviews were conducted in both English and the local language (Bemba) depending on the respondent's preference. The interviews took approximately 30 minutes per each respondent.

3.8.2 Semi-structured interviews– Female participants

Semi-structured interviews were conducted by a trained female research assistant. The interviews were conducted in both English and the local language (Bemba) depending on the respondent's preference. The interviews lasted approximately 20 minutes. Before starting the interview, the purpose of the study was explained to the participants and written informed consent obtained for their participation (see Annexure E). The interviewer recorded responses to each question on the interview schedule by taking notes.

3.8.3 Key informant interview process – Health providers

Key informant interviews targeted the health providers who were providing ANC at Kasama urban clinic. Semi-structured interviews were conducted by trained research assistants. Interviews were conducted in English. The interviews took approximately 30 minutes per each participant. Before starting the interview, the purpose of the study was explained to the participants and written informed consent obtained for their participation (see Annexure F). The interviewer recorded responses by taking notes.

3.9 DATA QUALITY CONTROL

The study was managed by the researcher, who saw to it that all aspects of the research were adhered to as indicated in the research protocol. The research assistants were adequately prepared through a one day orientation to ensure that they understood the questions and how to phrase them. To ensure that data collected was of good quality, the researcher checked for consistency, accuracy and completeness on a daily basis, and held daily debriefing meetings with the research assistants. This was done to address questions or concerns among the research assistants and to check the

quality of the information collected. During this process erroneous entries were inspected and corrected where possible.

3.10 DATA PROCESSING AND ANALYSIS

According to Brink et al., (2006) data analysis entails categorizing, ordering, manipulating and summarising data and describing them in meaningful terms. Two sets of data was collected for this study: quantitative and qualitative.

3.10.1 Quantitative data analysis

Data from survey questionnaires were entered and analysed using the Statistical Package for Social Sciences (SPSS) version 21. A data entry template was developed using Epidata software[1]. Once captured, the data was exported into SPSS for data cleaning and analysis. Data cleaning involved running of frequencies so as to check on the consistencies and also to check the ranges.

A data analysis plan was also developed prior to data analysis and assisted in guiding the selection of variables to be included in the analysis. The responses from open ended questions were extracted, categorized and coded before entering them into SPSS. The data was analysed using univariate analysis and results presented in frequency and percentage tables and graphs.

[1] Epidata, is a free downloadable internet software which is basically for data entry and can also be used to performs basic data analysis.

3.10.2 Qualitative data analysis

Qualitative data analysis (QDA) is usually based on an interpretative philosophy. Taylor et al., (2010) refers to qualitative data analysis as a range of processes and procedures of turning written data such as interview and field notes that has been collected into some form of explanation, understanding or interpretation of people and situations. There is a broad range of approaches to analysis in qualitative research. In this study, the thematic data analysis approach was used. Thematic analysis is a method for identifying, analysing, and reporting patterns (themes) within data (Braun et al., 2006). The data collected during the key informant interviews with providers and during the semi-structured interviews with female participants was written in notebooks during field data collection by trained research assistants. Information gathered from targeted respondents was summarised and categorised, and thematic areas identified.

To gain deeper understanding of the factors associated with male participation in ANC, the qualitative findings were then triangulated with the quantitative data findings. A combination of qualitative and quantitative findings added very rich understanding of the factors that influence males to participate in PMTCT.

3.11 RESEARCH ETHICS CONSIDERATIONS

According to Mouton (2001), the ethics of science concerns what is wrong and what is right when conducting research. Furthermore since research is a form of human conduct, it follows that such conduct has to conform to generally accepted norms and values. Considering the sensitivity of this study, the following ethical issues were taken into account: permission to conduct the study and ethical clearance, voluntary participation, informed consent, right to confidentiality, right to privacy and scientific honesty.

The following was done to ensure that the above ethical issues were adhered to:

3.11.1 Permission to conduct the study and ethical clearance

The research proposal was submitted to and approved by the Ethics Committee of the Faculty of Humanities, Free State University (Annexure G). Permission to conduct the study at Kasama urban clinic was also sought through the Provincial Medical Office (PMO) (Annexure H).

3.12.2 Voluntary participation

Participation in this study was voluntary. The right of the study participants to take part in the research was respected as no respondent was forced to be part of the study. The participants were informed of their right to answer questions or not and to withdraw at any time during the interview process if they so wished.

3.11.3 Informed consent

All respondents were informed about the general purpose of the study. The trained research assistants administered the consent forms to study participants individually, in a private space, with each eligible study participant who was willing to be part of the study. After explaining the purpose of the study, participants were given an opportunity to ask questions.

3.11.4 Right to confidentiality

Study respondents were assured of confidentiality. All respondents were informed in advance about issues of confidentiality so that they were free to respond honestly to questions in the questionnaire and during the semi-structured interviews. The names of the respondents were not recorded on the questionnaires/semi-structured interview schedules and all data was aggregated. Hard copies of the questionnaires and notes were stored under lock and key. Issues of confidentiality were also stressed during the training of the research assistants so that no information that they come across during the study would be divulged.

3.11.5 Right to privacy

The respondents' right to privacy was ensured. Interviews were conducted at a time and place convenient for the respondent. Respondents could refuse to participate in the interview, or stop an interview at any point. All the rights to privacy such as declining to be interviewed all together or declining at specific cases such as meal time, at night or for longer periods was respected during the actual implementation of the study.

3.11.6 Scientific honesty

Scientific honesty was observed by ensuring proper cross-referencing and by listing all scientific sources at the end of this mini-dissertation. The researcher also pursued truthful and objective interpretation of the data and drawing of findings and conclusions.

3.12 LIMITATIONS OF THE STUDY

This study had some limitations. The purposive sampling of respondents at the clinic posed a limitation to the generalisation of the study results. Furthermore, only males who accompanied their partners during ANC services at Kasama urban clinic were interviewed, thereby excluding those males who did not accompany their partners to ANC. Audio recording in qualitative research has the advantage that the interview report is considered more accurate than writing out notes. However, the interviews with female participants and key informants was not audio recorded because of lack of resources to acquire the voice recorder. Failure to do the audio recording was considered as a limitation, as some of the important key findings may have been lost by the note taker or the data collector.

CHAPTER FOUR: RESEARCH FINDINGS

4.1 INTRODUCTION

This chapter focuses on the research findings from the 80 male and 18 female participants as well as the three key informants. More specifically the chapter describes how men perceived male participation in PMTCT, as well as the factors they and the key informants thought hindered and/or encouraged male participation in PMTCT. The findings are presented in the form of tables and graphs.

More specifically, the chapter describes the demographic characteristics of the male respondents; their knowledge and awareness of HIV transmission from mother-to-child; socio-cultural factors and attitudes influencing male participation in PMTCT. It also describes programmatic factors that may influence/or deter men from participating in PMTCT. The level of male involvement is also discussed.

4.2 DEMOGRAPHIC CHARACTERISTRICS OF MALE PARTICIPANTS

This section presents the demographic characteristics of the male participants including: age, marital status, educational levels, religious affiliations, tribal affiliation, type of relationship and duration of current relationship (see Table 2).

More than two thirds of the male participants (n=56; 70.1%) were between the ages of 24 and 38 years. The majority (n=77; 96.2%) had some form of education, with almost half (n=38; 47.5%) of the participants having completed senior secondary school. In terms of occupation, almost all

(n=75; 93.7%) participants were employed at the time of the survey, except for five participants (6.3%) who were students. One fifth of employed participants worked in farming, forestry or fishing (n=19; 23.8%) and business (n=18; 22.5%); while 12.5% were bus/taxi drivers (n=10).Two thirds of the males (n=53; 66.3%) were from the Bemba tribe. Kasama District is the home of the Bemba tribe. The main religious groups were Catholic (n=24; 30%) and Pentecostal (n=22; 27.5%).

The male participants were asked how long they had been married/or in a relationship with their pregnant female partner. Almost one third of the participants (n=25; 31.3%) were married/or in a relationship for 2 to 4 years. More than a quarter (n=24; 30%) of the participants reported that they had been married/or in a relationship for 8 to 10 years at the time of the survey.

Table 2: Demographic characteristics of male survey respondents

Variable	N=80	Percentage (%)
Age		
≤ 18	1	1.3
19 – 23	5	6.3
24 – 28	18	22.5
29 – 33	15	18.8
34 – 38	23	28.8
39 – 43	11	13.8
44+	7	8.8
Level of education		
Secondary	38	47.5
Tertiary	31	38.8
Primary	8	10.0
None	3	3.8
Occupation		
Farmer, forestry, fishing	19	23.8
Businessman	18	22.5
Driver (bus, taxi, truck)	10	12.5
Other	9	11.3
Soldier, policeman	8	10.0
Student	5	6.3

Professional manager	4	5.0
Manual worker	3	3.8
Clerical	3	3.8
Sales, service worker	1	1.3
Tribe		
Bemba	53	66.3
Other	23	28.8
Tonga	3	3.8
Soli	1	1.3
Religious affiliations of respondents		
Catholic	24	30.0
Pentecostal	22	27.5
Protestant	15	18.8
New Apostolic	9	11.3
Adventist	8	10.0
Anglican	1	1.3
Other	1	1.3
Duration of the relationship		
<= 1	11	13.8
2 – 4	25	31.3
5 – 7	19	23.8
8 – 10	24	30.0
11+	1	1.3
Relationship		
Wife	75	93.8
Regular or steady girlfriend	4	5.0
Other	1	1.3

4.3 KNOWLEDGE AND AWARENESS OF MOTHER-TO-CHILD TRANSMISSION OF HIV

Increasing the level of knowledge about HIV transmission through MTCT is very important for pregnant women and their male partners. The male participants were asked to indicate whether a number of statements testing their knowledge of MTCT were "true" or "false". They also had the option "don't know" if they were not able to respond to the statements with a definite answer (see Table 3).

To assess MTCT knowledge, male survey participants were asked whether HIV could be transmitted from a mother-to-a child during pregnancy. More than three quarters (n=64, 80%) were aware that HIV could be transmitted during pregnancy from mother-to-child, they also knew that HIV could be transmitted through breast milk (n=78; 98.7%). Knowledge among the male participants on whether giving ARVs to both the mother and the child could reduce the chances of MTCT was also high: 94.9% (n=75) indicated that they were aware that giving ARVs to both the mother and the child could reduce the MTCT rates. However, only 15% (n=12) were aware that delivering a baby through caesarean section could reduce the chances of MTCT.

Table 3: Knowledge and awareness of MTCT

Variable	TRUE		FALSE		Don't know	
	N	%	N	%	N	%
A mother who is HIV positive can transmit HIV to her child during pregnancy	64	80.0	13	16.3	3	3.8
A mother who is HIV positive can transmit HIV to her child through breast milk	78	98.7	0	0.0	1	1.3
Giving ARVs to both the mother and child reduces the chances of transmission of HIV from the mother-to-child	75	94.9	0	0.0	4	5.1
Delivering the child by Caesarean section can reduce the chances of transmitting HIV from the mother-to-child	12	15.0	60	75.0	8	10
Not breastfeeding reduces the chance of transmission of HIV from mother-to-child	78	97.5	1	1.3	1	1.3
Couples can use condoms to reduce chances of mother-to-child transmission	57	58.8	22	27.5	0	0

The composite measure of male respondents' knowledge and awareness was measured by total number of correct answers to the six items on knowledge. Based on the scores, four categories were established to determine the levels of men's' knowledge and awareness of PMTCT as follows (See table 4 below);

Table 4: Level of knowledge and awareness about PMTCT

Level of knowledge	Scores	N=80	Percentage (%)
No Knowledge	≤1	0	0%
Low knowledge	2- 3	2	2%
Medium knowledge	4 – 5	19	24%
High Knowledge	6	59	74%

PMTCT knowledge scores, as determined by the knowledge questions, were high, with a median of 4 (0.508SD) out of a maximum of 6 as shown in table 4 above. The majority (n=59; 74%) of the respondents were in the high knowledge category.

4.4 SOCIO-CULTURAL FACTORS AND ATTITUDES

The male participants were asked to "strongly agree", "agree", "disagree" or "strongly disagree" with a number of statements regarding socio-cultural factors that could influence male involvement in PMTCT. They also had the option "undecided", if they were not able to respond to the statements with a definite answer. For the analysis, strongly agree and agree were grouped together and strongly disagree and disagree were grouped together (see table 5).

When asked if a pregnant woman could be tested for HIV without permission from her male partner, almost all (n=78; 98%) participants agreed that this was acceptable. All male participants (n=80; 100%) were of the opinion that men should accompany their partners for PMTCT; although 11% (n=9) were undecided if men who accompanied their partners for PMTCT could be seen as being weak.

It was also evident that some of the female participants were of the view that their partners should be available to accompany them for ANC to appreciate what they go through and also have an opportunity to understand the benefits of male involvement in such programmes.

"This is just too much for a woman alone especially when you test positive. It is very difficult to inform your partner about such, so in most cases we just opt to keep quiet and where possible drink the ARVs secretly. So I feel men should start accompanying us so that they understand what we go through." Female participant

Whilst the majority of the interviewed female participants indicated that they would want to be escorted for ANC by their partner, a few were not in support of this.

"My partner is married so there's no way I will get embarrassed at the clinic by going with a married man for ANC, otherwise I may end up even being beaten by his wife the moment she knows that he is the father of my child". Female participant

In terms of HIV testing as a couple, the majority (n=74; 93%) of the male participants disagreed with the statement that it is a taboo for men to discuss HIV testing with their pregnant partner. When asked if men and women should undergo HIV testing at the same time when going for PMTCT, almost all (n=77; 96%) male respondents were in agreement with the statement. Qualitative findings also suggested that it was important for the couple to undergo HIV testing together. Knowing one's HIV status was described as being fundamental in avoiding some of the marital problems such as divorce.

"It is important for our partners to escort us because you know the issues of HIV are very sensitive. It's actually better that the testing is done as a couple so that the divorces we have seen as a result of HIV test results during ANC can reduce". Female participant

The majority of the male participants (n=76; 95%) did not agree with the statement that "ANC clinics offering PMTCT are for women and children only". Male participants were also asked if a positive HIV test in a pregnant woman was as a result of her being unfaithful to her partner, the majority , 91% (n=73) disagreed with the statement and 8% (n=6) were undecided. The results also show that male participants 93% (n=74) did not consider it shameful for a man to attend ANC clinics for PMTCT with their partners. Asked if men who go for PMTCT with their partners are jealous, 98% (n=78) disagreed with the statement. However, the results also show that almost all (n=79; 99%) the male participants agreed that it is inconceivable for a woman to tell a man what to do and worse still for him to consent to what she says. When male respondents were asked if men who attend ANC clinics for PMTCT are over-protective of their wives, almost all (n=79; 99%) the respondents did not agree with this statement (see table 5).

Table 5: Social cultural factor- responses for men and female interviewed in Kasama

Variables	Agree		Disagree		Undecided	
	N	%	N	%	N	%
A pregnant woman can be tested for HIV without the permission of her husband/partner.	78	98%	2	3%	0	0%
Men should accompany their pregnant partners for PMTCT	80	100%	0	0%	0	0%
Men who accompany their pregnant partners for PMTCT are weak	0	0%	71	89%	9	11%
It is a taboo for men to discuss HIV testing with their pregnant partner	0	0%	74	93%	6	7%
Men and women should undergo HIV testing at the same time at when going for PMTCT	77	96%	2	3%	1	1%

ANC clinics offering PMTCT are for women and children only	0	0%	76	95%	4	5%
A positive HIV test in a pregnant woman shows that she has been unfaithful to her partner	1	1%	73	91%	6	8%
It is shameful for a man to attend ANC clinics for PMTCT with their partners	0	0%	74	93%	6	8%
Men who go for PMTCT with their partners are jealous.	0	0%	78	98%	2	3%
It is inconceivable for a woman to tell a man what to do and worse still for him to consent to what she says	79	99%	0	0%	1	1%
Men who attend ANC clinics for PMTCT are over-protective of their wives.	0	0%	79	99%	1	1%

A composite score was calculated to determine the influence of sociocultural factors on male involvement in PMTCT (Table 6);

Table 6: Influence of socio-cultural factors on male involvement in PMTCT

Influence of socio-cultural factors	Score	N=80	Percentage (%)
No influence	0	75	94%
Low influence	1 – 2	5	6%
High influence	3+	0	0%

The higher the scores the higher the level of social cultural influence on the respondent. The total scores of the social cultural factors were low, with a median of 0.625 (0.00SD) (Table 6). The majority (n=75; 94%) of the male respondents were in the "no influence of social cultural factors" category.

4.4.1 Programmatic factors

The male participants were asked to "strongly agree", "agree", "disagree" or "strongly disagree" with a number of statements regarding programmatic factors that influence male involvement in PMTCT. They also had the option "undecided", if they were not able to respond to the statements with a definite answer. For the analysis, strongly agree and agree were grouped together and strongly disagree and disagree were grouped together (Table 7).

The majority of male participants (n=77; 96%) did not agree that men should only be attended to by male health workers. Furthermore, all male participants (n=80; 100%) indicated that they did not agree with the statement that health workers do not like to see men when providing PMTCT services.

This was also supported by qualitative findings from female participants:

"Even if some males do not like supporting their female spouse by way of escorting them to ANC, the nurses at this clinic are very good. In fact, they make sure that those who come with their partners are attended to first than those who were unaccompanied". Female participant

Some of the female participants also indicated that some women "hire" men who pretend to be their partners for the sake of being served earlier than others.

"Some of these so called husbands are not even legitimate partners to these women. They hire so that they take less time on the queue. In fact some of them are not even married, hahahahah. Just ask around you will know the truth". Female participant

The results also show that almost all (n=77; 99%) of the male participants did not agree with the notion that PMTCT is meant for women and children only. When asked if ANC clinics offering PMTCT should be open during weekends and evenings so that men could access them, 85%

(n=68) of the male participants were in agreement. When asked about confidentiality in PMTCT, all (N=80; 100%) of the male participants did not think that ANC/PMTCT services lacked confidentiality in terms of HIV test results. The majority of the participants 96% (n=77) indicated they did not need to be invited by the health worker to escort/or accompany their partners for ANC/PMTCT services.

Table 7: Programmatic factors

Statement	Agreed		Disagreed		Undecided	
	N	%	N	%	n	%
At ANC clinics offering PMTCT, men should be attended to by male health workers only	3	4%	77	96%	0	0%
Health workers do not like to see men when providing PMTCT services	0	0%	80	100%	0	0%
PMTCT is meant for women and children only	1	1%	77	99%	0	0%
ANC clinics offering PMTCT should be open during weekends and evening so that men can access them	68	85%	7	9%	5	6%
Staff providing PMTCT services do not keep the HIV status/results of men and women confidential	0	0%	80	100%	0	0%
You can only receive PMTCT if invited by health worker to come	0	0%	77	96%	3	4%

4.5 LEVEL OF MALE INVOLVEMENT IN PMTCT

As a way of ascertaining the level of male involvement in PMTCT, the male participants were asked a series of questions regarding involvement in the various steps of the PMTCT cascade (see Table 8).

All male participants (n=80; 100%) had discussed HTC with their partner during her current pregnancy, and also indicated that they would discuss this again with their partner during her next pregnancy. They also all (n=80; 100%) reported that their partner did receive HTC during her current pregnancy, while 93.8% (n=75) had received HTC themselves. All male participants (n=80; 100%) indicated that they would buy infant formula for their baby/infant if required, and that they would support their partner to take ARVs in an event that they were found to be HIV positive.

Table 8: Level of male of involvement in PMTCT

Key variable	N=80	Percentage (%)
Have you discussed HIV counselling and testing with your partner during this current pregnancy?		
Yes	*80*	*100*
No	*0*	*0*
Don't know	*0*	*0*
Will you discuss HIV counselling and testing with your partner the next time she is pregnant?		
Yes	*80*	*100*
No	*0*	*0*
Don't know	*0*	*0*
Was your partner counselled and tested for HIV during her current pregnancy?		
Yes	*80*	*100*
No	*0*	*0*
Don't know	*0*	*0*
Have you ever been counselled and tested for HIV together with your partner at ANC clinic?		
Yes	*75*	*93.8*
No	*5*	*6.3*
Don't know	*0*	*0*
If no, will you go for counselling and testing for HIV together with your partner? (N=5)		
Yes	*5*	*100*
No	*0*	*0*
Don't know	*0*	*0*
If your partner was HIV positive, and you were advised not to breast feed, would you buy formula milk for the baby?		

Yes	*80*	*100*
No	*0*	*0*
Don't know	*0*	*0*
If your partner was HIV positive, would you encourage her to take medication (ARVs)?		
Yes	*80*	*100*
No	*0*	*0*
Don't know	*0*	*0*

4.5.1 Factors that hinder males from being involved in ANC

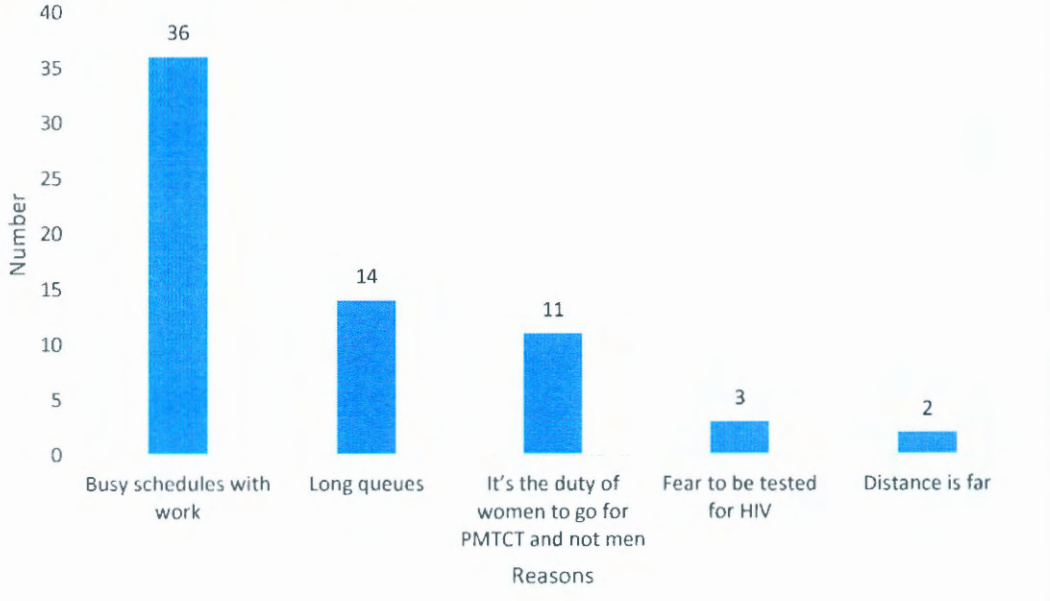
The male participants were asked what would prevent men from participating in PMTCT (figure 7). Slightly more than half of the responses (n=36; 55%) related to busy schedules due to work, that prevented men from accompanying their partners to attend ANC clinics offering PMTCT. Other factors discouraging males from participation in PMTCT included: long queues at ANC clinics (n=14; 21%); the belief that it was the woman's duty to go for PMTCT (n=11; 17%); fear to be tested for HIV (n=3; 5%) and long distances to the ANC clinic (n=2; 3%). Qualitative findings indicated that some men in the community may have extramarital affairs which maybe a deterrent for them to support their "partners" by way of escorting them to ANC.

"From our experience, some of these women you see without their partners, its either they are dating a married man or they are just single and got pregnant by mistake. So you don't expect them to come with their partners" Key informant

Qualitative findings were also evident that some men still perceived PMTCT as a women's' duty as shown in figure 5 below.

"Most of the men I have interacted with usually say that this is supposed to be for women and not men. The job of men is to ensure that their family has enough food on their table and not to go and waste time at ANC clinics in queues and full of other pregnant women", Key Informant

Figure 5: Factors hindering male involvement in PMTCT



The qualitative study findings also showed that the number of times that the ANC services are offered in a week was inadequate and hence contributing to longer queues and ultimately increasing the time taken before receiving the service. This was cited as a barrier to encouraging men to participate in ANC activities.

"There's need for the clinic to increase in the number of days that offer ANC services. Imagine the whole week, this is only done on Wednesdays and Thursdays during the week. Some of us have husbands working and as a result they prefer going for work and not escorting us here at the clinic". Female participant

"Am, sure you can see how long the queues are, and how long it takes to be attended to, this is as a result of less days dedicated to ANC and probably less staff. How can our husbands be convinced to come like this?" Female participant

Furthermore findings from the key informant interviews identified some factors that reportedly discouraged men from being involved in ANC. One of the key factors or reasons that discourage men from attending ANC with their partners was the issue of inadequate human resource and long queues:

"We try to encourage our women to come with their husbands to the clinic for ANC. But I feel one of the discouraging factors for the male partners not escorting their wives is that we have long queues at this clinic. This is because we are understaffed and have decided to dedicate the ANC service provision to only two days a week". Key informant

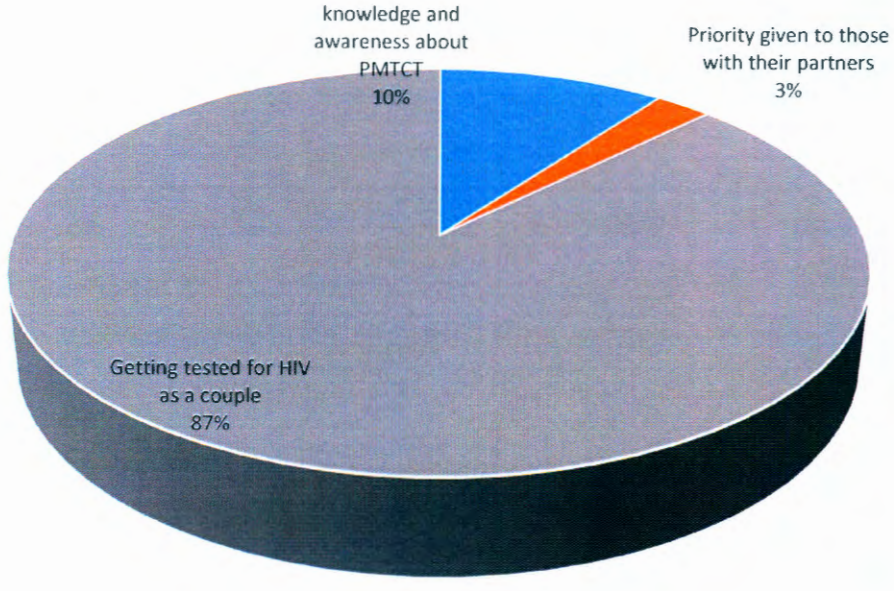
4.5.2 Factors encouraging men to attend PMTCT with their partners

The male participants provided a number of factors that could encourage men to attend ANC with their partners. More than three quarters of the male survey participants (n=69; 87.3%) indicated that encouraging couple counselling will bring more men on board to support their spouses. This finding is supported by the qualitative research, where the female participants' perceived couple counselling as one of the encouraging factors as opposed it being a deterrent.

"Our husbands feel encouraged to escort us for ANC if they hear that the HIV testing will be done together as a couple. You know men rarely go the clinics if not sick. So to be given such an opportunity of doing an HIV test with their spouse, I think they feel very encouraged because that the only time they will also get to know the HIV status for their wives, and hence plan nicely for the unborn child. In my case he did not escort me because he was busy with work". Female participant.

Other factors that could encourage males to attend PMTCT included: sensitising men about the importance of PMTCT (n=7; 9%); and giving preference to woman who are accompanied by their partners (n=1; 1.3%).

Figure 6: Factors that encourages men to attend ANC with their partners



In summary, the findings show that the majority (n=78; 97.5%) of the interviewed respondents were in the category of high involvement, suggesting willingness to get involved in supporting their female spouses in PMTCT. The level of male involvement was measured by the total scores in terms of positive response that supports male involvement. In this case, the total scores varied from 1 to 7; 1 being poor/or no involvement and 7 being better/or high involvement in terms of support (Table 9). A mean of 6.21 and SD of 0.52 was observed.

Table 9: Level of male involvement

Level of involvement	Score	N=80	Percentage (%)
No involvement	≤1	0	0
Low involvement	2 - 3	0	0
Moderate involvement	4 - 5	2	2.5
High involvement	6 - 7	78	97.5

4.6 SUMMARY OF FINDINGS

This Chapter discussed the research findings for the 80 male, and 18 females' participants as well as the three key informant who participated in this study.

They majority of the male respondents had a good level of knowledge about PMTCT and the importance of being engaged throughout the process for the health benefit of both the mother and the unborn infant. However, there were some knowledge gaps identified in relation to HIV transmission through mother-to-child at delivery. Less than a quarter (n=12; 15%) of the interviewed men were aware that delivering a baby through caesarean section could reduce the chances of MTCT.

The findings suggest that men were willing to support their partners despite some of the known cultural factors which were perceived as a deterrent to male involvement. Qualitative findings also indicated they would want their partners escort them for ANC as this would give them an opportunity to appreciate the purpose and benefits of PMTCT. Overall socio-cultural and programmatic factors did not appear to influence male involvement in PMTCT.

Despite the positive perception towards male participation in PMTCT/ANC, various factors that hindered their participation in ANC were identified. Conflicting times of being at work so as to provide for the family and also wanting/or willingness to escort their partners for PMTCT/ANC made some men shun from accompanying their partners to the ANC clinic. Fear of HIV testing during ANC visits also made some men shy away from escorting their partners. In addition, some men still has a belief that ANC/PMTCT is a woman's responsibility and those who were willing to escort their partners for such were considered over jealous and protective. Long queues and time spent at the clinic was another major deterrent towards the participation of males in PMTCT/ANC.

CHAPTER FIVE: DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

During the past year, Zambia has been transitioning from offering less effective to more effective PMTCT regimens. Zambia has also witnessed a policy shift in the administration of ART. Currently, both WHO option B+ and WHO option B are being implemented alongside each other. MoH has also continued enhancing the involvement of males in PMTCT/ANC activities, but still face some challenges. In order to address this, the MoH in collaboration with its partners have, been trying various strategies to promote male involvement in facilities. These strategies include giving priority to women who come with their male partners and to men who bring their children to clinics. The MoH has also, through community health workers, engaged traditional leadership in promoting male involvement. These concept have gained popularity and is increasing male participation in prevention of MTCT programmes.

The aim of this study was to determine what factors influence male partner participation in PMTCT of HIV in Kasama district, Zambia, and to make recommendations on how this could be improved. More specifically, the objectives were to:

- Investigate male awareness and knowledge of MTCT of HIV
- Determine what factors could influence male participation in PMTCT
- Establish the level of male involvement on PMTCT

The discussion presented in this chapter is structured according to the research objectives of the study. Relevant literature is used as a frame of reference during the discussion of findings. Recommendations are also formulated based on the findings and reviewed literature.

5.2 KNOWLEDGE AND AWARENESS OF MOTHER-TO-CHILD TRANSMISSION OF HIV

The findings revealed that male participants' knowledge about MTCT of HIV was fairly high. Men were also aware of the importance of partner involvement in PMTCT/ANC. Being aware and being knowledgeable partially explains what motivated men at Kasama urban clinic to participate in PMTCT programme.

The findings expressed in this study is congruent with reports from Kenya and Tanzania where lack of community awareness on the importance of partner involvement was reported as a deterrent to partner involvement in ANC/PMTCT (Farquhar et al., 2004). In addition, the gap in knowledge about PMTCT was also associated with poor uptake of partner involvement in PMTCT/ANC (Falnes et al., 2011). The qualitative findings also suggested that if men were well informed about PMTCT, the uptake of male partner involvement would improve.

The majority of the male survey respondents were aware of how HIV is transmitted from the mother-to-child during antenatal and post-natal periods. For example, they were aware that HIV could be transmitted during pregnancy and also through breast milk from mother-to-child. These findings are similar to those reported from the Zambia Demographic Health Survey (2014), where 82% of the interviewed males reported that they were aware that HIV could be transmitted to the child during pregnancy. In the current study, the majority of the male participants knew that ARVs taken by the mother and baby decreased MTCT rates.

However, some gaps in knowledge did exist, for example when it came to caesarean section; only a few of the interviewed male survey respondents, were aware that delivering a child through caesarean section could reduce the chances of MTCT. Tshibumbu (2006), had similar findings, where only 38% of respondents knew that caesarean section could reduce the risk of MTCT transmission.

Whilst the findings in this study suggest that awareness and knowledgeable scores about PMTCT program were fairly high among the men interviewed, some gaps were however observed. The findings further suggest that there is need to do more on sensitisation among males so as to encourage/or motivate them participate in PMTCT programmes. This is in line with a study conducted by Theuring et al (2009), where it was found that increased education and knowledge on the importance of ANC and PMTCT services, through sensitisation, will encourage male participation in PMTCT.

5.3 FACTORS THAT COULD INFLUENCE MALE PARTICIPATION IN PMTCT

5.3.1 Socio-Cultural factors

In this study, socio-cultural beliefs were not perceived as a barrier towards male involvement in PMTCT. The majority (n=78; 98%) of the male survey respondents were of the opinion that women can do an HIV test without seeking for "approval" from the male partner. This suggested that the influence of hierarchy and power between men and women did not appear to permeate numerous aspects of decision making. For example, whilst it is considered that man is the head of the house and the final decision maker, in the African society (Nyirenda, 2015), the results from this study shows that women could still initiate the discussion about the possibility of doing an HIV test. The results further reveal that it was not taboo to discuss HIV testing as a couple. On the contrary, couple HIV testing was instead used as a motivating factor for males to also have an

opportunity of knowing their HIV status and ultimately support each other in the uptake of interventions. In Uganda, Byamugisha et al., (2010) also found that male participation in the ANC of their partners together with couple counselling and testing for HIV, increased the use of interventions for HIV prevention. However, these findings were in contrast with the findings by Ditekemena et al., (2012) and Morfaw et al., (2013). In their studies, HIV testing was considered as a limiting factor for men to get involved in ANC/PMTCT activities. The reasons given are reflective of inadequate knowledge of HIV testing.

It was also interesting to note that male survey respondents were not in agreement with perceptions that men who accompany their female partners to ANC are jealous and that it was considered shameful for the men to attend ANC clinics with their partners. However, qualitative findings revealed some conflicting views of how socio-cultural factors deterred male involvement as PMTCT/or ANC was still perceived as the duty of women and not men. Byamugisha et al., (2012) in Uganda had similar findings in terms of cultural factors affecting the involvement of males in PMTCT. Men had negative opinions towards the support of women during ANC services.

The quantitative findings from this study are therefore in contrast to findings from similar studies, for example Morfaw et al., (2013) and Osoti et al., (2014) who found that men who escorted their partner to ANC were seen as being jealous, over protective and lacking confidence. The study done by Peltzer et al., (2011) also suggested that men's position as the household head was undermined if they were expected to escort their partner for ANC, as it is considered to be a "woman's clinic program", leading them to decline to attend ANC and PMTCT with their partners.

5.3.2 Programmatic factors

With increased coverage in terms of PMTCT in Zambia, there has been significant changes in a way the HCWs view male involvement. The findings revealed that men who accompany their female partner for ANC/PMTCT do not have a problem in interacting with female providers during

ANC. The majority (96.3%) of the respondents were ready to be attended to by the female health care workers. Furthermore, all the male participants disagreed with the statement that HCWs do not like seeing men when providing PMTCT". This is contrary to the findings by Burke et al, (2004) in Tanzania. The findings from his study revealed that that men preferred to receive information from their fellow men rather than from women. The findings also revealed that the timing of ANC activities conflicted with other economic activities that men were involved in and as a result, they prioritized other activities rather than accompanying their partner to ANC. Qualitative findings from the key informant interviews also revealed that most men were busy with their work schedules during the week. This was aggravated by the fact that Kasama urban clinic had only two days dedicated to ANC/PMTCT activities in a week and they were not flexible enough to accommodate those who were busy with their work schedules. Because of the limited time, the majority of the male survey respondents (85%) were of the view that ANC should be open during weekends so as to accommodate some men with busy schedules during the week. These findings were consistent with the findings by Tshibumbu (2006), in Zambia where approximately half of the interviewed respondents felt that it was necessary to open have ANC during weekends.

Limited number of days dedicated to ANC in a week coupled with human resource constraints was also perceived as the one of the contributing factors resulting into longer queues. Longer queues resulted in longer waiting times and this also discouraged some men from attending ANC. Similar findings were noted by Morfaw et al., (2013) and Kwambai et al., (2014) in their studies where long waiting times was identified as a deterrent to male partner participation in PMTCT/ANC. Being employed was viewed as one of the barriers towards male involvement in PMTCT.

6 RECOMMENDATIONS

Based on the findings from this study, it is recommended that:

- There is need to consider increasing the number of days during which ANC services are provided. This will not only accommodate men with tight schedules during the week but also reduce the long queues of people. This will equally reduce the waiting period that pregnant women together with their partner spend at ANC clinics.
- Adequate human resource is pivotal in the successful provision of health services and also strengthen the health care system. There is need for the MoH to consider improving on staffing level of human resource in health facilities as this will equally reduce on the time spent at the clinic. This will eventually encourage male counterparts to accompany their partners.
- According to the findings of this study, the majority of the respondents were of the view that couple counselling is encouraged to remove the fears of knowing the HIV status individually as a couple. Increased male involvement and couples' joint HIV counselling/testing during antenatal care (ANC) seem crucial for improving PMTCT outcomes.
- There is need to provide more information about PMTCT and the benefits of male involvement to male partners. Only when one knows the benefit will make a wiser decision, in this case support the partner
- To further encourage more men to accompany their partners, women who attend ANC with their partners should be given preference and attended to first. This means that they would not have to wait too long at the health centre to receive the service

To explore further the in depth factors that influence male participation in ANC, it is recommended that further qualitative research is undertaken.

7 CONCLUSION

This study aimed at establishing factors associated with male participation in PMTCT in Kasama at Kasama urban clinic. Whilst ANC/PMTCT is considered as key component that represents a window of opportunity for information sharing, knowing each other's serostatus and as a gateway to both prevention and care, this study revealed that male were willing to be involved in PMTCT. However, this calls for continued sensitisation on the importance of male partner involvement as well as its benefits in PMTCT programmes.

Various factors encouraging male partner involvement were identified. This included knowledge and awareness of PMTCT programmes, health systems and socio cultural factors. Men believed that it was important for the couple to know one's serostatus as this was perceived as a motivating force for HIV positive and negative people alike to adopt safer sexual behaviour. This was considered that seropositive people will prevent their sexual partners from getting infected and those who test seronegative will need to remain negative. All the men interviewed were aware what PMTCT services are key to preventive actions exist. However, whilst it is considered that men play critical roles in women's ability to seek health care, some men still felt that PMTCT was the duty of women and not men. Men's duty was perceived as that of supporting the family financially and not wasting time accompanying their partner for ANC. The study therefore revealed that a combination of knowledge gap and also some of the socio cultural related factors affected the participation of males in ANC/PMTCT programmes.

Men identified a number of factors that discouraged them from participating in ANC despite some of the positive male participation results. Other factors that discouraged men from participating in ANC was their busy work schedules that prevented them from accompanying their partners as they were busy with other income related activities during the time they were expected to escort their partners to ANC. The study also identified that the specified number of days in which they provide ANC was limited and not accommodative to those who were in employment with tight schedules.

As a way of responding to some of the barriers identified, and also ensure that men participate in ANC/PMTCT programmes, recommendations were proposed. One of the key recommendations was to increase or spread the number of days dedicated to ANC service provision across the week unlike the current situation where only two days are dedicated to ANC service provision. The flexibility in the provision of ANC was perceived as an opportunity to improve on male involvement. Men also felt that they would be encouraged to attend ANC if women who attend ANC with their partners were prioritised as this would result in men not having to worry about spending the whole day at ANC at the expense of other income generating activities. It was also recommended that improving on staffing level of human resource in health facilities will reduce on the time spent at the clinic.

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9 APPENDICES

ANNEXURE A: STRUCTURED SURVEY QUESTIONNAIRE FOR MEN

Perception of male involvement in PMTCT of HIV

Questionnaire No._____

SECTION A. DEMOGRAPHIC AND BACKGROUND INFORMATION

General instructions to the enumerator: Circle the appropriate number/code reflecting the respondent's option or write the answer in the space provided

A1	How old are you now? (indicate age in completed years)	_____Years
A2	What is your highest educational level attained?	1. None 2. Primary level 3. Secondary level 4. Tertiary level
A3	What is your usual occupation? [PROBE: What kind of work do you do most of the time?]	1. Farmer, forestry, fishing 2. Soldier, policeman 3. Driver (bus, taxi, truck) 4. Businessman 5. Manual worker 6. Sales, service worker 7. Clerical 8. Professional, manager

		9. Student 10. None 11. Other Specify_____
A4	What tribe are you?	1. Bemba 2. Tonga 3. Soli 4. Other (specify) _____
A5	What religion do you belong to?	1. Catholic 2. Adventist 3. Protestant 4. Anglican 5. Pentecostal 6. New apostolic 7. Other (Specify)_____
A6	How long have you been living with your current wife/partner	_____Years _____Months 88.Don't live together
A7	How would you characterise your current partner?	1. Wife 2. Regular or steady girlfriend/ 3. Casual girlfriend 4. Other (specify) _____

SECTION B. KNOWLEDGE AND AWARENESS OF MOTHER-TO-CHILD TRANSMISSION OF HIV

General instructions to the enumerator: Circle the appropriate number/code reflecting the respondent's option or write the answer in the space provided

B1	A mother who is HIV positive can transmit HIV to her child during pregnancy	1. True 2. False 3. Don't know/Not sure
B2	A mother who is HIV positive can transmit HIV to her child through breast milk	1. True 2. False Don't know/Not sure
B3	Giving ARVs to both the mother and child reduces the chances of transmission of HIV from the mother-to-child	1. True 2. False 3. Don't know/Not sure
B4	Delivering the child by Caesarian section can reduce the chances of transmitting HIV from the mother-to-child	1. True 2. False 3. Don't know/Not sure
B5	Not breastfeeding reduces the chance of transmission of HIV from mother-to-child	1. True 2. False 3. Don't know/not sure

B6	Couples can use condoms to reduce chances of mother-to-child transmission	1. True 2. False 4. Don't know/Not sure
B7	Are pregnant women counseled and tested for HIV during ANC clinics?	1. Yes 2. No 3. I don't know/Not sure
B8	Was your partner tested for HIV during her ANC visits for this current pregnancy	1. Yes 2. No 3. I don't know/Not sure

SECTION C: SOCIO CULTURAL FACTORS MALE INVOLVEMENT IN PMTCT OF HIV

General instructions to the enumerator: Circle the appropriate number/code reflecting the respondent's option or write the answer in the space provided.

		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
C1	A pregnant woman can be tested for HIV without the permission of her husband/partner.	1	2	3	4	5
C2	Men should accompany their pregnant partners for PMTCT	1	2	3	4	5
C3	Men who accompany their pregnant partners for PMTCT are weak	1	2	3	4	5
C4	It is a taboo for men to discuss HIV testing with their pregnant partner	1	2	3	4	5

C5	Men and women should undergo HIV testing at the same time at when going for PMTCT	1	2	3	4	5
C6	ANC clinics offering PMTCT are for women and children only	1	2	3	4	5
C7	A positive HIV test in a pregnant woman shows that she has been unfaithful to her partner	1	2	3	4	5
C8	It is shameful for a man to attend ANC clinics for PMTCT with their partners	1	2	3	4	5
C9	Men who go for PMTCT with their partners are jealous.	1	2	3	4	5
C10	It is inconceivable for a woman to tell a man what to do, and worse still for him to consent to what she says	1	2	3	4	5
C11	Men who attend ANC clinics for PMTCT are over-protective of their wives.	1	2	3	4	5
C12	Are you aware of any cultural beliefs that discourage men from attending the PMTCT clinic with their partners?				1. Yes 2. No	
C13	Please explain					

SECTION D. PROGRAMMATIC FACTORS

General instructions to the enumerator: Circle the appropriate number/code reflecting the respondent's option or write the answer in the space provided

		SA	A	U	D	SD
D1	At ANC clinics offering PMTCT, men should be attended to by male health workers only	1	2	3	4	5
D2	Health workers do not like to see men when providing PMTCT services	1	2	3	4	5
D3	PMTCT is meant for women and children only	1	2	3	4	5

D4	ANC clinics offering PMTCT should be open during weekends and evening so that men can access them	1	2	3	4	5
D5	Staff providing PMTCT services do not keep the HIV status/results of men and women confidential	1	2	3	4	5
D6	You can only receive PMTCT if invited by health worker to come	1	2	3	4	5

SECTION E. ACCESSIBILITY TO PMTCT CLINICS		
E1	How far is the ANC clinic offering PMTCT services from your home?	1. Less than 1km 2. Between 1km – 5km 3. Between 6km – 10km 4. More than 10km 5. Don't know/Not sure
E2	How long does it take you to travel to this clinic?	1. Less than 15 mins 2. One 1hr 15 mins 3. About 2hrs 4. More than 2hrs 5. Don't know/Not sure
E3	Do you know the times that the clinic is open?	1. Yes 2. No===➔F1

E4	Do these times suit you?	1. Yes 2. No
E5	If no, why not?	_____ _____ _____ _____

SECTION F.	LEVEL OF INVOLVEMENT IN PMTCT

F1	Have you discussed HIV counselling and testing with your partner during this current pregnancy?	1. Yes 2. No 1. Don't know/Not sure
F2	Will you discuss HIV counselling and testing with your partner the next time she is pregnant?	1. Yes 2. No 3. Don't know/Not sure
F3	Was your partner counselled and tested for HIV during her current pregnancy?	2. Yes 3. No 3. Don't know/Not sure

F4	Have you ever been counseled and tested for HIV together with your partner at ANC clinic?	1. Yes 2. No
F5	If no, will you go for counselling and testing for HIV together with your partner?	1. Yes 2. No
F6	If your partner was HIV positive, and you were advised not to breast feed, would you buy formula milk for the baby?	1. Yes 2. No
F7	If your partner was HIV positive, would you encourage her to take medication (ARVs)?	1. Yes 2. No
F8	What are the factors that prevent men from attending ANC clinics offering PMTCT with their partners?	_____ _____ _____ _____ _____ _____
F9	What are the factors that encourage men to attend ANC clinics offering PMTCT with their partners?	_____ _____ _____ _____ _____ _____ _____

ANNEXURE B. SEMI-STRUCTURED INTERVIEWS WITH WOMEN

Interview guide for ANC clients who are not accompanied by their partners

1. Does your partner live with you?
2. If no, where does he live (probe to see if he lives in the same town as the respondent).
3. Would you like your partner to accompany you to the ANC clinic?
4. Please explain.
5. Do you think that men should accompany their partners to ANC clinics offering PMTCT?
6. Please explain.
7. What encourages men to accompany their partners for PMTCT?
8. What discourages men from accompanying their partners for PMTCT?

ANNEXURE C: SEMI-STRUCTURED KEY INFORMANT INTERVIEW GUIDE

Interview Guide for key informants

(ANC and PMTCT service providers)

I. What is your position at this facility?
II. How long have you been providing PMTCT services at this facility?
III. In your opinion, is it beneficial for men to be involved in PMTCT services?
IV. If yes, please explain the benefits of male involvement in PMTCT.
V. How would you describe male involvement in PMTCT programmes at this facility?
VI. What factors encourage men to attend PMTCT services with their partners?
VII. What factors discourage men from attending PMTCT services with their partners?
VIII. What recommendations could you make to improve male participation in PMTCT services?

Thank you for participating in this interview.

ANNEXURE D: MALE PARTICIPANT INTERVIEW CONSENT FORM

UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA
UFS UV

HUMANITIES
GEESTESWETENSKAPPE
UFS·UV

Date: _____

Dear Participant,

MALE PARTICIPANT INTERVIEW CONSENT FORM

My name is Webby Kanjipite. I am a student studying for a Masters in Development Studies at the University of the Free State in South Africa. I would like to invite you to voluntarily take part in a research project. I am carrying out a study on perceptions of male involvement in the prevention of mother-to-child transmission (PMTCT) of HIV services in Kasama District. This study will provide an opportunity to obtain information on the factors that hinder or promote male involvement in PMTCT.

You have been selected to participate in this study as your partner is accessing antenatal care services at Kasama urban clinic. To be in this study you must give your informed consent. Your participation in this research is entirely voluntary. It is your choice whether to participate or not. Whether you choose to participate or not, all the services you receive at this clinic will continue and nothing will change. No harm will come to you, your partner or unborn child as a result of your participation or non-participation in this study. If you decide to take part, you can change your mind later on and withdraw from the study.

If you take part in this study, you will be given a copy of this consent form. The interview will take approximately 20 minutes. You will be interviewed in a language of your choice, and you

will be asked questions about the possible factors/or barriers that affect male partner participation in PMTCT of HIV.

You will receive no remuneration for taking part in this study nor will you have to pay any costs. Although there are no personal benefits if you take part in this study, the information that you provide during this interview will help us to understand why males do/do not become involved in PMTCT services and to make recommendations to Kasama urban clinic and the Ministry of Health that could possibly help to improve this.

All information that you provide during the interview will be kept secret. Your name will not appear on the questionnaire. This consent form (with your name and signature) will be kept separate from the questionnaire. Your answers to these questions will be combined with answers from the other respondents so that no one will know that the answers you give me today belong to you. The results of this study may be presented at meetings or in publications. Your identity will not be given out during those presentations.

The interview will take place in a private venue of your choice. If you need more information about this study, you can contact Mr. Webby Kanjipite at 0977470751

If you agree to take part please sign the consent form below.

I _____

[FULL NAME OF RESPONDENT IN BLOCK LETTERS]

- Read and understood the above information
- Was given the opportunity to discuss the information and ask questions
- Volunteer to take part in this study, and
- Confirm that I have received a copy of this consent form

Signature

Date

ANNEXURE E: FEMALE PARTICIPANT INTERVIEW CONSENT FORM

Date: _____

Dear Participant,

FEMALE PARTICIPANT INTERVIEW CONSENT FORM

My name is Webby Kanjipite. I am a student studying for a Masters in Development Studies at the University of the Free State in South Africa. I would like to invite you to voluntarily take part in a research project. I am carrying out a study on perceptions of male involvement in the prevention of mother-to-child transmission (PMTCT) of HIV services in Kasama District. This study will provide an opportunity to obtain information on the factors that hinder or promote male involvement in PMTCT.

You have been selected to participate in this study to give your ideas about male involvement in PMTCT. To be in this study you must give your informed consent. Your participation in this research is entirely voluntary. It is your choice whether to participate or not. Whether you choose to participate or not, all the services you receive at this clinic will continue and nothing will change. No harm will come to you, your partner or unborn child as a result of your participation or non-participation in this study. If you decide to take part, you can change your mind later on and withdraw from the study.

If you take part in this study, you will be given a copy of this consent form. The interview will take approximately 15 minutes. You will be interviewed in a language of your choice, and you will be asked questions about the possible factors/or barriers that affect male participation in PMTCT of HIV.

You will receive no remuneration for taking part in this study nor will you have to pay any costs. Although there are no personal benefits if you take part in this study, the information that you provide during this interview will help us to understand why males do/do not become involved in PMTCT services and to make recommendations to Kasama urban clinic and the Ministry of Health that could possibly help to improve this.

All information that you provide during the interview will be kept secret. Your name will not appear on the questionnaire. This consent form (with your name and signature) will be kept separate from the questionnaire. Your answers to these questions will be combined with answers from the other respondents so that no one will know that the answers you give me today belong to you. The results of this study may be presented at meetings or in publications. Your identity will not be given out during those presentations.

The interview will take place in a private venue of your choice. If you need more information about this study, you can contact Mr. Webby Kanjipite at 0977470751

If you agree to take part please sign the consent form below.

I _____

[FULL NAME OF RESPONDENT IN BLOCK LETTERS]

- Read and understood the above information
- Was given the opportunity to discuss the information and ask questions
- Volunteer to take part in this study, and

- Confirm that I have received a copy of this consent form

Signature

Date

ANNEXURE F: PROVIDER INTERVIEW CONSENT FORM

Date: _____

Dear Participant,

PROVIDER INTERVIEW CONSENT FORM

My name is Webby Kanjipite. I am a student studying for a Masters in Development Studies at the University of the Free State in South Africa. I would like to invite you to voluntarily take part in a research project. I am carrying out a study on perceptions of male involvement in the prevention of mother-to-child transmission (PMTCT) of HIV services in Kasama District. This study will provide an opportunity to obtain information on the factors that hinder or promote male involvement in PMTCT.

You have been selected to participate in this study as you are a provider of PMTCT services at Kasama urban clinic. If you agree to participate in this interview, you must give your informed consent. Your participation in this research is entirely voluntary. It is your choice whether to participate or not. No harm will come to you as a result of your participation or non-participation in this study. If you decide to take part, you can change your mind later on and withdraw from the study.

If you take part in this study, you will be given a copy of this consent form. The interview will take approximately 15 minutes. You will be interviewed in a language of your choice, and you will be asked questions about the possible factors/or barriers that affect male partner participation in PMTCT of HIV.

You will receive no remuneration for taking part in this study nor will you have to pay any costs. Although there are no personal benefits if you take part in this study, the information that you provide during this interview will help us to understand why males do/do not become involved in PMTCT services and to make recommendations to Kasama urban clinic and the Ministry of Health that could possibly help to improve this.

All information that you provide during the interview will be kept secret. Your name will not appear on the questionnaire. This consent form (with your name and signature) will be kept separate from the questionnaire. Your answers to these questions will be combined with answers from the other respondents so that no one will know that the answers you give me today belong to you. The results of this study may be presented at meetings or in publications. Your identity will not be given out during those presentations.

The interview will take place in a private venue of your choice. If you need more information about this study, you can contact Mr. Webby Kanjipite at 0977470751

If you agree to take part please sign the consent form below.

I _____

[FULL NAME OF RESPONDENT IN BLOCK LETTERS]

- Read and understood the above information
- Was given the opportunity to discuss the information and ask questions
- Volunteer to take part in this study, and

- Confirm that I have received a copy of this consent form

Signature

Date

ANNEXURE G: ETHICAL CLEARANCE FROM UNIVERSITY OF FREE STATE

UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA

UFS·UV

15 August 2014

Mr W. Kanjipite
Centre for Development Support
UFS

Ethical Clearance Application: Perceptions about male involvement in the Prevention of Mother-to-Child Transmission (PMTCT) of HIV Programme in Kasama district, Zambia

Dear Mr Kanjipite

With reference to your application for ethical clearance with the Faculty of the Humanities, I am pleased to inform you on behalf of the Ethics Board of the faculty that you have been granted ethical clearance for your research with the following stipulations:

1. No box is ticked to indicate that vulnerable populations will be involved - therefore no mitigation is put in place
2. Many of the respondents will be HIV-positive and will be poor. The applicant has to take this into consideration when reflecting on potential ethical issues.
3. No letter authorising this research in public health care clinics was included.
4. Translations are still in process - submit documentation as soon as it is available.

Your ethical clearance number, to be used in all correspondence, is:

UFS-HUM-2014-52

This ethical clearance number is valid for research conducted for one year from issuance. Should you require more time to complete this research, please apply for an extension in writing.

We request that any changes that may take place during the course of your research project be submitted in writing to the ethics office to ensure we are kept up to date with your progress and any ethical implications that may arise.

Thank you for submitting this proposal for ethical clearance and we wish you every success with your research.

Yours sincerely,

Katinka de Wet
Research Ethics Committee (Faculty of the Humanities)

Copy: Mrs Charné Vercueil (Research Co-ordinator, Faculty of the Humanities)

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Ofisa ya Dine

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E boukeshs@ufs.ac.za

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ANNEXURE H: PERMISSION FROM THE PROVINCIAL MEDICAL OIFFICE (PMO)MTO CONDUCT THE STUDY AT KASAMA URBAN CLINIC

C/O Plot 3362.

Meanwood, Chamba Valley

Lusaka

No objection. Note that you need to seek MoH clearance

10th December 2014

The Provincial Medical Office

P.O. Box 410026.

Kasama.

Dear Sir/Madam,

Ref: Permission to carry out academic study at Kasama Urban Clinic – Student, Webby Kanjinite.

Reference is made to the above subject.

I am a Zambian student studying a Master's Degree program in Development Study at University of Free State in South Africa.

I wish to request for your approval to collect data from Kasama Urban clinic as per attached data collection tools, consent forms and ethical clearance from University of Free State.

Your positive response will highly be appreciated.

Yours Faithfully,

Kanjinite Webby