# MALE INVOLVEMENT IN VOLUNTARY COUNSELING AND TESTING IN ANTENATAL CLINICS FOR PREVENTION OF MOTHER TO CHILD TRANSMISSION OF HIV AND AIDS IN IRINGA MUNICIPALITY.

By

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A Dissertation Submitted in Partial Fulfilment of the Requirements for the Degree of Master of Public Health of the Muhimbili University of Health and Allied Sciences

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## CERTIFICATION

The undersigned certifies that has read and hereby recommends for acceptance by the Muhimbili University of Health and Allied Sciences a dissertation entitled **Male Involvement in Voluntary Counseling and Testing in Antenatal Clinics for Prevention of Mother to Child Transmission of HIV and AIDS In Iringa Municipality,** in partial fulfilment of the requirements for the degree of Master of Public Health of the Muhimbili University of Health and Allied Sciences.

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Date: 26th OCTOBER 2007

## DECLARATION

## AND

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## DEDICATION

This dissertation is dedicated to Salome my wife, my son James Gibeshi and my daughter Joyce Milembe. I say thank you so much for your prayers and tolerance my long absence from home.

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## ABSTRACT

Studies and reports have shown that there is low male involvement in Voluntary Counseling and Testing (VCT) of HIV for PMTCT in antenatal clinics; this has been compromising the success of PMTCT programme.

A cross sectional study using both quantitative and qualitative design was conducted in Iringa Municipality to determine factors associated with male involvement in voluntary counseling and testing, a component of Prevention of Mother to Child Transmission (PMTCT) of HIV and AIDS in antenatal clinics.

This study examined the knowledge of MTCT, male willingness to test HIV with their partners at Antenatal Clinics (ANC), perceived benefits and barriers of testing if partner is pregnant, willingness to have children if test positive for HIV and solicited males suggestion on how to improve their involvement in PMTCT.

A multistage cluster sampling method was used to select two health facilities among four providing PMTCT services. The streets in the ward in which the selected health facilities were located served as catchments areas. A total of 253 males who are married or cohabiting were interviewed in a face to face structured questionnaire and 16 among those who participated in quantitative design were purposefully selected to participate in the in-depth interviews.

Results were, 126 male from Kihesa and 127 from Ruaha wards agreed to participate in the study. General knowledge on Mother to Child Transmission (MTCT) was 60.5%. Those with high level of education had high level of knowledge ($p<0.001$). Only 39.5% were aware that ARV could prevent HIV transmission from Mother to Child.

Majority of male 90.1% were willing to accompany partners to ANC, and 87.7% were willing to take HIV test with partners if pregnant. Testing of HIV for PMTCT was perceived to be beneficial by the majority (93.3%). Many barriers were perceived to influence low male involvements in VCT in ANC for PMTCT of HIV and AIDS. Frequently mentioned barriers were lack of knowledge and awareness that male should attend ANC, and its not culturally accepted for a man to attend ANC, a place regarded as women clinic, ANC environment are poorly designed to accommodate couple, Health workers at ANC not keeping patients/clients secrets and men being not involved in their partners affairs if they happen to attend ANC were also cited as barriers.

Majority of males were not willing to have children if tested positive for HIV. Only 6.3% of the respondents were willing to have babies regardless of the positive HIV status. The reasons cited for this willingness were the need to have more children and the availability of PMTCT services.

Health promotion and health education on PMTCT, strengthening and implementing a policy or possible law enforcements were frequently cited suggestions to make male involved in ANC for PMTCT, redesigning of antenatal cards to have a provision for indicating male attendances with their partners at least twice during antenatal period and restructuring of ANC to attract males to attend as couple for VCT.

In order for PMTCT of HIV programme to succeed, there is a need to make sure that males are part of clients of ANC by giving them health education, revising the national health policy on PMTCT and restructuring our antenatal clinics environment to attract males.

## DISSEMINATION OF RESEARCH FINDINGS

The following bodies will be provided with a copy of this study; Muhimbili University of Health and Allies Sciences, Ministry of Health and Social Welfare, and Municipal Director's office of Iringa Municipality.

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## ABBREVIATIONS/ACRONYMYS

| | |
|---|---|
| AIDS | Acquired Immune Deficiency Syndrome |
| ANC | Antenatal Clinics |
| ARV | Anti Retro Viral |
| AZT | Zidovudine |
| CDC | Center for Disease Control |
| DHS | Demographic Health Survey |
| DMO | District Medical Officer |
| HIV | Human Immunodeficiency Virus |
| IMCI | Integrated Management of Childhood Illness |
| IRIN | Integrated regional Information Network |
| MCHC | Mother and Child Health Clinic |
| MoH&SW | Ministry of Health and Social Welfare |
| MPH | Master of Public health |
| MTCT | Mother To Child Transmission |
| MUHAS | Muhimbili University of Health and Allied Sciences |
| NACP | National Aids Control Programme |
| PMTCT | Prevention of Mother to Child Transmission |
| RCHC | Reproductive and Child Health |
| RMO | Regional Medical Officer |
| USAID | United States Agency for International Development |
| VCT | Voluntary Counseling and Testing |

# CHAPTER ONE: INTRODUCTION

## 1.1 BACKGROUND

Since the first cases of acquired immunodeficiency syndrome (AIDS) were reported in 1981, infection with human immunodeficiency virus (HIV) has grown to pandemic disproportion, resulting in an estimated 65 million infections and 25 million deaths worldwide.

During 2005 alone, an estimated 2.8 million persons died from AIDS, 4.1 million were newly infected with HIV, and 38.6 million were living with HIV. Approximately 10% of the world population lives in sub-Saharan Africa, but the region is home to approximately 64% of the world population living with HIV (CDC, **2006).**

HIV is spread by sexual contact with an infected person, by sharing needles and/or syringes (primarily for drug injection) with someone who is infected, or, less commonly (and now very rarely in countries where blood is screened for HIV antibodies), through transfusions of infected blood or blood clotting factors and through mother to child transmission.

A total of 16,430 AIDS cases were reported by the NACP from the 21 regions of Tanzania in year 2004. This resulted into a cumulative total of 192,532 reported cases since 1983 when the first 3 cases were identified in the country.

The NACP Tanzania report estimated about 5% (540) of the AIDS cases reported in 2004 were below 15 years of age and most of these were likely to have acquired infection through mother to child transmission. The mode of HIV transmission has remained mainly heterosexual constituting up to 78.1% of all reported AIDS cases during 2004. Mother to child transmission constituted 4.6% and 17.3% through other means of Transmission (HIV/AIDS/STI Surveillance, 2004).

Mother to Child Transmission (MTCT) of HIV in Tanzania has set a remarkable and deleterious impact on child survival. Using an estimated HIV prevalence rate of 12% for antenatal women and a total of vertical transmission rate of approximately 40%, it was estimated that 72,000 babies would become infected with HIV from their mothers (approximately 25,000 through breastfeeding) per year (MoH, 2004).

Therefore MTCT accounts for the additional 64,800 child deaths. Adding 64,800 to the existing 150,000-child death from common childhood infections represents a 43% increase in infant mortality. This is a big set back to the improved infant survival enjoyed by the country in the last two decades through universal immunization and improved Integrated Management of Childhood Illnesses (IMCI).

Since the introduction of PMTCT of HIV in antenatal clinics in Tanzania, there has been a high acceptance rate for testing among pregnant women (85%) However, it was

reported low male partners involvement and low community participation in testing for HIV (MoH, 2004).

In the last 10 years there has been an increase of global recognition of importance of male involvement in sexual and reproductive health. HIV/AIDS pandemic reinforces the urgency of encouraging men to take fully responsibilities for their own sexual and reproductive health, their partners and families in general.

There have been worsening rate of HIV infection among children due to MTCT; the Ministry of Health and Social Welfare Tanzania decided to scale up PMTCT services up to the lower health facilities at district level in the efforts to control HIV/AIDS. Effective PMTCT of HIV in antenatal clinics requires incorporating and creating conducive environment to involve male partners.

This study found out how and why males are less involved in VCT of HIV for Prevention of Mother to Child Transmission with a broader objective of determining factors associated with males' involvement in Voluntary Counseling and Testing of HIV a component of PMTCT services in antenatal clinics. Males married or cohabiting were interviewed in order to get their views for their low involvements in PMTCT through structured and semi structured interviews. The study was community based and males married or cohabiting residing within Iringa Municipal council catchments area where the PMTCT services were introduced in May 2004 was be the target population.

## 1.2 PROBLEM STATEMENT

HIV AIDS remains a public health challenge in the world particularly in Sub Saharan Africa. Several interventions are undertaken to fight HIV/AIDS in Tanzania focusing on the pattern of the HIV/AIDS.

Mother to child transmission of HIV/AIDS remains the only vertical mode of transmission to most of children under 15 years of age and contributing to high children morbidity and mortality rate in affected countries like Tanzania (HIV/AIDS surveillance, 2004).

Prevention of MTCT of HIV ranges from family level for a couple making VCT before conception and during pregnancy to community level by providing social support and supportive environments to enable people to take preventive measures against HIV transmission. Social-cultural and economic factors play an important role. Infection can occur in utero (10%) during delivery (20%) and during breastfeeding (10%).

Among the greatest challenges facing providers of preventing mother-to-child transmission (PMTCT) services is reaching sexual partners of HIV-positive women and persuading them to receive HIV counseling and testing. (USAID, 2005).

Dean Peacock, (2003) reported that, Prevention of mother to child transmission requires that women utilize a range of reproductive health care services including anti-retroviral and specialized deliveries, and that they either exclusively breastfeed or consistently use formula.

All of these are difficult for women to do when male partners either do not know their positive status, are unwilling to commit the necessary resources for clinic visits or oppose exclusive formula feeding on cultural grounds. Furthermore, in some cases, even when women know their HIV status and may not want to have a child to prevent MTCT, men often control decisions about contraception and family planning and may disregard women's choices.

Tanzania currently is providing free Anti Retroviral Therapy to all HIV infected pregnant women who are voluntarily counseled and tested for HIV through its RCH antenatal clinics. Uptake of services for HIV/AIDS testing in antenatal clinics for effective PMTC has been reported to be high among women attending antenatal clinics and it was estimated to be 85% (MoH, 2004).

In Iringa region about 86% of counseled pregnant women attending antenatal services agree to test for HIV (Iringa RMO, 2006).

However, it has been reported that, there has been low male partners involvement in testing for HIV (Guidelines for PMTCT, 2004).

Pregnant women tested for HIV in antenatal clinics have been requested to bring their partners for counseling and testing as per Tanzania National Guideline for PMTCT of HIV, like in other sexually transmitted illness where partners are requested to come and receive treatment both in order to prevent further transmission and encourage behaviour change.

Male response in PMTCT of HIV services in antenatal clinics has been unpromising. For example only 9 pregnant women out of 1000 attended for VCT in antenatal clinic

managed to come with their male partners for HIV test in 2006 at Mafinga Hospital (DMO, 2006)

Several factors could be associated with the involvement of males in PMTCT services. These could be; lack of knowledge on basic concepts of PMTCT, cultural norms and beliefs, stigma and fear of isolation or discrimination, non disclosure from their spouses (female partners) health system mostly targeting women leaving behind men; lack of men-friendly environment at antenatal clinics and attitudinal factors from health service provider towards male participation at antenatal clinics.

Men have been also identified as barriers to women's full and successful participation in programmes designed to prevent mother to child transmission of HIV. Women, who undergo tests for HIV without involving their male partners, have reported violence, on disclosure of their HIV sero status. Divorce and discrimination have also been reported in some cases. (Kilewo et al, 2001).

Effective PMTCT needs involvements of male partners in voluntary counseling and testing for HIV as a couple for social support, care of the baby after delivery in terms of breastfeeding, behaviour change among partners and adherence to antiretroviral for those already infected (Kiarie et al, 2003).

Little is known in Tanzania about factors associated with low involvement of male partners in antenatal clinics for testing of HIV in antenatal clinics for effective PMTCT

This study sought to investigate the factors associated with males' involvement in Voluntary Counseling and Testing for HIV a component of PMTCT, and suggest ways of improving/increasing their involvement.

## 1.3 RATIONALE

Involvement of males in antenatal services has continued to be a problem as it has been before during the era of Mother and Child Health (MCH) clinics. This has necessitated the Ministry of Health and Social Welfare Tanzania to make modification of those clinics to favour males' participation and is now called Reproductive and Child Health Clinics (RCH) as the issue of reproduction involves both parents to encourage males' involvement.

The HIV infection rate among pregnant women is increasing and ultimately an increase of infants who will be infected and it is believed that the uptake of PMTCT intervention would improve with the involvement of male partners.

The reasons for low male partners involvement in VCT of HIV in antenatal clinics needs to be explored. The issue of discordant pairs exists and if both partners are infected they could take preventive measures to avoid acquiring new infections and their own health care, aiming at reducing morbidity and mortality.

The findings of this study will be used as a base for recommendations on how to improve the extent of male partner's involvement in PMTCT programme. It partly

answers why and how there is poor involvement of males in antenatal clinics for Voluntary Counseling and Testing of HIV in PMTCT services.

The findings of this study will also add new insight to the already existing knowledge on the involvement of male in reproductive health.

Lastly, the results of this study will partly help at national level to start a promotive strategy that will enhance the uptake of PMTCT services for men and women leading and the effectiveness of HIV prevention in the country.

## 1.4. OBJECTIVES

### 1.4.1 Broad objective

To determine factors associated with male's involvement in Voluntary Counseling and Testing of HIV a component of Prevention of Mother to Child Transmission services in antenatal clinics.

### 1.4.2 Specific Objectives

1. To assess knowledge on MTC transmission of HIV among males
2. To determine the proportion of males willing to test for HIV with their pregnant partners for PMTCT of HIV.
3. To assess the perceived benefits of testing for HIV in antenatal clinics for PMTC transmission of HIV among males
4. To assess the perceived barriers of testing for HIV in antenatal clinics for PMTC transmission of HIV among males
5. To determine the proportions of males willing to have children if they were HIV positive.
6. To solicit males suggestions on how to improve male participation in VCT for HIV with their partners in Antenatal clinics

# CHAPTER TWO: LITERATURE REVIEW

Success of prevention of HIV transmission from mother to child requires involvement of male partners. Males have to be involved right from the beginning of intervention and this is during antenatal clinics.

A study done in Kenya (Kiarie et al, 2003) has shown that, compliance with the Thai-CDC (zidovudine) and HIVNET-012 (Nevirapine) regimens among HIV infected pregnant women was low. Male partner involvement, support and education on perinatal HIV-1 prevention could improve compliance and increase the number of infants protected from HIV-1 infection

## 2.1 Knowledge on MTCT of HIV among males

Over 80% of Ugandan had general knowledge of HIV transmission from mother to child (Uganda DHS, 2000-01, and 2004-2005). In 2000/01 considerably fewer respondents knew about MTCT of HIV during pregnancy, delivery and through breastfeeding, 34% for women and 28% for men. In 2004-05 survey, 51% of men knew that ARV can prevent MTCT of HIV and those who knew avoiding breastfeeding and use alternative feeding were 55%. Only 35% knew both.

A study done in Botswana (Dean, 2003), to nearly 600 men in four different regions found that men were in fact quite supportive of their partners. While 77.8% of men

interviewed did report that they would be very unhappy if their partners tested for HIV and took AZT without their knowledge, 75% were likely or most likely to allow their pregnant partners to get HIV test while 72% were willing to go for an HIV test with their pregnant partners and 97% said they would support an HIV infected partners to feed their babies with formula milk.

In Tanzania (DHS, 2004) PMTCT of HIV using ARV and avoiding breast feeding was known to 36% and 74% respectively. Those who knew both were 30% and 91% reported that HIV can be transmitted from mother to child, those who reported that it can be transmitted during pregnancy; delivery and breastfeeding were 79%, 69% and 74% respectively.

A survey done in Indonesia (Indonesia DHS, 2002 and 2003) reported that 53 % of males knew that HIV can be transmitted from mother to child and those who knew that prevention can be by avoiding breastfeeding was 48%. Only 51% knew transmission to occur during pregnancy, 47% during delivery and 48% during breastfeeding. Those who said transmission can occur during delivery; by breast-feeding and during pregnancy were 44%.

In Zambia (Zambia SBS, 2003), males who reported that HIV could be transmitted from Mother to Child were 85%. Those who reported that prophylactic ARV could prevent HIV from mother to child were 18% and avoiding breast-feeding was 78%.

Transmission by of HIV through breast feeding was known by 82 % of males and 75% said transmission can occur during delivery and 91% said during pregnancy.

A study done in Bushenyi District, Rural South Western Uganda (Asiimwe, S et al, 2004) showed that only 35.5% of men aged 15-54 years knew about MTCT and 23.4% among men knew about transmission of HIV through breast milk. 73.6% of men knew about the benefits of having an HIV test, low knowledge particular in males could negatively influence the uptake of mothers on the PMTCT program.

Another study done in Dar es Salaam (Kilewo et al, 2001),
showed that pregnant women do fear to share information with their partners because of fear of stigma and divorce, that only 16.7% (48 of 288) of the enrolled women disclosed their positive HIV serostatus to their sexual partners. However 60% percent (29 of 48) of the informed sex partners agreed to be tested for HIV and 69% (20 of 29) tested HIV sero-positive.

**2.2 Making males involved in PMTCT**

A study done in Kinshasa Congo (Mbuyi et al, 2004) showed that a number of men participating in HIV counseling appointments increased from 13 in the 9 months preceding the new policy, to 122 in the first 9 months following policy implementation ($p<0.001$), and the proportion of participating men agreeing to get tested increased from 85% to 96% at the intervention site ($p<0.001$). However, overall male participation remained low. Even after the policy change, only 2% of all male partners received counseling and testing at the intervention site; less than 1% of male partners received

counseling at the comparison site. The percentage of women agreeing to an HIV test increased from 72% to 99% at the intervention site and from 89% to 92% at the comparison site. The study concluded that, Promoting male involvement in antenatal care of primiparous women increased the numbers of male partners presenting for and accepting VCT. Male participation may also increase women's willingness to undergo HIV testing. A shift in the paradigm of ANC delivery has important implications for the success of PMTCT programs. Strategies should be further developed and evaluated to increase male participation.

Willingness of involving partners among pregnant women may be improved if male are involved right from the beginning of attending antenatal clinic.

A study done in Kenya (Gaillard et al, 2001) showed that after discussing advantages and risks, only a third of the 290 HIV-infected women included in an intervention study to reduce mother-to-child transmission of HIV in Mombasa, Kenya, informed their partners of their results. Despite careful counseling, 10% subsequently experienced violence or disruption of their relationship. To increase the uptake of interventions to reduce perinatal HIV transmission safely, it was recommended the involvement of partners in HIV testing. In addition, the counseling of women has to address methods and skills to deal with violence.

A report from Rwanda (USAID, 2005), reported that, the success of the PMTCT partner involvement initiative can be attributed to three principal activities: 1) a system in which

sexual partners are invited discreetly (via letters from health facility staff) to accompany women to prenatal visits and receive voluntary counseling and testing; 2) the involvement of men in the reproductive health services provided to their spouses, such as prenatal counseling; and 3) a community-provider partnership approach that promotes male partner involvement by challenging attitudes and behaviors of men that compromise their own health as well as the health of women and children.

Partner involvement has grown dramatically as a result of these activities. At Kigoma Health Center at Gitarama Province in Rwanda, the partner-testing rate grew from 10 percent in December, 2002 to 88 percent in September, 2004. In fact, the trend in Kigoma is that, the majority of women's sexual partners now accompany their spouses to the PMTCT counseling sessions without receiving a written invitation letter.

In Gitarama Province, the Byimana Health Center, which only began providing PMTCT services in May 2004, reported that 78 percent of partners were agreed to test by September 2004, up from 53 percent in the first month of the activity. And at Kinihira Health Center in Byumba Province, 57 percent of partners consented to testing by September 2004; only six months after the initiation of PMTCT services and male involvement activities the rate of partner testing in the first month of services was 16 percent.

**2.3 Benefits of male partners involvement in PMTCT programme.**

Studies in Mombasa Kenya also came into recommendation that couple-counseling and partner involvement in MTCT prevention programmes, as only testing women can increase their susceptibility to violence despite careful counseling. Men are often not in favour of having their wives tested, fearing the indirect disclosure of their own infection. However, involvement of the partner might be inevitable, especially in interventions that are perceptible by the household members. In some African pilot projects, the uptake of interventions to reduce MTCT has been hampered by, among other things, women's fear of being tested.

Male partners are main economic controllers of most families and are regarded as final main decision makers in family issues. If they are not involved earlier in PMTC services for those infected it may lead to ineffective care of the baby when the mother decide not to breastfeed.

A study done in Kenya (Gaillard et al, 2002), described that partner's attitude as one of the obstacles to the adoption of formula feeding by HIV-infected mothers. Promoting infant health as the responsibility of both the mother and the father should be part of messages to encourage future fathers to be tested for HIV jointly with their wives

Another study done in Northern Tanzania (M. M. de Paoli et al, 2004), described that if pregnant women are to fully participate in and benefit from mother-to-child-transmission prevention efforts, their partners must be committed and involved in the process.

A study done in Dar es Salaam Tanzania (Antelman et al, 2001), showed a substantial proportion of HIV-infected pregnant women never disclosed their result to a partner or a close female relative. Lack of disclosure may have limited their ability to engage in preventive behaviors or to obtain the necessary emotional support for coping with their HIV serostatus or illness.

A study done by (Farquhar C et al, 2004) showed that Nevirapine use was reported by 88% of HIV-infected women who were couple counseled, 67% whose partners came but were not couple counseled, and 45% whose partners did not present for VCT (P value for trend = 0.006). HIV-1-seropositive women receiving couple's counseling were 5-fold more likely to avoid breast-feeding (P = 0.03) compared with those counseled individually.

It has been shown in a study done in Botswana (P. Ndase et al, 2002) that, there is low acceptance of VCT (2.9%) among partners of pregnant women being screened for PMTCT interventions as well as a high proportion of discordant HIV sero-status (25%) among the couples tested. The low acceptance could be due to the refusal of partners to test but also the refusal of women to disclose their status or to recommend that their partners go for VCT. Low level of partner participation even in the context of available antiretroviral treatment continues to factor into the success of PMTCT programs in Botswana and may undermine efforts towards HIV risk reduction among couples.

In a study done in Mombasa Kenya (Mwanyumba FM et al, 2002) in collaboration with Ghent University in Belgium their preliminary results show that partner involvement is crucial in postpartum MTCT. Couple counseling should be the intervention of choice with emphasis on safe feeding practices.

Another study done in rural Uganda (Homsy J et al, 2006) on routine intrapartum HIV counseling and testing for prevention of mother-to-child transmission of HIV showed that 99% of all women presenting to the antenatal clinic had an unknown HIV status; only 4% opted out of counseling and testing; the need to consult or be accompanied by a partner was the most frequently cited reason for opting out. Among those tested, 7.7% were seropositive, of whom 80% were given nevirapine with instructions for self-administration. Only 107 (2.8%) male partners were counseled and 3 (2.8%) opted out; of those tested, 20% were seropositive. This study came into conclusion that, intrapartum opt-out counseling and testing can increase individual and couple participation in prevention of mother-to-children transmission interventions.

The benefits of services for prevention of mother-to-child HIV transmission (PMTCT) go far beyond providing antiretroviral drugs. Introducing PMTCT services into existing maternal/child health services, including antenatal care, can contribute to a more effective response to HIV/AIDS by motivating health providers, improving HIV/AIDS knowledge in the community, getting male partners more involved in HIV prevention

and the health of their families, and facilitating clients' access to HIV/AIDS care and support.

Involving male partners can make a real difference in improving women's uptake of PMTCT services. When outreach efforts successfully engage men, they are far more likely to support women at critical turning points; deciding whether to take an HIV test, returning for test results, taking antiretroviral drugs, and practicing safer infant feeding methods.

A study done by Mbuyi et al, (2004), found that partner participation in HIV voluntary counseling and testing (VCT) of pregnant women receiving antenatal care in Nairobi was associated with an increased uptake of treatment to prevent mother-to-baby transmission of HIV and of condom use.

One of the evaluation team's most compelling findings is that attempts to involve male partners are most successful when they provide information about HIV and PMTCT directly to men outside of the antenatal or maternal/child health clinic setting, which many men perceive as the exclusive realm of women. For example, in rural Keemba and Monze, Zambia, program staff approached male leaders to promote PMTCT among the men in their communities, which has led to higher levels of male involvement in PMTCT decision-making and in uptake of VCT services. Providing men directly with information confirms their important role in such decisions and removes the onus of responsibility from women for bringing up PMTCT.

"Often it's easiest to reach men in the more traditional and close-knit communities rather than in large urban areas," said Dr. Chipepo Kankasa of the MTCT Working Group and a principal investigator for the Horizons PMTCT study in Zambia "There's a recognizable leadership structure in place, usually headed by a man, through which programs can communicate health and prevention messages to men." (Naomi Rutenberg, 2003).

Similarly, PMTCT program managers in Kenya developed strategies to inform male partners about PMTCT services such as providing community education on PMTCT in places where men congregate, organizing support groups for men and directly inviting men to the clinic for HIV counseling and testing (Naomi Rutenberg, 2003).

Among pregnant women who do take a test and are found to be HIV positive, a high proportion (sometimes up to 70%) choose not to tell their partners. Most are afraid of violence or abandonment: in many societies it is common for men to blame their partners for being infected, even if they too have HIV.

An HIV positive, pregnant woman who has not disclosed her diagnosis to her partner, family or friends is generally less likely to accept preventive drugs and to practise unconventional methods of infant feeding, for fear of revealing that she is infected. PMTCT programmes should therefore seek to make disclosure less difficult for their

clients, for example by running support groups or anti-stigma campaigns. They might also try to identify and assist those who wish to avoid or defer disclosure.

One good idea is to involve male partners in the PMTCT programme. If couples are counselled and tested together then there is less potential for blame and recrimination. Counsellors can emphasise the man's responsibility for protecting the health of his partner and family, and can promote the use of PMTCT and other services, resulting in much higher take-up rates.

Possible ways to increase male participation include hand delivered invitations and routine testing for men who accompany their partners. However, it is usually far from easy to persuade men to attend what they regard as women's clinics dealing with women's issues. www.avert.org/pmtct-hiv.htm accessed on 5th May 2007.

"If I stop breast-feeding, I have to explain to my relatives and my husband. I have to disclose my status. I know women who were beaten or divorced just for disclosing their HIV status to their husbands," explained Veronica Mutsumwe, a delegate at the conference. "If there is a chance my child can survive without the programme, I would rather not take part in it than face the wrath of my husband and his relatives." This was a statement from UN, IRIN Africa, Report in Zimbabwe, 2004.

Male partner involvement in VCT may increase the likelihood of VCT uptake, behavior

change, as well as improve compliance with PMTCT measures such as nevirapine (NVP) uptake among pregnant women (Katherine Semrau et al, 2005).

A community-based survey conducted in Soweto by the Population Council found that 62 percent of males interviewed had encouraged their partners to go to antenatal clinics during their last pregnancy, but only 37 percent accompanied them during these visits. "An even lower proportion of men" accessed VCT with their partner as a couple. Studies and reports have suggested that when men do play a role in VCT both parts do benefit and it shows that HIV women are more likely to Receive ARVs, during follow up and avoid Breast feeding of their infants (IRIN, 2005).

It has been suggested that in order to reach men in antenatal clinics health workers have to work outside the walls of the clinic and the issue is not to re-arrange the health system but low cost things like messages, posters, pamphlets to target men said Dean Peacock, programme manager of the Men as Partners (MAP) Programme in South Africa. (IRIN, 2005).

However stigma and fear of disclosure remain the main barriers for men to access VCT and in Soweto South Africa Levack found that, many people do not take test until they show symptoms of AIDS but men were more scared of AIDS that dying (IRIN, 2005).

## 2.4 Conclusion from literature review.

Studies and different reports above shows that there is low males involvement in voluntary counseling and testing for HIV in antenatal clinics and the success of prevention of HIV transmission from mother to child requires involvement of males.

Male partner involvement, support and education on perinatal HIV-1 prevention may improve compliance and increase the number of infants protected from HIV-1 infection (Kiarie et al, 2003). Male participation may also increase women's willingness to undergo HIV testing. To increase the uptake of interventions to reduce perinatal HIV transmission, different studies have recommended the involvement of Male partners in HIV testing (Gaillard et al, 2002).

Involving male partners can make a real difference in improving women's uptake of PMTCT services. Divorce and discrimination among women who underwent HIV testing in antenatal clinics have been reported when they disclose the results to their male partners. If males are involved right from the beginning in antenatal clinics prevention of mother to child transmissions of HIV will be successful.

Very little is known about factors associated with male involvement in voluntary counseling and testing for HIV with their partners in antenatal clinics, for effective prevention of mother to child transmission. My study has attempted to fill this gap.

Challenges in PMTCT includes the overemphasis on HIV-Infected women, something that misses men, poor communication between spouses, men do not attend ANC and do not comply with protection measures and refusal of most of spouses of positive women in participating in PMTCT.

http://healthbridge.ca/assets/images/pdf/Gender/Challenges%20in%20the%20Prevention-of-Mother-to-Child-Transmission%20of%20HIV%20in%20Africa.pdf

There is little success of PMTCT intervention if men are left behind in PMTCT programme and therefore, efforts to overcome factors influencing low male partners involvement in VCT of HIV should be made.

# CHAPTER THREE: METHODOLOGY

## 3.1 Study Area:

Iringa Municipal Council is among of the seven districts of Iringa region with an area of 162square kilometres (The region ranks the second with high prevalence rate of HIV 13.4% after Mbeya region which has 13.5%). It has a population of 115,165 people, with an annual growth rate of 1.6. Administratively, Iringa Municipality has 1 division, 14 wards, 3 villages, 13 hamlets (Vitongoji) and 149 neighbourhoods (mitaa). The wards are; Gangilonga, Kihesa, Mtwivila, Mkwawa, Ilala, Makorongoni, Mivinjeni, Mshindo, Mlandege, Mwangata, Kwakilosa, Kitanzini/Miyomboni, Kitwiru, and Ruaha. The District is an urban with its heaquarter in Iringa town.

The Municipal has 25 Health facilities 2 hospital (1, Govt Regional Hospital, 1 Private) 3 health centres and 20 dispensaries. 4 health facilities provide PMTCT services in Iringa municipality 1 Hospital and 2 health centres and 1 dispensary.

## 3.2 Target Population

The study targeted males of active childbearing age (18-59 years) residing within the Iringa Municipality.

## 3.3 Study Populations:

The study populations were males married or cohabiting within the catchments of Ngome and Ipogolo health centres, which are among the 4 health facilities providing Prevention of Mother to Child Transmission Services in the Municipal.

### 3.4 Inclusion and Exclusion criteria

The inclusion criteria for the study participants were; male gender, married or cohabiting aged 18-59, residence of Iringa Municipality and there was no exclusion criterion.

### 3.5 Study design:

The design of this study was descriptive cross-section study using both quantitative and qualitative design.

### 3.6 Sample size:

The sample size was estimated using a formula, $n=\frac{4p(100-p)}{c^2}$

Therefore sample size $n = \frac{4 \times 72 (100-72)}{36} =$ 224 as a minimum sample

However in this study it was decided to exceed the minimum sample size and 253 males were interviewed.

- Where: n=Minimum sample size

  p=proportion of previous study (72% similar study done in Gaborone Botswana (Dean, 2003))

  c =Margin or bound of error on estimate in this study 6 %

### 3.7 Sampling procedures

#### 3.6.1 Quantitative study design

A multistage cluster sampling technique was used. All 4-health facilities providing PMTCT services were regarded as clusters, 2 health facilities Ngome and Ipogolo health

centres were selected randomly as clusters for the study, catchments areas of each selected health facility cluster was identified in terms of ward served of which were Kihesa and Ruaha wards respectively. Sub wards (Streets) from each ward served by the health facility providing PMTCT were listed and 50 % of sub wards (Streets) were randomly selected and all available eligible men in each household within the selected sub wards were preliminarily explained about the study and face to face interviewed up on their consent till the desired sample was covered.

In Kihesa ward the street which were covered were 8 out 14 named as Dodoma road A, Semtema A, Semtema B, Sokoni, Kilimani, Mwenge, Ngome and Mbuma streets and for the Ruaha ward were 7 out of 14 named as Ipogolo A, B, D and E, Ndiuka C and D, and Buguruni. A total of 126 males from Kihesa ward and 127 from Ruaha ward participated in the study.

### 3.6.2 Qualitative study design

The sampling procedures for qualitative design was purposeful sampling of which 16 male individuals knowledgeable about PMTCT were identified during quantitative study design and requested to participate again in the in-depth interview at a place convenience to them, of which all of them were interviewed at their home.

### 3.7 Research instruments (Data collection tools):

Data collection was done using both structured interview schedules with both closed and open-ended questions for quantitative design and semi-structured interviews guide with tape recording for the qualitative design.

Interview schedule for the quantitative study design consisted of 9 parts (A-I) with a total of 38 questions. The questions covered demographic information (11item statements), knowledge of mother to child transmission and prevention (12 item statements), willingness of male partners to test HIV if their partners pregnant at ANC. (5 item statements), Perceived benefits of testing for HIV if partners are pregnant (5 item statements), perceives barriers (1 item statement), willingness of males partner to have children if have HIV infection (3 item statements) and Males suggestion on improving their participation in VCT for PMTCT of HIV in ANC (1 item).

#### 3.7.1 Measurement of knowledge

The knowledge was measured by applying a designed knowledge scale on Mother to Child Transmission of HIV and AIDS (score 0-11). Items used to measure general knowledge were;

- Can HIV transmission from mother to child be possible?
- Can HIV be transmitted during pregnancy?
- Can it be transmitted during delivery?
- Can HIV be transmitted during breastfeeding?

- Can HIV transmission from mother to child be prevented?
- How can HIV transmission from mother to child be prevented,
    - Is it by using ARV?
    - Is it by avoiding breastfeeding and opting for alternative feeding?
    - Is it by safer delivery like caesarian sections practices?
- Is currently VCT of HIV services provided at ANC?
- Are ARV provided at ANC for PMTCT?
- Is Family planning services provided for PMTCT?

Each correct response to a question was given 1 score and 0 score to incorrect response.

**Measuring scale**

Low level of knowledge score 0-5

Moderate level of Knowledge 6-8

High level of knowledge 9-11

**3. 8 Training of research assistants**

The PI trained five research assistants with form four and diploma level of education in the area of health, all married with an age raging from 28 to 57 years. 4 of them were female and 1 male identified with an assistance of the DMO office. The training was conducted for one day and emphasis was made on understanding the aim of the research and the meaning of each question in the interview schedules, for consistency in data collection from the interviewees.

### 3.9 Pre-testing of data collection instruments

After training of the research assistants the research team conducted a pre testing of questionnaire at Kitanzini ward in Iringa Municipal a ward that was not included in the study; an interview was done to 12 interviewees. At the end of pre-testing few modifications were made and some new responses were added to some of the questions.

### 3.10 Data Collection and Management

#### 3.10.1 Quantitative study design.

The Principal Investigator (PI) and research team collected the data for 2 weeks in June 2007. Each structured interview tool was administered to one person after obtaining his informed consent through face-to-face interviews in the community. Every evening all filled interview tools were reviewed together by the PI and research assistants for consistency and quality assurance of the collected data and any ambiguity were clarified accordingly.

#### 3.10.2 Qualitative study design.

In-depth interviews were conducted by the PI assisted by one of the research assistants. Prior to the interview, 16 participants who were purposely selected during data collection in the quantitative study design were requested to give their consent for the interviews and tape recording. The research assistant recorded the information given by the study participants in Kiswahili language and tape recording was done concurrently by the PI during the interviews.

### 3.11 Data processing and analysis;

#### 3.11.1 Quantitative data

All filled questionnaires were given identification number before entering into the Epi Info statistical package, coding was done and data were entered into the Epi Info 3.3.2 version, data cleaning was done and later frequencies of all variables were printed out. Cross tabulation was done for defined independent and dependent variables to obtain table of results. MS- Excel package was used to plot graphs.

#### 3.11.2 Qualitative data.

Tape records were listened, transcribed, translated from Kiswahili to English version, data coding was done and thereafter summaries of statements made by respondents were included in the report.

Discussion of the results was carried out and later on recommendations and conclusions were made.

### 3.12 Variables

#### 3.12.1 Independent Variables

The independent variables were; age, marital status, level of education, number of children, occupation, religion, knowledge on MTCT of HIV, willingness to test HIV with partners at ANC for PMTCT, perceived benefits of VCT of HIV for PMTCT, perceived barriers of VCT of HIV for PMTCT, willingness to have children if tested HIV positive and suggestion to improve male involvements in PMTCT.

#### 3.12.2 Dependent variable

The dependent variable was Male involvement in VCT for PMTCT of HIV and AIDS.

### 3.13 Ethical issues and permission to conduct the research.

#### 3.13.1 Permission to conduct the research

Ethical clearance was sought from the Muhimbili University of Health and Allied Sciences Research and Publication ethical committee. Permission from the district administrative authorities was obtained.

#### 3.13.2 Voluntary participation.

The right of the respondents to participate or not to participate in the study was respected. All respondents participated freely after receiving the information on the study and they were given the right to respond to questions or not and right to withdraw at any time during the process of interview.

#### 3.13.3 Informed consent.

All participants were given adequate information on the research before interview; verbal consent was obtained from the respondents. Only participants who consented for the interview were interviewed.

#### 3.13.4 Confidentiality and anonymity.

The right of the study participants to anonymity and confidentiality were ensured by making the questionnaire anonymous, the information given were kept secretly and the research finding published in a way that would not relate to the respondents. Research assistants were trained to maintain confidentiality.

### 3.14 Limitation of the study

The limitation of the study may emanate from possible unnoticed biases which may arise from the use of data collection tools and research assistants although trained may influence the data collected through their own understanding and might influence responses, through interviewer bias and information bias from incorrect information from respondents.

### 3.15 Definition of terms

**Prevention MTCT of HIV (PMTCT)-** refers to preventive intervention aimed at reducing the chances of transmission of HIV from an infected mother to her baby. In this study PMTCT include Voluntary counseling and testing and use of prophylactic anti retroviral therapy during pregnancy or in the immediate postnatal period and use of infant feeding options instead of breastfeeding.

**Male Involvement**-Male participation in antenatal clinics with their female partners counseled and tested for HIV together, support or/and use of anti retroviral therapy if partner or both tested positive for prevention of mother to child transmission.

**Male** –are men individual married or cohabiting

**Voluntary Counseling and testing (VCT)** = is the process by which an individual undergoes counseling enabling him/her to make an informed choice about being tested. This decision must be entirely the choice of the individual and s/he must be assured that the process will be confidential.

**Cohabiting-** man living with a woman as a couple, without formal marriage.

# CHAPTER FOUR: RESULTS

This chapter presents and interprets the data. Data were collected with the aim of answering the objectives. The results are presented using tables, graphs and summary statistics.

## 4.1 Socio-demographic characteristics

The socio- demographic characteristics of respondents are summarized in the table 1 below: A total of 253 males participated in this study, of whom 126 (49.8%) were from Kihesa ward and 127 (50.2%) were from Ruaha ward. The mean age was 36.7± 9.9 with range of 19 (minimum) to 59 (maximum) the mode was 28.

The majority of respondents had primary education 173 (68.4%) and only 72(28.5) had secondary education and above, the rest 8 (3.2%) had no formal education. Most of them were petty traders and self-employees 99 (39.1%) and 73 (28.9% respectively. About 184 (73%) of respondents were father with 1-4 children.

Only 6.7% had no children and the rest had fathered 5 children or more. 77.9% of the respondents were married and the rest were cohabiting. Most of participants 83.4% were Christian (Roman Catholic and Protestants), Muslims constitutes 15.8% of the total respondents and the rest had no religion.

**Table 1 Socio-demographic characteristics of the study participants (n=253).**

| Socio- demographic characteristics | Number | Percentage |
|---|---|---|
| **Age (years) distribution** | | |
| >18 - 29 | 74 | 29.2 |
| >29 - 40 | 102 | 40.3 |
| >40 - 51 | 48 | 19.0 |
| >51 - 59 | 29 | 11.5 |
| **Religious affiliations** | | |
| Roman Catholic | 122 | 48.2 |
| Muslim | 40 | 15.8 |
| Protestants | 89 | 35.2 |
| No religion | 2 | 0.8 |
| **Marital status** | | |
| Married | 197 | 77.9 |
| Cohabiting | 56 | 22.1 |
| **Education level** | | |
| No formal education | 8 | 3.2 |
| Primary education | 173 | 68.4 |
| Secondary education | 67 | 26.5 |
| College/University | 5 | 2.0 |
| **No of Children** | | |
| 0 | 17 | 6.7 |
| 1-4 | 184 | 72.7 |
| 5+ | 52 | 20.6 |
| **Occupation** | | |
| Petty trader | 99 | 39.1 |
| Peasant | 59 | 23.3 |
| Government employee | 19 | 7.5 |
| Self employee | 73 | 28.9 |
| NGO employee | 3 | 1.2 |

### 4.2.1 Knowledge of Mother to Child Transmission

Knowledge of MTCT was assessed on transmission, prevention, awareness of discordant pairs and PMTCT program. Table 2.1 below shows that, 90.9% were aware of MTCT of HIV however only 39.5% were aware of prevention of MTCT of HIV using ARV and 71.5% were aware of discordant pairs. About 73% of respondents had heard the PMTCT services and only 60.5% were aware that PMTCT services are provided in their area.

**Table 2.1 Items of knowledge on MTCT (n=253)**

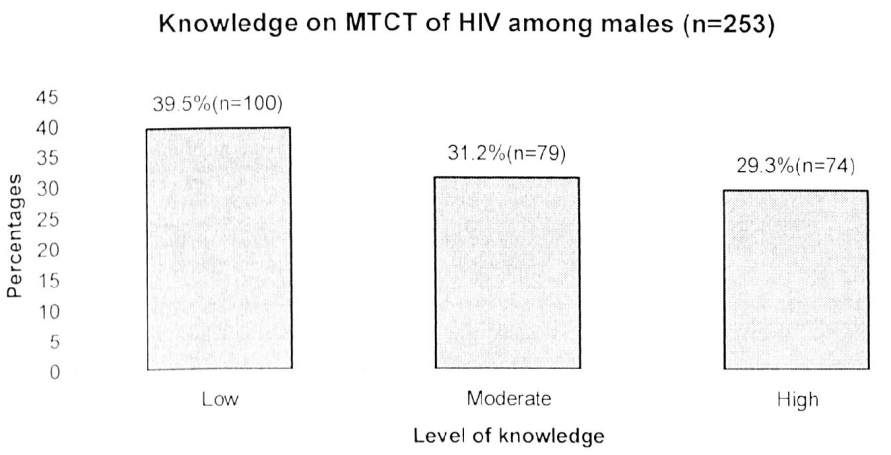
| **Knowledge and awareness on** | Yes response freq. | **%** |
|---|---|---|
| **Transmission** | | |
| MTCT of HIV possible | 230 | 90.9 |
| During pregnancy | 156 | 61.7 |
| During delivery | 195 | 77.1 |
| Breastfeeding | 195 | 77.1 |
| **Prevention of MTCT** | | |
| PMTCT of HIV possibility | 161 | 63.6 |
| By using ARV | 100 | 39.5 |
| Avoiding breastfeeding & opt alt.feeding* | 142 | 56.1 |
| **Discordant pair** | 181 | 71.5 |
| **PMTCT programme** | | |
| Heard about PMTCT | 185 | 73.1 |
| Presence of PMTCT in their area | 153 | 60.5 |
| **PMTCT Services Provided at ANC** | | |
| VCT of HIV | 158 | 62.5 |
| ARV | 130 | 51.4 |
| Family planning | 108 | 42.7 |
| Referrals to CTC | 4 | 1.6 |

* Alternative feeding

### 4.2.2 General Knowledge on MTCT of HIV among 253 male's respondents.

The knowledge on mother to child transmission of HIV and AIDS is shown in figure 1 below; those who had high level of knowledge were 74 (29.3%), those with moderate knowledge were 79 (31.2%) and those who had low knowledge were 100 (39.5%). The high score was 10 that was attained by 42 (16.6%), none of the respondents attained the highest score of 11, however the lowest score of 0 was attained by 17 (5.9%). The mean score was 6.2 ± 2.9.

**Figure 1**: Frequency distribution of levels of knowledge on MTCT of HIV/AIDS




In the in depth interview one of the respondent who was asked about transmission said *"Yes, HIV can be transmitted from mother to child during pregnancy, delivery and during breastfeeding if there are bruises"*.

**Table 2.2 Knowledge on MTCT of HIV by level of education**

| Education level | Level of Knowledge | | | | | | **Total** |
|---|---|---|---|---|---|---|---|
| | **Low** | | **Moderate** | | **High** | | |
| Primary and below | 84 | (46.4%) | 46 | (25.4%) | 51 (28.2%) | | 181(71.5%) |
| Secondary and above | 16 | (22.2%) | 33 | (45.8%) | 23 (32.0%) | | 72 (28.5%) |
| **Total** | 100 | (39.5%) | 79 | (31.2%) | 74 (29.3%) | | 253 (100%) |

$X^2 = 14.75$ df 2 p=0.00062627

Tables 2.2 above shows that, among those with secondary and above level of education, 22.2% had low knowledge while those with primary education and below, 46.4% had low level of knowledge.

The level of knowledge was higher among those with secondary education (77.8%) and above than those with primary education and below (53.6%) and it was statistical significant. ($p<0.001$).

One of a standard seven respondent in the in depth interview who was asked about Mother to child transmission he said that *"Yes, the mother may infect the baby with HIV during conception, during delivery but not during breastfeeding"*.

**Table 2.3 Knowledge on MTCT of HIV by Age Group**

| Age (years) | Level of Knowledge | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | **Low** | | **Moderate** | | **High** | | | |
| 18-29 | 27 | (36.5%) | 17 | (23.0%) | 30 | (40.5%) | 74 | (29.2%) |
| 30-41 | 33 | (32.4%) | 39 | (38.2%) | 30 | (29.4%) | 102 | (40.3%) |
| 42-51 | 24 | (50.0%) | 15 | (31.3%) | 9 | (18.7%) | 48 | (19.0%) |
| 52-59 | 16 | (55.2%) | 8 | (27.6%) | 5 | (17.2%) | 29 | (11.5%) |
| **Total** | **100** | **(39.5%)** | **79** | **(31.2%)** | **74** | **(29.3%)** | **253** | (100%) |

Table 2.3 above shows that, 50% of people aged 42 and above years of age had low knowledge of MTCT of HIV, high level of knowledge was observed among 18-29 years age group (40.5%) than other age groups

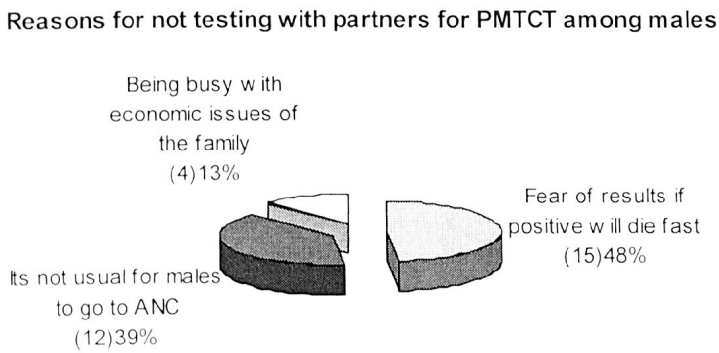
Levels of knowledge were independently associated with other social demographic characteristics.

### 4.3. Willingness to undergo HIV test for PMTCT.

Table 3.1 and 3.2 below shows that (222) 87.7% of all respondents were willing to test with their partners for PMTCT of HIV and AIDS.

There were no statistically significant associations when willingness of undertaking HIV test was stratified by some social demographic characteristics like occupation, marital status, age and level of education. In all these social demographic variables willingness to undertake HIV test was high (≥80%) in all categories within each variable.

**Figure 2 Reasons given by respondents (n=31) for not testing with partners**




The figure 2 above shows that, fear of results was the most frequently reason (15) 48.4% and being busy was the least by (4)12.9%.

In the in depth interview one of the respondent in emphasizing the importance of involving male in PMTCT said that, *I think most of women they don't tell their partners, men may not know the health status of their partners since pregnancy, if the mother is infected and the father discover later then violence or discrimination happen it is better to involve men in ANC.*

**Table 3.1 Willingness to test for HIV with partners by those who were willing to accompany partners to ANC**

| Willingness to accompany to ANC | Willingness to test HIV with Partner for PMTCT | | **Total** |
|---|---|---|---|
| | **Willing** | **Not willing** | |
| **Willing** | 219 (96.1%) | 9 (3.9%) | 228 (90.1%) |
| **Not willing** | 3 (12.0%) | 22 (88.0%) | 25 (9.9%) |
| **TOTAL** | 222 (87.7%) | 31 (12.3%) | 253 (100%) |
| | **Fisher exact: 1-tailed** | **P-value 0.0000000** | |

**Table 3.1** above show that, (228) 90.1% of all 253 respondents were willing to accompany partners to ANC and (219) 96.1% of male respondents who were willing to accompany partners to ANC showed willingness to take also an HIV test for PMTCT, however, (22) 88% of those who were not willing to accompany to ANC were not willing to take HIV test at all, 12% of those who would not accompany partners to ANC were willing to take HIV test in any other testing site rather than ANC.

**Table 3.2 Willingness to test HIV with partners by partner's pregnant status since start of PMTCT services**

| Partner pregnant within past 2 years | Willingness to Test HIV with Partners at ANC | | | | **Total** |
|---|---|---|---|---|---|
| | **Yes** | | **No** | | |
| Yes | 109 | (92.4%) | 9 | (7.6%) | 118 (46.6%) |
| No | 113 | (83.7%) | 22 | (16.3%) | 135 (53.4%) |
| **Total** | 222 | (87.7%) | 31 | (12.3%) | 253 (100%) |

$X^2 = 4.4$ p value =0.0359123

The table 3.2 above shows that, (109) 92.4% of males respondents whose partners were pregnant within the past 2 years since the initiation of PMTCT services at ANC were willing to test HIV, while (113) 83.7% of those whose partners were not pregnant were willing to take HIV test. The difference was statistical significant $p<0.05$.

**4.4. Perceptions on benefits of testing of HIV among males for PMTCT.**

Majority of males perceived testing for HIV to be beneficial if partners are pregnant. 93.3% of the respondents said that it is beneficial for a man to take HIV test. Only 6.7% of males perceived no benefits of undergoing HIV test if partner pregnant (see figure 3 below). Tables 4.1 and 4.2 below show the perceived benefits of testing for HIV with pregnant partners and cross tabulation with some of the socio-demographic (age and marital status) characteristics respectively.

**Table 4.1 Perceived benefits of testing for HIV with pregnant partners for PMTCT (n=253)**

| Perceived Benefits | Responses Freq | Percentage |
|---|---|---|
| Know health status | 236 | 93.3 |
| Self care | 187 | 73.9 |
| Preparation for baby care | 146 | 57.7 |
| Planning future child bearing | 124 | 49.0 |
| Practice safer sex | 99 | 39.1 |
| Others | 43 | 17.0 |

Table 4.1 above shows that, the mostly perceived benefits for testing of HIV was to know health status (236) 93.3% followed by self care (187) 73.9%, preparation for care of the baby to be borne 57.7%, planning for future child bearing (124) 49.0% and other perceived benefits constituted to 17% and are described in figure 3 below.

**Figure 3: Other perceived benefits of testing for HIV if partner pregnant**

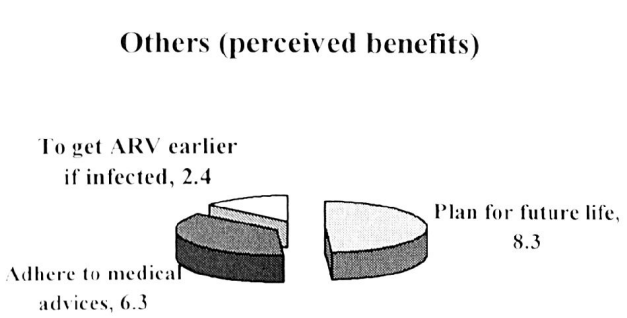



Figure 3 above show that, plan for future life 8.3% followed by adhere to medical advice 6.3%, and to get ARV earlier if HIV infected 2.4% were also cited as benefits of taking HIV test.

Table 4.2 below shows that, perception of benefits was 91.2% or higher in all age groups however all 29 (100%) of males aged 52-59 years of age perceived testing of HIV for PMTCT to be beneficial. High percentage of married individual (188) 95.4% perceived testing of HIV for PMTCT to be beneficial and only 48 (85.7%) of those who were cohabiting perceived testing to be beneficial if partner is pregnant. About 8 out of 56 (14.3%) of those who were cohabiting did not perceive or did not know any benefit of taking HIV test while it was only 4.6% among those who were married.

**Table 4.2: Perceived benefits of testing for HIV for PMTCT by age and marital status (n=253)**

| Characteristics | Perceived benefits | | | | Total | | P value |
|---|---|---|---|---|---|---|---|
| | YES | | NO | | | | |
| **Age (years) group** | | | | | | | |
| 18-29 | 69 | (93.2%) | 5 | (6.8) | 74 | (29.2%) | |
| 30-41 | 93 | (91.2%) | 9 | (8.8%) | 102 | (40.3%) | |
| 42-51 | 45 | 93.8%) | 3 | (6.2 %) | 48 | (19.0%) | |
| 52-59 | 29 | (100%) | 0 | (0.0%) | 29 | (11.5%) | |
| **Marital Status** | | | | | | | |
| Married | 188 | (95.4%) | 9 | (4.6%) | 197 | (77.9%) | |
| Cohabiting | 48 | (85.7%) | 8 | (14.3%) | 56 | (22.1%) | 0.01 |

All respondents in the in-depth interview perceived testing of HIV to be beneficial one of the respondent said *yes, there are benefits they will know their health status, and take preventive measures to protect the baby, if mother infected she will be given drugs to prevent infection during delivery.*

**4.5: Willingness to have children if tested HIV positive.**

The willingness to have children if males are tested positive for HIV was reported by 6.3% of male partners. The majority 93.7% was not willing to have children if they test positive for HIV (see tables 5.1-5.3 below).The reasons for willingness or not willing to have children if tested positive for HIV are also described below.

There was statistical significance when the willingness of males to have children if test positive for HIV by the level of education ($p<0.05$). Other social demographic characteristics (marital status and parity) were statistically insignificant.

**Reasons for willingness to have children if tested HIV + (n=16)**

The reasons given by the 16 respondents on their willingness to have children were; the need to have more children, this was given by 9 male respondents out of 16 and the other was the presence of help to protect the baby from infection (PMTCT) was also cited as a reason by 7 respondents out of 16 (n=16).

**Reasons for not willing to have children if tested HIV+ (n=237)**

Those who were not willing to have children if tested HIV+ also provided their reasons of which the majority 144 out of 237 (60.8%) said that, the baby may be infected and suffer. Others, 38 out of 237(16.0%) said the life will be difficult to them by nursing a sick baby, parents will die and leave an orphan was said by 32 out of 237(13.5%) and 23 out of 237 (9.7%) said their female partners will die fast.

**Table 5.1 Willingness to have children if tested HIV+ by marital status and parity (n=253)**

| Characteristics | Willingness to have children If HIV + | | | | Total | | P value |
|---|---|---|---|---|---|---|---|
| | YES | | NO | | | | |
| **Marital status** | | | | | | | |
| Married | 11 | (5.6%) | 186 | (94.4%) | 197 | 77.9%) | |
| Cohabiting | 5 | (8.9%) | 51 | (91.1%) | 56 | 22.1%) | 0.36 |
| **Parity** | | | | | | | |
| 0 | 1 | (5.9%) | 16 | (94.1%) | 17 | (6.7%) | |
| 1-4 | 11 | (6.0%) | 173 | (94.0%) | 184 | 72.7%) | |
| 5 and above | 4 | (7.7%) | 48 | (92.3%) | 5 | (20.6%) | 0.9 |

Table 5.1 above shows that, 8.9% of those who were cohabiting were willing to have children if tested positive for HIV and it was 5.6% among those who were married. Those who had 5 children and above, 7.7% were willing to have children if tested HIV positive, only 6.0% of those who were fathered 1-4 children and 5.9% among those who had no child.

**Table 5.2 Willingness to have children if tested HIV+ by level of education**

| Education level | Level of Knowledge | | | | **Total** |
|---|---|---|---|---|---|
| | **Yes** | | **No** | | |
| Primary and below | 8 | (4.4%) | 173 | (93.6%) | 181 (71.5%) |
| Secondary and above | 8 | (11.1%) | 64 | (88.9%) | 72 (28.5%) |
| **Total** | 16 | (6.3%) | 237 | (93.7%) | 253 (100%) |
| $X^2$=3.89 | | | p value=0.048 | | |

Table 5.3 above shows that 11.1% of those who had secondary and above level of education were willing to have children it tested positive for HIV, however those who had primary and below level only 4.4% were willing to have children if tested positive for HIV and the result were statistical significant ($p<0.048$).

### 4.6. Perceived barriers of attending ANC for PMTCT

The table 6 below shows that, the most frequently mentioned barrier was lack of knowledge and awareness that male should attend ANC for VCT (76.3%), followed by fear to be perceived differently by the community (53.4%), cultural norms (51.8%) and others 124 (49%).

Among the others the frequently mentioned barriers were, health workers do not encourage male to attend ANC 11.1%, Unfriendly antenatal clinics to males 8.3%, unsuitable timing of ANC to males 6.7%, lack of confidentiality among health worker 4.7%, fear of multitude of women and stigma 4.0% and the long waiting queue at ANC 3.6%.

**Table 6 Perceived barriers to attend ANC for VCT for PMTCT** (n=253)

| Barriers | No. | Percentage |
|---|---|---|
| ANC not for male are female based | 104 | 41.1 |
| Being busy with social economics issues | 107 | 42.3 |
| Community will perceive differently | 135 | 53.4 |
| Lack of Know.& awareness that should attend | 193 | 76.3 |
| Multiple sexual partners/polygamy | 68 | 26.9 |
| Poor health workers attitude to male | 34 | 13.4 |
| Fear of results | 117 | 46.2 |
| Male are not involved if they attend ANC | 60 | 23.7 |
| Culture and customs | 131 | 51.8 |
| Others | 124 | 49.0 |

In the in depth interviews barrier cited included; lack of knowledge and awareness that men should attend ANC, community stigma, use of bad languages to males and their partners, failure in keeping patients secrets done by some health workers and males not being faithful by having multiple sexual partners.

For example one of the respondents during in depth interview said "*men have no knowledge and they are not aware that, they should attend antenatal clinic if they get education they will go and test*".

During in depth interview 8 clients out of 16 also pointed out that community itself is a barrier to men to attend antenatal clinic. If a man attends ANC with his partner he is stigmatized that he is under control of his wife. One of the respondent said *"if you accompany your partners people will say that "Umesogoswa'' means your under control of your wife probably given local medicine traditionally known as "Limbwata".*

Furthermore during in depth interviews 5 clients out of 16 cited that some health workers at ANC to be another barrier that is likely to hinder male participation on services offered at ANC. One of the respondent said *"Health workers may be barriers, some have abusive languages these are barriers to men, for example partners may be asked why they came late?, why you have brought your partner in this condition you are failing even to care".*

However the antenatal clinics are not friendly to men as majority are still written mother and child clinic MCH. This was cited by 8 out 16 male respondents. One of the male respondent during in depth interview said that; "*The government did a mistake at the beginning, if you attend ANC you see a poster written mother and child clinic then you know that, this is not my place, you may enter and if a doctor ask me what are you doing here, this will make me embarrassed as a man".*

In the in depth interview 9 out of 16 respondents said that health workers do not maintain confidentiality. One of the respondent said that "*Some nurses do not adhere to ethics...they do not keep secrets, if they find the mother has been infected then the whole community knows and stigma starts, we have heard this in the community*".

### 4.7. Male suggestions to involve them in ANC for PMTCT services

Table 7 below shows that, health promotion on reproductive health and testing of HIV for the couples (81.8%) and health education (75.9%) on attending ANC were most frequently mentioned suggestions.

However, antenatal clinic cards number 4 to show male attendances (48.6%) was mentioned that, it could make male more committed in going to ANC.

Among the other suggestions were, establishing a male friendly and couple attractive ANC. These suggestions were made by 12.3% and 8.7% of males respectively. However, the presence of male health workers at ANC, giving incentives to males who attend with partners (1.6%) and increasing working hours for ANC to operate even on weekends (1.6%) were cited as suggestions that could make male attend ANC with partners for PMTCT services.

**Table 7 Suggestions to involve male in ANC for PMTCT (n=253)**

| **Suggestions** | Frequency | % |
|---|---|---|
| Give invitation letters to male partners | 53 | 20.9 |
| Health educations on attending ANC to male | 192 | 75.9 |
| Establish a policy and if possible law enforcement | 181 | 71.5 |
| Health promotion on Reproductive health and testing for HIV | 207 | 81.8 |
| ANC Card no 4 to show males attendances | 123 | 48.6 |
| H/W to involve males if they attend ANC with their partners | 79 | 31.2 |
| RCHC to be named Family clinics for father, mother and child | 133 | 52.6 |
| Others | 66 | 26.1 |

All respondents participated in depth interview suggested health promotions and health education to the community targeting men should be conducted.

Male should be educated and should understand their roles in PMTCT, culturally sensitive messages will change the beliefs and negative attitudes influencing low male attendance and participation in PMTCT services in ANC.

One of the respondent said *"government has to conduct health promotion to males and educate them on the importance of testing, this will change even the cultural norms and encourage male to attend. Even women believe that all clinic issues do not concern men it is just for women and babies".*

Also other respondents in the in depth interview said that "*For a man to be tested by another man is better even in our culture, community needs female health workers to provide HIV test for female and male to provide test to male*" .

Another respondent during in depth interview said "*The health workers at ANC have to involve males when they attend ANC they should not let them stay outside while attending their female partners*".

# CHAPTER FIVE: DISCUSSION

The involvement of males in Voluntary Counseling and Testing for HIV in ANC for PMTCT can make real difference in the effort to fight HIV/AIDS in the country. Male are recognized as main part of the family and the community in making decisions and hence improved health. Therefore males are key actors in making PMTCT of HIV programme successful.

The results in this study show some important reasons, which make male not to participate well in ANC for PMTCT. The respondents provided very important suggestions which, if are considered and implemented can change the atmosphere of ANC from being female based to family oriented clinics and effective PMTCT of HIV interventions.

## 5.1 Knowledge on MTCT among male partners HIV

The findings revealed that, the general level of knowledge on mother to child transmission among male was average (60%). The general level of knowledge among those with secondary education and above was high (77.8%) than those with below secondary education and it was statistical significance ($p<0.001$). This can be explained that high level of education influences somebody on the accessibility of information from different sources e.g. newspaper, leaflets, TV radio, seminars and workshops etc than those with low level of education.

The Majority of males (90.9 %) were aware that HIV can be transmitted from mother to child. This finding is similar with those of the survey conducted in 2004-5 which were 91% (Tanzania DHS, 2004-2005). About three quarter of male knew that transmission of HIV occurs during delivery and breastfeeding however about 62% (n=253) knew that transmission can occur during pregnancy.

Knowledge on preventive strategies using ARV was very low 39.5% (n=253) majority were not aware that using ARV can prevent transmission of HIV from the mother to child however about 64% of the respondents were aware that prevention of HIV to the baby was possible. This finding is slight higher than those of the survey conducted in 2004/05 (Tanzania DHS, 2004-5) which showed only 36% of male who knew that ARV can prevent transmission.

This finding it is also extremely higher than those reported in Zambia that only 18% of males who knew that transmission of HIV can be prevented using ARV (Zambia Sexual Behavior Survey 2003). Health education is needed to the community on ARV. It's likely that giving ARV to HIV positive pregnant women to swallow immediately before or during labour may be negatively influenced by male partners if are not aware of the potential effect of ARV in reducing Mother to Child transmission of HIV.

About three quarter (73.1%) of males have heard of PMTCT and only 60.5% of all male respondents were aware that PMTCT services are provided in health facility of their

catchments area and about half of them were aware that currently ARV are being provided in antenatal clinics to female partners who test positive. This finding is higher that those found in Mambwe district Zambia by (D.Tshibumbu, 2006) who found that 51.2% of 147 male respondents heard about PMTCT programme. This finding depicts that the community of males have not been adequately sensitized about the PMTCT services and effort have to be done to provide the community with messages pertaining to PMTCT.

### 5.2 Willingness to test for HIV if partner pregnant for PMTCT

The findings of this research depicts that Majority of males 87.7% of all 253 respondents were willing to test HIV with partners for PMTCT of HIV. This finding though high it concurs with that of Rwanda in Gitarana Province which reported that 78% of partners agreed to take HIV test (USAID, 2005). It was also found that (90.1%) of all respondents were willing to accompany partners to ANC for PMTCT.

Among those who would accompany partners to ANC if pregnant, 96.1% would wish also to undergo HIV test for PMTCT with partners. These finding shows that the first entry for involving males in PMTCT services is to influence them attend ANC with partners. However barriers that have been identified that make the majority not to attend should be immediately addressed.

The results of this study show that, higher percentage of older age group 42 years and above were willing to take HIV test for PMTCT than younger age group but it was statistically insignificant this can be explained by the fact that the older you are the more life experiences and challenges you face.

The results also shows that, level of education of male individuals had no influence on personal willingness to take HIV test. Community sensitization on taking HIV test for couples especially if partner is pregnant has to be strengthened regardless of an individual education level. It suggests that there are probable barriers that should be addressed to make males participate in testing for HIV with partners in ANC or any VCT for PMTCT.

**5.3 Perceived benefits of testing for HIV if partners are pregnant**

The results have shown that majority of males 93.3% perceived testing of HIV to be beneficial if partners are pregnant. This finding is higher than that of the study done by Asiimwe, S et al, 2004, who found that 73.6% knew about the benefits of having HIV test.

The married ones perceived testing to be more beneficial than those who were cohabiting ($p<0.05$) this could be explained by the fact that marriage put a man into more commitment and becomes more known to the community, this may lead to avoidance of multiple sexual partners.

Knowing HIV sero-status was the frequently mentioned benefits of testing, and then this could lead to taking measures to overcome MTCT of HIV. The results indicate that it is possible to persuade males and get them involved in VCT of HIV for PMTCT.

### 5.4 Perceived Barriers of VCT of HIV at ANC

The findings of this study show that majority of men mentioned that, they were not aware that they were supposed to attend ANC for VCT this was the main barrier for them not to attend ANC 76.3%. Attending ANC with a partner was reported as barrier due to stigma in the community, the community could perceive differently (as deviant) a man accompanying his partner to ANC that he is under control of his female partner. Also it is not their cultural norms for a man to attend ANC an area that is regarded as a female arena. Most males feel shy to go and stand in a multitude of women and children. They feel that their culture does not allow a man to mix with women in clinics; this was reported to be inherited from their elderly parents.

Antenatal clinics were wrongly designed right from the beginning, as men were not involved and no adequate efforts have been made to involve men. Majority of people interviewed said that even if males decide to go there you find ANC named mother and child clinic, so male feels that it is not their place. Men also trust their partners whatever we are going to be told by health workers at ANC however majority of women do not tell their partners because they think that those, are women issues and this is what has been known from the beginning that ANC are not for male, however some men were not

aware that they were also supposed to attend ANC for VCT if their partners are pregnant for PMTCT, probably women have not been sharing information with their male partners due to fear of being divorced and discriminated (Kilewo et al, 2001) probably those who test without male partners consent.

A male who accompany his partner to ANC may be labeled by the community that he is under control of his wife and it is traditionally regarded that men should be head of families and they have other specific duties in the community and ANC are female arenas. It also seems that, accompanying partners to ANC is a European culture".

On the other hand health workers in ANC have been regarded as barriers of men's participation. Some do not maintain confidentiality of their customers and even men have not been involved even if they attend ANC only their female partners have been allowed to enter into the room for consultation. Some health service providers in antenatal clinics they don't consider to involve men partners while attending pregnant women it seems this has been a custom in most of the antenatal clinics this could be due the fact that since early clinics were labeled mother and child clinics and it is not usual for men to go to antenatal clinics where multitude of pregnant women are being attended and some health workers they don't keep secret when couple attend and take a test for HIV.

**5.5 Willingness to have children if test positive for HIV.**

Having a baby while a man is HIV positive was regarded as causing suffering and killing of his own baby and risking the mother's life. Majority of men 93.7% (n=253) were not willing to bear children if tested positive for HIV. They thought that their family will be endangered and they did not like to nurse a sick baby as chances of infecting partners are high and ultimately their baby.

These findings show that men have negative attitude towards having a baby with a possibility of being infected by HIV, they will be living a doubtful life; this attitude could influence men to practice family planning with their female partners if they test positive for HIV.

Results also show that among those who were willing to have children regardless of HIV sero-status majority had secondary education or above ($p<0.05$) this can be explained by to the fact that they are more knowledgeable about MTCT and availability of PMTCT services and the influence of community that having babies is socially valued.

The results also depict that those who had fathered 5 children or more were slightly more willing 7.7% than those who has fathered 4 children and below but the difference was statistically insignificant ($p>0.05$). These findings depicts that it should be emphasized that all men who are expecting to have babies with heir partners they should also take HIV test before conception. Those who test positive are likely to change behaviour and adhere to family planning methods.

**5.6 Suggestion to make male involved in VCT of HIV in ANC**

Increasing people awareness and knowledge through health promotion and health education on PMTCT of HIV among males and the community was suggested by the majority as the entry point in involving males in VCT of HIV in ANC.

These suggestions concur with those of Kiarie J, et al, 2003 who suggested that to reach men PMTCT education programme need to be developed in the community, at workplaces, through media and by making ANC more receptive. Through health education it will make them understand and then take measures to attend ANC. IRIN report of July 25, 2005 Dean Peacock (Dean, 2003) programme manager of men as partner (MAP) suggested that in order to reach men health workers have to work outside the walls of clinic but by giving low costly interventions, like messages, posters, pamphlets to target men. In rural Keemba and Monze in Zambia (Naomi Rutenberg, 2003), program staff approached men in their communities, which led to higher levels of male involvement in PMTCT decision making and in uptake of services, providing men directly with information it confirms their important role in decision making and removes the onus of responsibility from women for bringing up PMTCT.

Government has to emphasize and implement the policy of testing couples, instead of attending women at ANC alone. If possible use some law enforcement to make males attend, this was also suggested. The current PMTCT guideline does mention very little about the issues of involving men, it targets mainly women. Previous studies show high

rate of discordant pairs and majority of women does not disclose their sero-status to their partners (Killewo et al, 2003, Farquhar C et al, 2004), if a man lives with an HIV infected woman and himself he doesn't know but only partner and the VCT counselor, this strongly compromises the effort of fighting HIV pandemic and males right.

Health workers should emphasize that, women should come to antenatal clinics with their partners; this can be made successful by redesigning ANC card(s) (MCH card no.4) to have a provision for male attendances to ANC at least twice during pregnancy period of their partner and even handing of invitation letters and routine testing of partners if they attend ANC. This will assist health workers to keep on insisting women to attend ANC with partners and men themselves will feel that they have a part to play.

However in order to get a more comprehensive picture there is also a need to explore women views on involving their male partners in VCT of HIV during antenatal period for PMTCT intervention.

# CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

## 6.1 Conclusions

The General knowledge on Mother to Child Transmission of HIV among males is average. Males are highly willing to be involved in PMTCT programme and majority perceives testing for HIV to be beneficial if their partners are pregnant. Most males are not willing to have children if tested HIV positive. This shows the potential of changing the atmosphere of ANC where PMTCT services are provided, from being female dominant to couple clinics

This study like others has identified a number of barriers that hinder males' involvement in VCT at antenatal clinics for PMTCT of HIV and AIDS. Lack of knowledge and awareness about attending for PMTCT among males, cultural norms, attitudinal factors of health workers, the community and programmatic factors are major barriers of male involvements.

PMTCT programme is unlikely to succeed without male involvement. The Ministry of Health and Social Welfare (MoH&SW) in collaboration with stakeholders has to start redesigning antenatal clinics to attract male to come with their partners. Health education and Health promotion to the community targeting males is a cornerstone to the success of PMTCT programme, this will change the mind set of males and the community that ANC is for women, cultural norms and reduce stigma.

Through prevention of mother to child transmission of HIV and AIDS, the quality of life of the people is likely to be improved by having children aged below 15 years who are nearly if not free of HIV and AIDS.

### 6.2 Recommendations

Based on the above findings, the following recommendations can be made for improving male involvements in PMTCT services in ANC.

- The Ministry of Health and Social Welfare (MoH&SW) in Collaboration with Local Government and Non Government Organizations should raise the knowledge and awareness about PMTCT to the community and target men particularly those in relationship with women of reproductive age.
- The Local Government in collaboration with the MoH&SW and other partners should consider restructuring the PMTCT clinics to accommodate males by having separate, conducive and private places for couples.
- Health service providers have to make efforts to involve males in VCT for HIV at the early beginning of the PMTC intervention and should adhere to professional ethics by keeping secret the status of their clients. Gender should also be considered in allocating staff to ANC.
- The Ministry of Health and Social Welfare, Local Government and other partners should address the negative influences of culture and customs among men in attending ANC with partners for PMTCT, in the era of HIV by giving cultural sensitive messages through health education and health promotion
- The Ministry of Health and Social Welfare should review the current policy of PMTCT to have provision and emphasis of involving men for PMTCT including restructuring the ANC cards.

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