ADDIS ABABA UNIVERSITY FACULTY OF MEDICINE

DEPARTMENT OF COMMUNITY HEALTH

ASSESSMENT OF FACTORS INFLUENCING WILLINGNESS AND UTILIZATION OF VCT AMONG PREGNANT WOMEN IN DESSIE TOWN

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DEDICATION

This paper is dedicated to my husband Abraham Sahilu who contributed unreserved support to my success and my children Loza and Yisahak who scarifies their time for my study.

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List of abbreviations

MTCT	Mother to Child Transmission
HIV	Human Immunodeficiency Virus
AIDS	Acquired immune deficiency syndrome
ANC	Antenatal Care
UN	United Nation
SSA	Sub Saharan Africa
PLWA	People Living with HIV/AIDS
UNAIDS	Joint United Nations program on HIV/AIDS
MOH	Ministry of Health
BSS	Behavioral Surveillance Survey
MCH	Maternal and Child Health
ART	Anti retro viral therapy
FGD	Focus Group Discussion
PMTCT	Prevention of Mother to Child Transmission
DHS	Demographic and health survey
FHI	Family Health international
VCT	Voluntary Counseling and Testing
WHO	World Health Organization
OR	Odds ratio
CI	Confidence Interval
FGAE	Family guidance association of Ethiopia
EDHS	Ethiopia Demographic and Health Survey
CHW	Community Health Worker

Abstract

Background-: HIV has spread throughout the world causing untold suffering and death and creating profound development challenges. Worldwide African women are the group most severely affected by the epidemic. Women who are infected by HIV are infecting their infants in turn. Mother to child transmission is the most common cause of HIV/AIDS in children less than 15 years of age. Mother to child transmission can occur during pregnancy, labor and breast-feeding. However the risk of MTCT can be lowered significantly through comprehensive reproductive health services which include voluntary counseling and testing for pregnant women, Anti-retroviral prophylaxis and breast feeding counseling.

Objective: - The purpose of this study is to assess factors influencing willingness and utilization of VCT for PMTCT among pregnant women.

Methods: - A cross sectional comparative study was conducted From September to October 2006. Study subjects were pregnant women who were identified by house to house registration from randomly selected Ketenas of ten centers in Dessie town. Relevant data were collected using structured questionnaire contains variables related to socio demographic knowledge attitude and practice on HIV/AIDS, VCT and PMTCT. Analysis was made using Epi info version 6and SPSS version 11computer software.

Results:-f Out of 438 participants 259(59.1%) had undergone VCT in the past. From the total women who had VCT, 213(82.8%) ANC, users. Were as 46(17.2%) were non users OR (95%CI) = 3.29(1.81-6.0).Women Who were in grade nine and above more likely to utilize VCT compared to illiterate OR (95%CI)=2.69(1.375.27).the association increased as the educational level increases .Women who were primi gravida were more likely to utilize VCT compared to those who had more than five pregnancies OR(95%CI)= 6.86(1.88-16.73). Discussion with partner was significantly associated with VCT utilization OR (95%CI) = 12.98(7.74-23.58).

Conclusion: - socio demographic factors such as education, having ANC, knowledge about VCT and PMTCT encouraging the women to utilize VCT. Lack of appropriate knowledge about VCT and PMTCT, stigma and discrimination associated with HIV, fear of partner reaction preventing women from utilizing VCT. Women empowerment, expansion of ANC to address marginalized women, coordinated and targeted IEC program to increase knowledge, promotion of male partner counseling and community involvement are recommended.

1. Introduction

Human immune deficiency virus (HIV) has spread through out the world causing untold suffering and death, and creating profound development challenges. Globally an estimated 42 million people are infected with HIV and 16,000 new infections occur every day (1). Developing countries bear more than 90% of the global burden of HIV/AIDS, which threatens to undermine the development gains of recent decades. These countries face not only the immediate challenge of caring for people affected by HIV/AIDS but also long term development crisis (1, 2). African women are the group most severely affected by the epidemic accounting 66% of those infected between the ages 15 and 24 years (3).

Victims of HIV/AIDS Epidemics in sub-Saharan Africa are young and females. From an estimated 8.6 million young people in the region, 5.7 million are young women. This accounts for 75% of HIV infection and approximately three times more likely to be infected than young men of the same age (4).

HIV started to spread in Ethiopia in the early 1980's. The first evidence of HIV infection was found in 1984 and the first AIDS case was reported in 1986 (5). Although HIV prevalence was very low in Ethiopia during the early 1990s, It has been increasing rapidly since the early 1990s (5). It was estimated that by 1989, adult HIV prevalence had increased to 2.7%. The estimated adult prevalence increases to 7.1% in 1997 and 7.3% in 2000 (5).

Report from ministry of Health (MOH) (2003) showed that urban prevalence rate continued to be high at 12.7% while the HIV prevalence rate for rural areas remained relatively low at 2.4% (6). According to the report from MOH 2004 the estimated and projected adult HIV prevalence at national level was 4.4%, urban prevalence was 12.6%

where as rural prevalence was 2.6%. Prevalence is higher among women (5%) than men (3.8%). Estimate of people living with HIV/AIDS (PLWA) in the same year was 1.5 million including 96,000 children. Younger females who are living with HIV/AIDS out number males (6).Globally, Ethiopia has the 16th highest HIV/AIDS prevalence and the third largest number of people living with HIV/AIDS (7). According to 2003 MOH Report in Ethiopia, a total of 128,000 HIV positive pregnancies and an estimated 35,000 HIV positive births occurred in the year. Among 0 – 14 years, there were 35,000 new HIV infections, 25,000 new AIDS cases and 25,000 AIDS deaths and about 537, 000 children were orphans due to AIDS (6). The report also indicated an estimated number of 51,000 HIV positive pregnancies and 14,000 births occurred in Amhara region. Furthermore some 179,000 AIDS related orphans and 36,000 children with AIDS were estimated in the Amhara region (6).

Most of HIV infections in sub Saharan Africa including Ethiopia occurs during heterosexual intercourse between couples relationship. Women, who are infected by HIV sero positive partners risk infecting their infants (8).

2. Statement of the problem

Knowledge about HIV/AIDS has been expanding in the past two decades, as has the number of infections globally. In 2003, an estimated 4.8 million people were newly infected with HIV. This is more than any year before. Some 37.8 million people are living with HIV, which killed 2.9 million in 2003 and over 20 million since the first AIDS case identification 1981 (3).

One of the tragedies of AIDS is that the virus can pass from the mother blood stream and other body fluids including breast milk to the baby and cause infection. Although many factors that increase the risk of infection are known and intensive research in this field continues, HIV can pass from the mother to the baby at all stages of pregnancy and breast feeding (9). However, most babies born to HIV positive mothers are not infected with HIV. The reasons why one baby is infected and another is not are insufficiently understood (9).

Mother to child transmission (MTCT) of HIV-1 is the most common mode of transmission, which can occur before, during and after delivery (10). Transmission is rare during early pregnancy and relatively frequent in late pregnancy and during delivery. Breast-feeding contributes substantially to the over all risk. In the salience of specific interventions the estimated rate of MTCT ranges from 15% to 40% (10). HIV transmission to babies is the second most Common mode of HIV transmission in sub-Saharan Africa after sex between men and women. Ninety percent of infection in babies and young children are acquired from the mother (9).

In 2003, an estimated 630,000 children worldwide become infected with HIV, the vast majority of them during pregnancy, labor and delivery or as a result of breast-feeding (4). Meanwhile some 490,000 children died of AIDS related causes (22, 23). The HIV

prevalence varies considerably across the continent ranging from less than 1% in Mauritania to almost 40% in Botswana and Swaziland. One in five pregnant women are HIV infected in most southern African countries, which else where in sub-Saharan Africa median HIV prevalence in ANC exceeds 10% (15).

According to the Federal Ministry of Health 5th report on AIDS in Ethiopia, based on ANC sentinel surveillance samples obtained in 2003, 8.2% (4.1% rural and 12% urban) were found to be HIV positive (6). The estimated national HIV prevalence in 2003 was 4.4% of which 12.6% were urban and 2.6% were rural. The cumulative number of people living with HIV/AIDS is about 1.5 million (3.8% male and 5% female). Of which about 96,000 are children less than 15 years. The estimated number of new AIDS cases in the adult population in 2003 was 98,000 (46% male and 54% female) (6). The report also indicated that there were a total of 128,000 HIV positive pregnancies and an estimated 35,000 HIV positive births. Among children 0 – 14 years, there were 35,000 new HIV infection, 25,000 new AIDS cases and 25,000 AIDS deaths and about 537, 000 children were orphaned due to AIDS (6). The report also showed Sero prevalence data in Addis Ababa among 15 – 24 years pregnant women was 11% in 2003 after having peak at approximately 24% in 1995 (5).

The UN General assembly a special session on HIV/AIDS held In June 2001 set the goal of reducing the proportion of infants infected with HIV by 20% by 2005 and by 50% by 2010 (2). Achieving these target will require immediate and dramatic scale up of activities such as expanding primary HIV prevention services for women of child bearing age, access to voluntary counseling and testing for pregnant women, comprehensive

reproductive heath services and antiretroviral prophylaxis to prevent mother to child transmission of HIV (3,10).

Despite the current progress in expanding access to anti retroviral treatment regimens, only less than 10% of pregnant women were offered this service. According to UNAIDS report on global AIDS epidemic (2004) in Ethiopia, Malawi, Burkina Faso, Nigeria and South Africa, less than 1% HIV infected mothers who gave birth in 2003 had access to regimen to PMTCT (3). Some of the barriers which hinder scaling up of the preventions program includes, inadequate pre-natal service coverage, Lack of financial and human resources, Low knowledge of sero status among women, fear of stigma and discrimination and the tendency of many women to give birth at home (24).

In Ethiopia only 28 % of women who gave birth in the past five years received antenatal care from heath professionals at least once according to DHS 2005 report (17). This shows scaling up of PMTCT program will be difficult since only one fourth of pregnant mother receives antenatal care service by health professionals. Another important point is awareness about MTCT is less in some population. For this reason assessing the women's knowledge and willingness to VCT for PMTCT, knowing their perception and identifying barriers that affect the acceptance and implementation of PMTCT programme will help to draw valuable information to scale up the programme.

3. LITERATURE REVIEW

3.1 Overview of Mother- to -Child Transmission.

Mother – to – child transmission (MTCT) of human immune deficiency virus (HIV) is the most significant route of infection in children. More than five million children under the age of 15 have acquired HIV since the AIDS epidemic begin, and almost 4 million of them have already died of AIDS (10). The vast majority of infected children acquire the virus from their mothers. Although Africa accounts for only 10 percent of world's population, to date close to nine tenth of all HIV infected babies have been born in the region (10).

HIV – 1 prenatal transmission rates in the absence of any interventions, range from 25% to 40% in developing countries and 15 % to 25% in developed countries (10). Although several factors could explain this difference, HIV postnatal transmission through breast-feeding is currently considered to play major role in the higher rates observed in developing countries including Ethiopia. It is assumed that 15 – 25 percent of infants born to HIV positive women are infected during pregnancy or delivery (10).

In South Africa the risk of vertical transmission from HIV infected mother to their infants estimated to be between 19% and 36% depending on whether or not the child is breast fed (8).

3.2 Women and HIV/ AIDS

Women are more physically susceptible to HIV infection than men. A number of studies suggest that male- to- female transmission during sex is about twice as likely to occur as female –to- male transmission. For many women including married women their partner's sexual behavior is the most important HIV risk factors

In recent years the overall proportion of HIV positive women has steadily increased. In 1997, women were 41% of people living with HIV. By 2002 this figure rose to almost 50% (3). This trend is most marked in place where heterosexual sex is the dominant mode of transmission particularly in the Caribbean and sub-Saharan Africa where 57% of adults infected are women and 75% young people infected are women and girls (3). Several social factors are driving the trend furthermore sexual violence increase the risk of HIV transmission (3).

A survey of women attending ANC in Sweto, South Africa, found significantly high rate of HIV infection in women who were physically abused, sexually assaulted or dominated by their male partners (9). The study also produced evidence that abusive men are more likely to be HIV positive (9).

The term MTCT and PMTCT ignore the reality of how the mothers become infected in the first place, usually they are infected by the father of the child. In Africa, the tragic result of a chain of events that most often involves, an HIV infected man infecting his female partner through unprotected sexual activity intern the women infecting her next baby and potentially several more babies during the reminder of her reproductive life.

To reflect the important role of men in this chain of transmission some organizations have replaced the biologically precise terminology “MTCT” with behaviorally sensitive term “parent to child transmission (16). In PMTCT to reduce new infection in babies the risk of infection to the mother must be first reduced. Married women in most African countries can rarely make decisions about HIV testing and the up take of anti retroviral drugs or changed feeding practices without wider family involvement, particularly that of their spouses (16,24).

3.3. Prevalence of HIV infection among pregnant women.

Evidence from different countries indicates that the number of people living with HIV continues to rise in all parts of the world despite the fact that effective prevention strategies exist. Sub Saharan Africa remains the hardest hit region with extremely high HIV prevalence among pregnant women aged 15 – 24 reported in a number of countries (4, 22).

HIV transmission from mothers to babies is the second most common mode of HIV transmission in sub - Saharan Africa, next to sex between men and women (9). More than five million children less than 15 years have acquired HIV since the AIDS epidemics began and almost four million of them have already died of AIDS. The vast majority of infected children acquired the virus from their mothers (4, 10, and 12).

In Africa, to date, close to nine tenth of all HIV infected babies have been born in that region, largely as a consequence of high fertility rates combined with very high infection rates in urban centers. In southern Africa, for example HIV infection rates of 20 – 30% are common among pregnant women tested anonymously at antenatal clinics (18). Rates of 50% have been recoded in parts of Zimbabwe, and over 40% in Botswana (9, 10). In another study conducted in Rwanda to evaluate the risk factors associated with prevalence of HIV – 1 infection among pregnant women shows overall sero prevalence was 9.3% in 5690 pregnant women who sought ANC (4, 10). In South Africa the risk of vertical transmission from HIV infected mothers to their babies estimated to be between 19% and 35 % (18). In Swaziland, the average prevalence among pregnant mother was 39% in 2002 showing an increase from 34% in 2000 (18, 22). The same is true in Botswana where ANC prevalence has been sustained between 35% and 37% in the period of 2001

to 2003 (1). According to data from UNAIDS, there are very few places outside sub-Saharan Africa where the prevalence of HIV infection among pregnant women has reached even ten percent (15).

The prevalence of HIV infection among pregnant women in Ethiopia was found to be 17.8%, 17.5%, and 15.1% in 1996, 1997, and 1999 respectively (5). Recent data from AIDS in Ethiopia 5th report in the year 2003 for 23, 861 samples collected from 66 sites HIV prevalence varied across sites from 0.5% to 30.2%. Crude data suggest that 8.6% of ANC attendees were HIV positive in the 15 – 24 year old age group (11.5% urban and 4.5% rural) (6).

3.4. Acceptance of VCT and the role of partners.

For Preventing HIV infection within parents to be most important is to protect the mother and sexual partners from infection in the first place and particularly during pregnancy and lactation, when risk of passing the virus to the baby is highest. Voluntary counseling and testing (VCT) services are also important at different stages integrating into antenatal care; VCT can play a major role in preventing transmission to babies among HIV positive mothers and in motivating couples in which the mother is HIV-negative to ensure that she stays negative.

The critical issue here is involving men in VCT and PMTCT program. Antenatal and family planning clinics typically target women, not couples. Many studies reported on the difficulty of including men in antenatal VCT services in many countries. A study from Zimbabwe indicated that only 30% of over 600 women had managed to bring in their partners to VCT services (9). Another study from Rwanda indicated that of 1223 women

screened for HIV, at post-test counseling said they wanted their partners to be tested but only 8% of partners came forward for testing (9).

In South Africa, less than 50% of HIV positive women felt able to tell anyone about their status and of these, only a minority could discuss it with their partners (10, 12). Another study in Botswana MTCT program reported that, uptake of VCT by pregnant women was under 50% and one key factor was the low involvement of men (9). Women who were interviewed in the study indicated that, they felt they would be blamed if they were found to be sero positive, as they would be considered the person who has brought HIV infection to the family (9).

A study conducted on determinants and outcomes of disclosing HIV sero positive status to sexual partners among women in Metu and Gore towns in south western Ethiopia found that among 67 female living with HIV 29 (43.3%) of the women disclosed their test results to their sexual partners, where as 11 (26.2%) of them said they did not disclose their results. The most common barriers to disclosure mentioned by the women include fear of abandonment, fear of stigma and rejection, fear of confidentiality, fear of embarrassing family members and fear of accusations of infidelity (13).

Disclosure of HIV test results to a sexual partner is an important prevention goal for a number of reasons. The benefit includes expanding and sharing the burden of helping people living with HIV/AIDS (PLWA) beyond professionals care providers, providing access for care and support programmes, planning for future care, and enhancing the quality of life of PLWAS and their partners. In relation to PMTCT shared confidentiality is considered beneficial in order to prevent unwanted pregnancies and arrest the spread of HIV transmission to uninfected partners. Another benefit is in assisting HIV infected

women to plan for their future and their partners, to gain access and adhere to therapeutic regiments such as anti retroviral therapy (ART) and replacement feeding for infants (12).

Along with those benefits, however there are a number of potential risks resulting from disclosure for HIV infected women including loss of economic support, blame, abandonment, physical and emotional abuse, discrimination and stigma as well as loss of custody of children and property (10). UNAIDS (2002) report on the dangers inherent in such an approach, women in many countries have been abused, assaulted and divorced because their husbands blame them for the infection (2). These risks may lead women not to use VCT services and for those who undergo VCT not to disclose their sero status to their partners. This in turn leads to a loss of opportunities for the prevention of new infections to their partners and their infants. In addition, there is a loss of greater access to social, medical, psychological, financial and legal support.

3.5. Knowledge about MTCT and its prevention

MTCT of HIV can occur during pregnancy, during labor and delivery, and after birth through breast-feeding. The best way to avoid MTCT of HIV is to prevent women of reproductive age from being HIV infected. Among antenatal care attendant mothers at two poly clinics in Ghana, Accra, less than 3% of them spontaneously mentioned MTCT as an HIV transmission route (9). The finding of behavioral surveillance survey (BSS) in Ethiopia 2001 about mode of transmission of HIV, only few youth participants mentioned MTCT during pregnancy and breast- feeding (14). Prevention and control of HIV infection depends on the success of strategies to prevent new infections and to treat currently infected individuals. VCT provides essential knowledge and support to

individuals at risk for contracting HIV enabling uninfected individuals to remain un infected, and those infected to plan for the future and prevent HIV transmission to others. HIV infected women who know their sero status are in better position to make informed choices about their reproductive lives and if pregnant access specific intervention such as antiretroviral prophylaxis and infant feeding counseling and support which can significantly reduce the risk MTCT

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For the millions of African women who are already infected and for those who will become infected in the future, core interventions are now available to help protect their infants (12). In addition to the obvious and compelling effect the MTCT prevention can have on saving children lives, many MTCT prevention intervention will also have much more broad-reaching effects on improving over all maternal and child heath (MCH) through improving ante-natal delivery and post partum care. Core MTCT preventions described as comprehensive MCH (ante-natal, post-natal and child heath) services, voluntary confidential counseling and testing, counseling and support about safe infant feeding practice, optimal obstetrical care, short course antenatal ARV therapy for HIV infected pregnant women, Family planning counseling and services that are linked to VCT (12).

All the MTCT prevention and care programs rely on the health system. In Ethiopian situation, where MCH and delivery services gained by skilled health professionals are at very low as indicated by DHS 2006 report, only 28 percent of women received antenatal care from health professionals and only less than 10%had institutional delivery (17). PMTCT program implementation needs mass mobilization and community involvement including influential person within the community and at household level.

4. Significance of the study

MTCT is the largest source of HIV infection in children below the age of 15 years. The virus may be transmitted during pregnancy, childbirth or breast-feeding. Recently, however, many advances have been made in developing effective and affordable interventions that reduce the likelihood that a woman will pass HIV on her baby (4). The most important interventions for the reduction of MTCT are avoidance of breast-feeding and anti retroviral regimen, which requires the woman to know her sero prevalence status (12, 15).

The risk of mother to child transmission can be reduced by about 50% by giving ART for the mother during pregnancy and labor and within 72 hours of delivery for the newborn and avoiding breast feeding (3, 25). VCT for pregnant women is an entry point for instituting MTCT prevention programme. However, most PMTCT programmes are rely on health institutions. In Ethiopian situation only 28% of pregnant women who gave birth in the past five years received ante natal care. This may hinder scaling up of PMTCT program in the country. Experience to date in many countries indicate great variation in willingness to accept VCT services and engaging in PMTCT programmes. Therefore, this study is designed primarily to assess knowledge and perception of pregnant mothers and identifies factors that influence their willingness to accept VCT for PMTCT (Figure 2).

5. Objectives

5. 1 General objective

To assess factors influencing willingness and utilization of VCT for PMTCT among pregnant women in Dessie town.

5.2 Specific objectives

- To assess knowledge about HIV/AIDS, VCT and PMTCT among pregnant women
- To examine intention and utilization of VCT among pregnant Women.
- To identify factors influencing VCT utilization among pregnant women.

6. Methods and materials

6.1 Study design

A cross-sectional comparative study design, using quantitative and qualitative data collection methods was employed to examine knowledge and perception about HIV/AIDS, VCT PMTCT and to assess factors influencing willingness and utilization of VCT among pregnant women.

6.2 Study area

The study was conducted in Dessie Town South Wello Zone in Amhara National Regional State, in Ethiopia. Dessie is the capital town of South Wello zone located 400 Km away north of Addis Ababa and 480 Km away from Bahir Dar, the capital of Amhara Regional state. Total population of the town according to 1994 census, in 2005 projected to be 152,137(19). Previously Dessie town was divided in 20 kebeles, which is now merged into 10 centers. Each center estimated to have 12000-15000 populations. There were one regional hospital, one health center and six governmental health posts. In

addition, there were five higher clinics, one general hospital, two medium clinics and nine lower clinics owned by private sectors.

6.3 Source population

Source populations of the study were all pregnant women in Dessie town.

6.4 Study population

The study populations were pregnant women who were in their second and third trimester of pregnancy at the time of the survey. The second and third trimesters of pregnancy were chosen as it is unusual for most women to expose that they were pregnant before three months of pregnancy due to cultural or other reasons. Before the actual data collection, all pregnant women in selected ketenas from the ten centers were registered. In addition women's gestational age reported by the women themselves, having ANC, address of their residence, house number and the name of family head were registered. Those women in second and third trimester of pregnancy were identified as eligible for the study.

6.5 Sample size determination

Sample size calculation was made using Epi info version 6.4 statistical soft ware program for two-population proportion.

$$n1=\frac{\left[(Z\alpha/2\sqrt{(+1/r)P(1-P)} + Z\beta/r\sqrt{p1(1-p1)+p2(1-p2)}\right]^2}{(P1-P2)^2}$$

To determine the sample size the following assumptions were taken.

1 Pregnant women in the town were estimated to be about 2% of the total population (19).

2 Duration of pregnancy was divided in to three trimesters and each trimester has three months. From the total expectant mothers those in second and third trimester pregnancies were roughly estimated to be two third of all pregnant women. Assuming that there is no special event or seasonal variation in the year to become pregnant.

3 Considering it as a major predictor of willingness for VCT. Pregnant women were categorized into ANC attendants and non attendants. ANC attendance was taken as an exposure status.

4. Proportion of willingness for VCT utilization among ANC followers taken as 50 %. Assuming 15% difference in proportion of willingness for VCT utilization among not users taken as 35% ratio of ANC users to non users = 2:1

n1=sample size of ANC users.

n2=sample size of not users

r=ratio of n1 to n2 considered to be 2:1

P1=Proportion of VCT utilized in ANC users =50%

P2=proportion of VCT utilized in non ANC users =35%

$\propto$ = 5% and power of the study = 80%.

Confidence level =95%

To allow for possible non-response due to refusal or absenteeism during the actual survey we will increase the sample size by 10%.

Based on the above assumptions 454 pregnant women (302 ANC follower and152 non followers) were required for the study as eligible study participants.

6.6 Sampling procedure

From all ten centers in the town the number of ketenas from each center listed out and a total of 101 ketenas were identified. Using proportional sampling method 53 ketnas were randomly selected as a study unit. Before the actual data collection all pregnant women who were in their second and third trimester were registered in the selected ketenas. A total of 658 pregnant women (451ANC followers and 207 non followers) were identified. From these using systematic random sampling methods 302 ANC users and 152 non users were selected as a study subject (Figure 1).

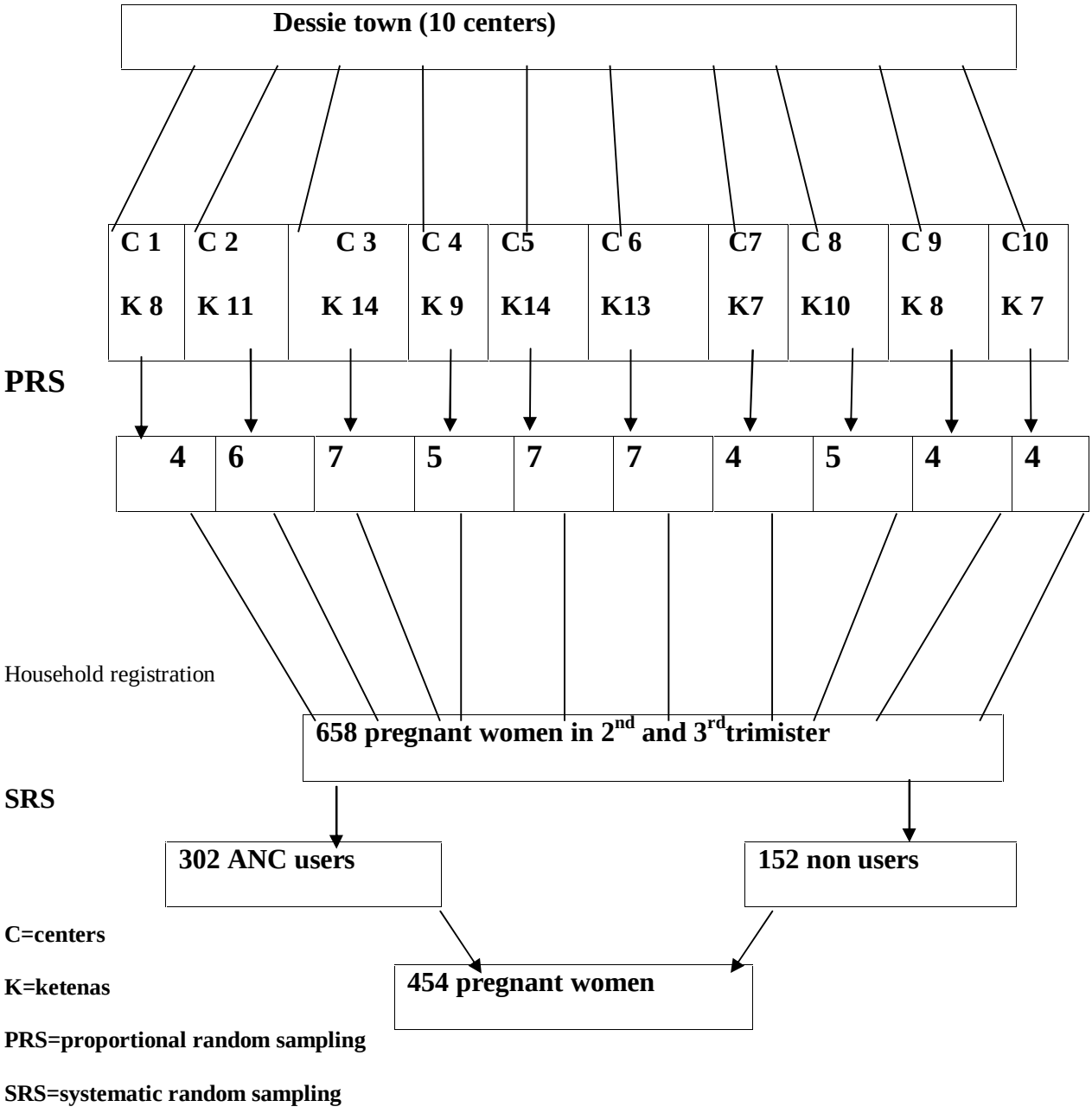
6.7 Data collection

Data was collected from the study participants using pre-tested structured questionnaire. The questionnaire was adapted from BSS, EDHS and VCT guideline with reasonable modifications. The questionnaire contains variables on socio demographic characteristics, knowledge, attitude and practice about ANC, HIV/AIDS, MTCT, VCT and PMTCT. The questionnaire was first prepared in English and translated to Amharic then back to English by other person who was fluent in English. This questionnaire was pre tested on pregnant Women in the town who were not eligible for the study before the start of actual data collection. Findings and experiences from the pre test was utilized in modifying and reshaping the research data collection tools.

Ten female data collectors and two supervisors were recruited from Dessie Health College. Data collectors were 3rd year diploma nursing students and supervisors were nursing instructors. The reason why nursing students were chosen was at the end of data collection health education was given for the respondents. Training was given for data collectors and supervisors about the objective of the study, how to fill the questionnaire and maintain privacy and confidentiality during the interview. For the registration of pregnant women ten community health workers and reproductive health agents were employed with the data collectors to guide the location of ketenas and households.

For qualitative Study participants for FGD were selected purposively from Dessie Hospital out patient department and MCH units and from Dessie Health center MCH units. Semi-structured questionnaire was used to facilitate discussions. During the group discussions the investigator was moderating the discussion and the supervisor was assigned for note taking and discussions were tape recorded.

Figure 1 Schematic diagram of data collection procedure



6.8 Supervision and data quality control

The supervisors and the principal investigator supervised the data collection processes. During the first registration phase some randomly selected households were checked to make sure that no household missed by data collectors. During the actual data collection time each questionnaire was reviewed every day by the principal investigator for completeness and further edition. Furthermore, some respondents (10%) of the women were randomly revisited by principal investigator and supervisors to make sure that data collectors actually meet the respondents and made interview.

6.9 Study variables

6.9.1 Dependent variables

-VCT utilization among pregnant women in Dessie town.

6.9.2 Independent variables

- Age
- Marital status
- Educational status
- Number of pregnancies and deliveries
- Monthly income
- Religion
- Ethnicity
- Having ANC
- Knowledge about HIV/AIDS, VCT and PMTCT.
- Perceived benefit and risk of VCT, HIV

6.10 Data entry and analysis

The data were cleaned, entered and analyzed using Epi info version 6 and SPSS version 11 computer software by the principal investigator. Socio demographic characteristics of the respondents were analyzed in terms of frequencies and percentages.

Respondents were assessed for their knowledge about HIV, VCT and PMTCT. Knowledge based questions for each were, scored and mean score value were calculated and presented as frequency distribution. Cross tabulation, X^2 and p-value analysis was made with socio demographic and other relevant variables. Crude and adjusted odds ratio with 95% confidence interval, was computed to assess the presence and strength of association and to see for confounders with dependent variable VCT utilization.

To determine factors influencing VCT utilization between ANC users and non users' socio demographic and reproductive characteristics, knowledge on HIV, VCT and PMTCT were analyzed and its association with dependent variables was calculated using 95% CI, odds ratio and X^2. Furthermore, multiple logistic regression was made to assess the separate effects of variables keeping one constant variable.

To analyze the qualitative data the investigator transcribed each tape-recorded discussion and transcribed word for word in Amharic language and then translated it to English. The transcribed documents were carefully reviewed for patterns, possible relationships between themes, contradictory responses or gaps in understanding. Content analysis was performed by categorizing concepts or themes and then assessed for similarities and differences. Summary was written in a concise form to make it understandable.

7. Ethical consideration

Ethical clearance to conduct this study was obtained from the faculty of medicine at Addis Ababa University. Official letters to make a study was obtained from the Zonal and Woreda Government officials as needed. Informed verbal Consent was obtained from the participant. At the end of data collection the data collectors gave health education for each mother on HIV, MTCT, importance of VCT and advantage of ANC. Maximum effort was made to maintain privacy and confidentiality during data collection and analysis period. Study participants were told about the right not to participate in the study or to discontinue the interview at any time if they did not want it.

8. Dissemination of findings

At the end of the study original findings will be disseminated to AAU medical faculty DCH, EPHA CDC project, MOH, Amhara regional health bureau, south Wello health desk, Intra health international and accredited Journals for publication.

Operational definitions

Anonymous HIV testing – Clients identifying information is not linked to test information.

Confidential HIV testing – Clients identifying information is linked to testing information.

Attitude – Consistent feeling directed towards a person, idea object or situation.

Stigma – negative feeling toward people with HIV/AIDS, Intention to avoid people living with HIV/AIDS from social relationship.

Town – Residence where more than 2000 people live.

Sufficient knowledge about HIV, VCT and PMTCT – when the respondent women scores more than the mean value for each item.

ANC attendants – Those women who have at least one visit to health institution for pre natal checkup at present pregnancy.

ANC non attendants – those women who have no visit to health institution for pre natal checkup at present pregnancy.

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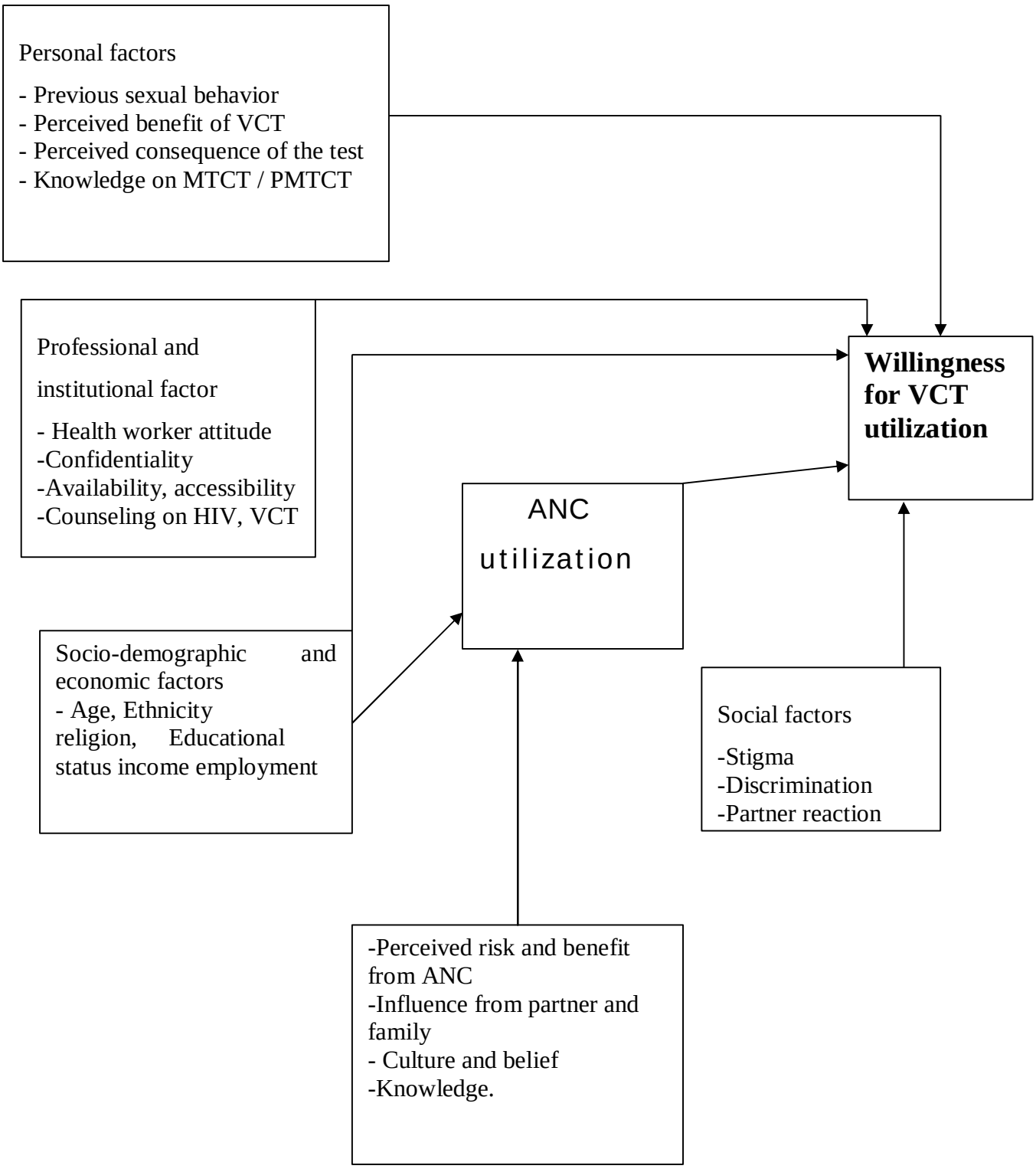
Figure 2 Conceptual frameworks for willingness and utilization of VCT and PMTCT among pregnant Women



8. RESULT

8.1 Socio - demographic characteristics of pregnant women

A total of 438 pregnant women participated in this cross-sectional comparative study with 97% response rate. Twelve women refused to participate and another four women were not available at home for three repeated visits. From the total respondents 300 (68.5%) had antenatal follow up while the remaining 138 (31.5%) had no antenatal follow up.

Table 1 shows the socio-demographic characteristics of the study participants. Of all respondents nearly half 213 (48.6%) were between the age of 15-24 years and 189 (43.2%) were between 25-34 years of age. The range was from 15-47 years with a mean (± SD) of 25.3 ± 5.8 years. Almost all respondents 418 (95.4%) were from Amhara ethnic group and the remaining 4.6% were from Tigray, Guraghe, and Oromo. Half of the respondents were Orthodox Christian 222 (50.7%) and 202 (46.1%) were Muslims. The majority of the study participants were married 402 (91.8%).

About two-thirds 286 (65.3%) of the study participants were house wives, 57 (13%) were employed and 49 (11.2%) daily laborer. The rest were student (21, 4.8%) and private business owners (19, 4.3%). With regard to their educational status 151 (34.5%) were grade nine to twelve 147 (33.6%) grade one to eight other 73 (16.7%), 28(6.4%), 39 (8.9%) were illiterate, read and write and above twelve grade respectively. Of 438 participants 167 (38.1%) earned monthly income less than 300 birr. other 65 (14.8%) earned more than 1000 birr per month Table 1.

8.2 Reproductive characteristics of the study participants

Of all participants 176 (40.2%) were primigravida, where as 236 (53.9) were gravida 2-4 and the rest were five and above (Table 2). Almost all women 399 (91.1%) knew the existence of ANC service in their locality. For those women who knew about ANC service, their source of information included health facility 319 (79%), mass media 130 (32.6%), partner 86 (21.6%), friends 78 (19.5%) and neighbors 92 (23.1%).

Of those 300(68.5%) women who had ANC at present pregnancy 112 (37.3%) went to government health center, 79 (26.3%) had follow up at government hospital, other 74 (24.7%) went to private clinic the rest went to FGAE and other NGO clinics (figure 3).

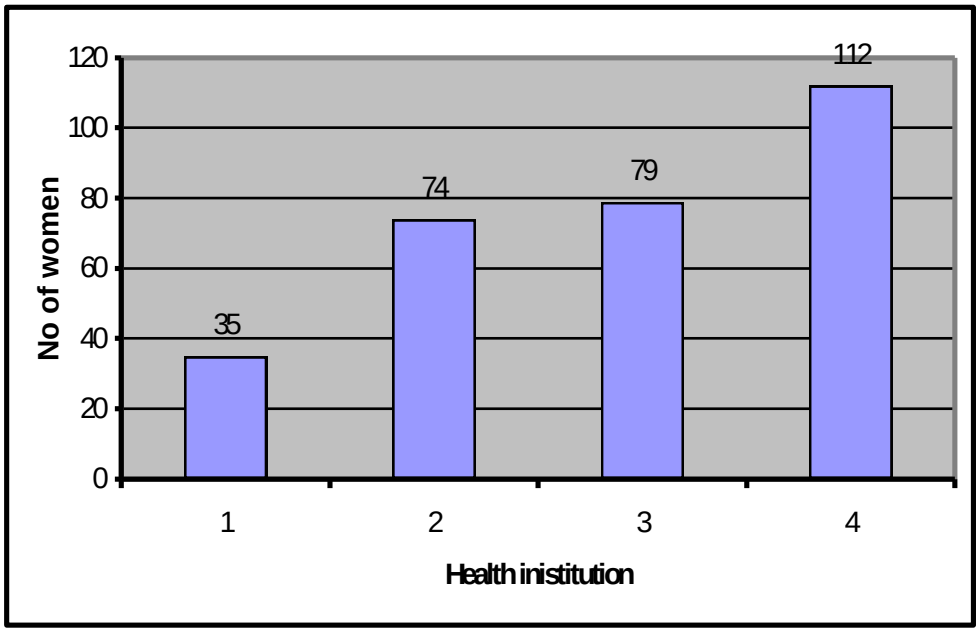
For those women who had no ANC follow-up during the current pregnancy their reason mentioned were 50 (36.2%) perceive as they were healthy, other 29 (21%) mentioned no problem experienced in previous pregnancies some 22 (15.9%) described lack of money was their main reason.

Table 1. Socio demographic Characteristics of Pregnant women in Dessie Town October, 2006 (n = 438)

Variables	ANC user n=300		ANC non user n=138		Total	
	Number	Percent	Number	Percent	Number	Percent
Age of women						
15 - 24 Years	147	49	66	47.8	213	48.6
25 - 34 Years	130	43.3	59	42.8	189	43.2
35 - 39 Years	23	7.7	13	9.4	36	8.2
Ethnicity						
Amhara	283	94.3	135	97.8	418	95.4
Tigray	11	3.7	3	2.2	14	3.2
Others	6	1.9			6	1.4
religion						
Orthodox	157	52.3	65	47.1	222	50.7
Muslims	131	43.7	71	51.4	202	46.1
Other Christians	12	4	2	1.4	14	3.2
Marital status						
Married	287	95.7	115	83.3	402	91.7
Single	7	2.3	16	11.6	23	5.3
Divorced	4	1.3	5	3.6	9	2.1
Widowed	2	0.7	2	1.4	4	0.9
Education						
Illiterate	25	8.3	48	34.8	73	16.7
read & write	15	5	13	9.4	28	6.4
Primary(1-8)	93	31	54	39.1	147	33.6
Secondary(9-12)	130	43.3	21	15.2	151	34.5
Above 12	37	12.3	2	1.4	39	8.9
Occupation						
House wife	196	65.3	90	65.2	286	65.3
Employed	50	16.8	7	5.1	57	13
Daily laborer	19	6.3	30	21.7	49	11.2
private business	15	5	4	2.9	19	4.4
Student	17	5.7	4	2.9	21	4.8
Others	3	1	3	2.2	6	1.3
Family income						
1001 and above	73	24.3	3	2.2	76	17.4
601-1000	55	18.3	10	7.2	65	14.8
301-600	86	28.7	44	31.9	130	29.7
001-300	86	28.7	81	58.7	167	38.1

Table 2 Reproductive Characteristics and utilization of ANC
Among pregnant women in Dessie town October, 2006
(n = 438)

Reproductive Characteristics	ANC users		ANC non users		Total	
	Number	Percent	Number	Percent	Number	Percent
No of pregnancies						
One	122	40.7	54	39.1	176	40.2
Two Four	165	55	71	51.4	236	53.9
Five& above	13	4.3	13	9.4	26	5.9
Know existence of ANC						
Yes	300	100	99	71.1	399	93.8
No	0	0	39	28.3	39	8.9
Perceived importance Of ANC						
Important	300	100	111	80.4	411	93.8
Not important	0	0	27	19.6	27	6.2



1 = NGO clinics 2 = Private clinics 3 = Govt. hospital
4 = Govt. health center

Figure 3-health institutions for ANC follow-up by pregnant Women in Dessie Town October 2006 (n = 300)

8.3 Knowledge on HIV/AIDS, MTCT and its mode of transmission

Almost all 435 (99.3%) participants knew the disease HIV/AIDS as it is shown in table 3. 414 (94.5%) mentioned they knew mode of transmission almost 413 (99.8%) mentioned sexually. unsafe injection, sharing sharp instruments and mother to child transmission accounts for 397 (96.1%), 378 (91.8%) and 349 (84.2) respectively. Misconception about mode of transmission observed through mosquito bite 156 (37.68%) and living in the same room 48 (11%).

Regarding to knowledge of mother to child transmission 235(53.7%) mentioned during pregnancy, 289(66%) during labor and 323(73.7%) mentioned during breast feeding. Furthermore 56(12.8%) mentioned MTCT could occur through kissing and 22(5%) during child caring (Table 3).

Table 3. Distribution of pregnant women based on their knowledge on HIV/AIDS and its Mode of transmission in Dessie town October ,2006 (n = 438)

Variables	ANC user		ANC non user		Total	
	Number	Percent	Number	Percent	Number	percent
Know HIV /AIDS						
Yes	300	100	135	97.8	435	99.3
No	0	0	3	2.2	3	2.2
Knows means & transmission						
Yes	293	97.7	121	87.7	414	94.5
No	7	2.3	17	12.3	24	5.5
Means of transmission						
Sexual	292	97.3	121	87.7	413	94.3
Unsafe injection	285	2.3	112	81.2	397	90.6
Share instruments	272	90.7	106	76.8	378	86.3
Mosquito bite	94	31.3	62	44.9	156	35.6
MTCT	255	85	94	68.1	349	79.7
Live the same room	33	11	15	10.9	48	11
Blood transfusion	202	67.3	79	57.2	281	64.2
Can HIV cure						
Yes	72	24	24	17.4	96	21.9
No	209	69.7	98	71	307	70.1
I don't Know	19	6.3	16	11.6	35	8
MTCT indicated when could occur						
During Pregnancy	190	63.3	45	32.6	235	53 .7
During Labor	221	73.7	68	49.3	289	66
During breast feeding	235	78.3	88	63.8	323	73.7
During child Care	10	3.3	12	8.7	22	5
During child kissing	32	10.7	24	17.4	56	12.8

8.4 Knowledge and utilization of VCT

As it could be seen from Table 4 among 438 respondents majority 402 (91.8%) of them knew the existence of VCT service in their locality. Their Source of information for their knowledge included health facility 330 (75.3%), mass media 216 (49.3%) and friends 126 (28.8%).

When they were asked about the importance of VCT, the majority (415, 94.7%) perceived that it is important, 18 (4.1%) gave didn't know responses and only 5 (1.9%) replied that it is not important. Among 415 respondents who were asked about the need for VCT, the majority (395, 95.2%) said that it is needed before marriage, 385 (92.8%) replied that is important for commercial sex workers, 379 (91.3%) stated that it is needed for pregnant women, and 378 (91.1%) answered that it is important for single men.

ANC follower participants were asked if they were informed about the existence and importance of VCT during pregnancy for PMTCT. About 57% were informed. Of those informed participants78.5% were government hospital attendants, 62.5% were government health center attendants. Only 24.7% were private clinic attendants.

Participants were asked if they discussed about the importance of VCT with their partners, and 263 (60%) had discussion but 175 did not. some of their reasons mentioned for not having discussion were trust each other 105 (60%) fear of mistrust by partner 92 (52.6%) lack of knowledge 40 (22.9%) and partner disagreement 34 (19.4%).

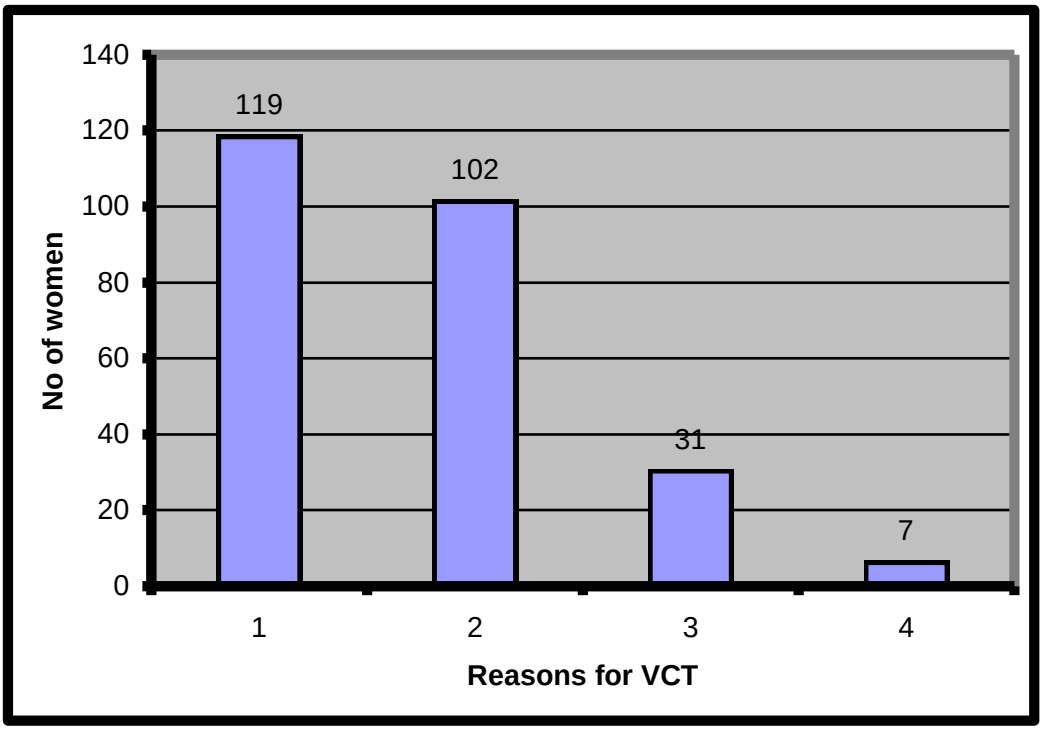
Of the total participants, 259 (59.1%) had undergone VCT. The reasons for undergoing VCT were marriage 119 (45.9%), current pregnancy for PMTCT 102 (39.4%), to know self-status 31 (12%) and other reasons 7 (2.5%). Women who received pre-test and post-test counseling during the time of VCT comprised 244 (94.2%) and 226 (87.3%), respectively (Figure 4).

Of those women who had VCT and intention to have in the future nearly 65% (243) of the respondents preferred to have VCT at government hospital, 177 (47.5%) preferred to have it at government health center, 139 (37.3%) wanted to have it at MCH clinics, and the rest 73 (19.6%) and 55 (14.7%) preferred to have it at private clinic and a distant health facility, respectively. Half of the respondents 202 (54.2%) preferred to have confidential testing while 117 (31.4%) wanted anonymous testing. The majority of women 314 (84.7%) preferred direct face to face to receive their test result.

Respondents were asked their willingness to tell positive results to their partner 70% of them were willing to tell (Table 4). For those women who did not want to tell positive result to their partner their main reason were fear of divorce, fear of blame, rejection and violence which accounts 66 (60.6%),59 (53.3%),34 (31.2%) and 19 (17.4%) respectively.

Table 4 Knowledge and utilization of VCT among pregnant women
In Dessie Town October ,2006 (n = 438)

Characteristics Variables	ANC user (n=300)		non user (n=138)		Total	
	Number	Percent	Number	Percent	Number	Percent
Know the existence of VCT						
Yes	287	95.7	115	83.3	402	91.8
No	13	4.3	23	16.7	36	8.2
Perceive VCT important						
Yes	292	97.3	123	89.1	415	94.7
No	3	1	2	1.4	5	1.1
Don't Know	5	1.7	13	9.4	18	4.1
For whom VCT is needed						
Before marriage	279	93.9	118	93.7	397	93.9
Commercial sex worker	271	91.2	117	92.9	388	91.7
Pregnant women	271	91.2	110	87.3	381	90.1
Single men	266	89.6	114	90.5	380	89.8
For all person	278	93.6	112	88.9	390	92.2
Discussion with partner about VCT						
Yes	213	71	50	36.2	263	60
No	87	29	88	63.8	175	40
Have VCT						
Yes	213	71	46	33.3	259	59.4
No	87	29	92	66.7	179	40.9
Pretest Counseling n=259						
Yes	204	95.8	40	87	244	94.2
No	9	4.2	6	13	15	5.8
Post test counseling n=259						
Yes	191	89.7	35	76.1	226	87.3
No	22	10.3	11	23.9	33	12.7
Perceive VCT is important During Pregnancy						
Yes	284	94.7	102	73.9	386	88.1
No	7	2.3	5	3.6	12	2.7
Don't know	9	3	31	22.5	40	9.1
Perceive VCT benefit to Mother and baby n=386						
Yes	211	74.3	62	60.8	273	70.7
No	73	25.7	40	39.2	113	29.3



1=Marriage 2= Pregnancy 3= to know self 4= others

Figure 4 reasons for VCT among pregnant women in Dessie October, 2006

8.5 Risk perception and Intention to VCT

Nearly half 200 (45.7) of the participants perceived as they might had the risk of getting HIV infection. Among them 130 (65%) were ANC users. The reasons mentioned by the respondents as risk factor were having multiple sexual partner in the past 93 (46.5%), unsafe injection 38 (19%), no VCT before marriage 80 (40%) and partner's extra marital affair 97(48.5%) Table 5.

Those pregnant women who had no VCT they were asked if they have an intention to have it in the future, 116 (64.8%) were willing to have VCT in the near future. Among those who were not willing to have VCT their main reasons mentioned were self and partner trust, fear of the result**,** believed that it is no**t** important (Figure 5).

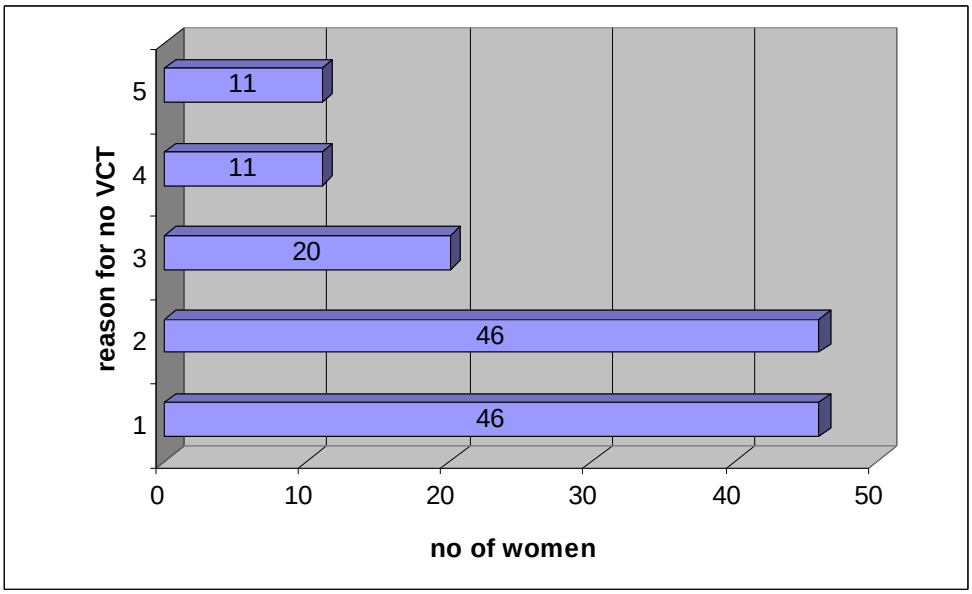
Table 5. Risk Perception and Intention for VCT among pregnant Women in Dessie town October,2006

Characteristics Variables	ANC user		ANC non user		Total	
	Number	%	Number	%	Number	%
Perceived risk for acquiring HIV						
Yes	130	43.3	70	56.7	200	45.7
No	143	47.7	60	43.5	203	46.3
Don't know	27	9	8	5.8	35	8
Perceived risk factor N=200						
Multiple sexual partner	17	13.1	21	30.1	38	19
Sex without condom	34	26.2	33	47.1	67	33.5
Unsafe injection	71	54.6	22	31.4	93	46.5
No VCT before marriage	47	36.2	33	47.1	80	40
Partner unfaithfullness	55	42.3	42	60.1	97	48.5
Sex with HIV Positive	5	3.8	4	5.7	9	4.5
Blood transmission	5	3.8	1	1.4	6	3
Intention to have VCT n=179						
Yes	65	76.5	49	53.3	116	64.8
No	20	23.5	43	46.7	63	35.2

8.6 Knowledge on HIV, VCT and PMTCT in relation to their socio-demographic and reproductive characteristics

All participants were assessed for their knowledge on HIV majority 285 (65%) had comprehensive knowledge. Furthermore their level of knowledge was assessed in relation to their socio-demographic and reproductive characteristics. Of all participants who were grade nine and above, who had some job and fair family income, women who had ANC follow-up found to be more knowledgeable with statistically significant value (p- value <0.05) Table 6.

More than half 263 (60%) participants were found to be knowledgeable for VCT. As it is shown in Table 7 those women who were grade nine and above, family income above 300 birr per month and those who had ANC and some job had better knowledge than the others. About half 236 (53%) women were found to be knowledgeable about means of preventing mother to child HIV transmission. Having ANC, grade nine and above, have some job and fair family income showed statistically significant association with their level of knowledge p- value <0.05 (Table 8)



1 = partner trust 2 = self trust 3 = Fear of the result 4 = not important 5 = don't know

Figure 5 reasons for not have intention to VCT among pregnant women in Dessie town October 2006

Table 6 knowledge on HIV Vs socio-demographic and Reproductive characteristics pregnant Women in Dessie town October,2006

Characteristic variables	Knowledge on HIV > mean Number	< mean Number	Total Number	X^2	P-value
Age group					
15-24 years	134	79	213	0.952	0.62
25-34 years	126	63	189		
35-49 years	25	11	36		
Education					
Nine and above	164	26	190	81.6	0.0005*
Elementary	86	61	147		
Illiterate	3543	66	101		
Occupation					
Have some job	82	15	97	18.97	0.0001*
No job	204	137	341		
Family income					
1001 birr	70	6	76	66.56	0.001*
601-1000 birr	54	11	65		
301-600 birr	87	43	130		
300 birr	74	93	167		
No of pregnancies					
One	111	65	176	1.48	0.46
Two- four	159	77	236		
Five and above	15	11	26		
ANC follow-up					
Yes	224	76	300	37.26	0.0001*
No	61	77	138		

* = p- value, 0.05

Table 7 knowledge on VCT Vs socio-demographic and Reproductive characteristics of pregnant Women in Dessie town October,2006

Characteristic variables	knowledge on VCT				
	> mean Number	< mean Number	Total no	X^2	p-value
Age group					
15-24 years	126	87	213	0.65	0.72
25-34 years	117	72	189		
35-49 years	20	16	36		
Education					
Nine and above	139	51	190	27.96	0.0001*
Elementary	81	66	147		
Illiterate	43	58	101		
Occupation					
Have some job	69	28	97	5.92	0.015*
No job	193	148	341		
Family income					
1001 birr	56	20	76	25.07	0.0001*
601-1000 birr	48	17	65		
301-600 birr	82	48	130		
300 birr	77	90	167		
No of pregnancies					
One	104	72	176	4.18	0.124
Two- four	148	88	236		
Five and above	11	15	26		
ANC follow-up					
Yes	200	100	300	16.53	0.0001*
No	63	75	138		

* = p- value, 0.05

Table 8 knowledge on PMTCT Vs socio-demographic and Reproductive characteristics of pregnant Women in Dessie town October,2006

Characteristic variables	knowledge on PMTCT > mean Number	< mean Number	Total Number	X^2	p-value
Age group					
15-24 years	121	92	213	1.47	0.47
25-34 years	96	93	189		
35-49 years	19	17			
Education					
Nine and above	138	52	190	62.42	0.0001*
Elementary	73	74	147		
Illiterate	25	76	101		
Occupation					
Have some job	65	32	97	7.94	0.005*
No job	171	170	341		
Family income					
1001 birr	55	21	76	30.59	0.0001*
601-1000 birr	44	21	65		
301-600 birr	72	58	130		
300 birr	65	102	167		
No of pregnancies					
One	103	73	176	2.56	0.27
Two- four	120	116	236		
Five and above	13	13	26		
ANC follow-up					
Yes	189	111	300	30.71	0.0001*
No	47	91	138		

* = p- value, 0.05

8.7socio-demographic characteristics Vs utilization of VCT

A crude analysis was done to assess any association between the socio-demographic variables and VCT utilization. Maternal age, education, family income and occupation were showed significant association with VCT utilization. Women between the age of 15-24 years are more likely to utilize VCT compared to 35-49 years of age OR=4.09 (95%CI=1.93 - 8.64). Women with educational level of nine and above were more likely utilize VCT compared to illiterate OR= 6.09 (95%CI= 3.58 - 10.39). VCT utilization showed significant association with family income, women who have fair family income were more likely to have VCT than those who have three hundred birr and less (p-value, 0.05). But when adjusted for socio-demographic and other selected variables only education persisted to be significantly associated with utilization of VCT OR= 2.69 (95%CI=1.37- 5.7) and p- value <0.05 (Table9).

Reproductive and other selected variables were analyzed to assess the presence of association with VCT utilization. Number of pregnancies, knowledge about ANC having ANC follow-up, discussion with partner, knowledge about VCT and PMTCT showed significant association with VCT utilization in both crude and adjusted analysis (p-value<0.05). Other variables such as knowledge about HIV, perceived risk of HIV not found to be associated with VCT utilization both in crude and adjusted analysis (Table 10).

Number of pregnancy showed significant association with VCT utilization. Primigravida women were more likely utilized compared women who had five and above pregnancies OR=6.66 (95%CI= 1.88 -16.73). Those women who had knowledge on ANC and have ANC about three times more likely utilize VCT with significant association p-

value <0.05 and OR= 3.17 (95%CI= 1.05 - 9.22) and OR= 3.29 (95%CI-=1.81 -6.0) respectively.

The Odds of utilizing VCT is 2 to 3 times more for the women who have favorable knowledge to VCT and PMTCT respectively OR= 1.93 (95%CI= 1.09 -3.39) and OR= 2.59 (95%CI= 1.55 - 4.33). Women who had open discussion with their partner about VCT and perceived VCT is important showed significant association with VCT utilization p- value <0.05. (Table 10)

Table 9 Socio-demographic characteristics Vs VCT utilization among pregnant women in Dessie town October, 2006. N=438

Characteristic Variable	VCT utilized Yes	NO	Odds ratio (95% CI) Crude	Adjusted
Age group				
15 -24 years	143	70	4.09(1.93,8.64)*	2.04(0.76,5.52)
25- 34 years	104	85	2.45(1.16,5.18)*	2.02(0.82,4.99)
35- 49 years	12	24	1	
Education				
nine and above	135	55	6.09(3.58,10.39)*	2.69(1.37,5.27)*
Elementary	95	52	4.4(2.62,7.85)*	1.69(0.76,3.72)
Illiterate	29	72	1	
Marital status				
Married	243	159	1.31(.43,3.97)	0.77(0.23,1.58)
single	9	14	.55(.14,2.18)	0.32(0.42,1.98)
Divorce,widowed	7	6	1	
Religion				
Christian	137	99	.91(.62,1.33)	0 .45(0.13,1.02)
Muslim	122	80	1	
Family income				
1001 birr	56	20	3.27(1.81,5.93)*	0 .76(0.28,2.1)
601- 1000 birr	46	19	2.83(1.53,5.23)*	0.95(0.40,2.26)
301- 600 birr	80	50	1.87(1.17,2.98)*	1.15(0.62,2.11)
300 birr	77	90	1	
Occupation				
have some job	70	27	2.07(1.27,3.4)*	1.18(0.56,2.46)
No job	189	152	1	
Ethnicity				
Amhara	248	170	1.19(.48,2.94)	.96(.65,1.86)
Others	11	9	1	

* = p- value, 0.05

Table 10 Reproductive and selected factors VS VCT utilization
Among pregnant women in Dessie town October, 2006 N=438

Characteristic Variables		VCT utilization Yes	No	Odds Ratio(95%CI) Crude	Adjusted
No of pregnancies					
One	129	47		9.15(3.46,24.17)*	6.86(1.88,16.73)*
Two-Four	124	112		3.69(1.43,9.52)*	2.15(0.71,6.49)
Five& above	6	20		1	
Know existence of ANC					
Yes	251	148		6.57(2.94,14.68)*	3.17(1.05,9.22)*
No	8	31		1	
Perceived importance of ANC					
Yes	254	157		7.12(2.64,19.18)*	2.3(0.21,3.22)
No	5	22			
Have ANC					
Yes	213	87		4.98(3.18,7.55)*	3.29(1.81,6.0)*
No	46	92		1	
Knowledge on HIV					
Above mean	175	109		1.04(.68,1.59)	0.92(0.28,1.49)
Below mean	79	39		1	
Knowledge on VCT					
Above mean	186	77		3.38(2.26,5.04)*	1.93(1.09,3.39)*
Below mean	73	102		1	
Knowledge on PMTCT					
Above mean	177	59		4.39(2.92,6.59)*	2.59(1.55,4.33)*
Below mean	82	120		1	
Discussion with partner					
Yes	220	43		17.84(11.0,28.93)*	12.98(7.74,23.58)*
No	39	136		1	
Perceived VCT importance					
Yes	254	132		18.09(7.03,46.57)*	8.39(2.86,24.61)*
NO	5	47		1	

* = p- value, 0.05

Qualitative

Summary results of focus group discussion

Thirty-two participants ranged from 18 to 45 years of age were included in the study. Participants were selected from Dessie Hospital gyne department and MCH unit, Dessie Health Center MCH unit. The sample represented by 18 housewives and 12 employed women.

Knowledge and perception of HIV and its mode of transmission

Almost all 4 group of the discussants stated that HIV could be transmitted through unprotected sex. They also mentioned that HIV created a burden to the family and community in terms of illness, death, economic problem and orphanage. It also created increased risk of street children and suffering of old ages due to death of young. One-house wife women mentioned, “In our surrounding we know many children who have become orphans due to the death of their parents by HIV”.

Knowledge about HIV MTCT

Majority of FGD participants knew MTCT of HIV. However there was variation about the rate and mode of transmission. Most participants from all groups mentioned MTCT is possible during delivery and breast-feeding only few employed and one housewife woman mentioned MTCT during pregnancy. “There is no chance for the baby to be free from HIV since he shares everything from his mother”. Said housewife participant.

VCT and its importance

More than half of participants agreed that VCT is important to know self-status. The ideal period for VCT mentioned before marriage. Four of the group discussants mentioned that VCT should be done before the woman gets pregnant. Almost all participants said that the best place to have VCT were government health institutions. Employed women said "I have ANC follow-up at private clinic as well as here in the health center. My doctor in the clinic never told me about MTCT and VCT but here in the health center I was counseled and tested to know my self". Other FGD participant from the hospital group mentioned "live alone to counsel a healthy pregnant woman a person who developed the sign and symptom of AIDS never be asked for VCT rather they tried to treat him by giving very expensive drugs in their clinic".

As far as prevention of MTCT concerned majority of participants from the four groups said that avoiding breast-feeding could prevent HIV transmission to the baby. Some participants mentioned taking ART could prevent it. None of them mentioned that operative delivery could minimize HIV transmission to the new born.

Role and reaction of partners to VCT

Majority of participants mentioned they have or would never discuss with their partner or other family member about VCT and PMTCT of HIV during their pregnancy. Few discussants mentioned only they discussed after knowing their HIV test result. Majority of participants' expected negative reaction from their male partners if they knew the positive HIV status of pregnant women. Majority said men could take the following

actions against their partner beat, disgrace, reject and divorce, insult and interrupt financial support. Housewife woman said “It might be possible for the male partner being HIV positive to live normally with his HIV negative wife but it is not true for the woman”.

The probability of convincing their partner to bring for couple counseling testing varies across the participants. Some of employed participants mentioned for the benefit of their family they could make it possible. One participant mentioned, “ Now things are changing after the emergence of ART most people are pushed to know themselves” Majority of housewives participants feels difficulty because of fear of mistrust, divorce, fear of the result and its consequences.

Stigma and discrimination

Community and social organization organizations response to HIV positive women varies from area to area but most respondents agreed there is stigma and discrimination at various levels. One participant mentioned “no one will be beside me during labor and delivery if I am known HIV positive”. Some of the Discussants mentioned even with in the Edir there is discrimination during the funereal procedure, If they suspect the person is died due to HIV they will not do the usual funereal procedure.

Suggestion given for PMTCT and improve VCT utilization

Intensive education and information dissemination about the importance of VCT

Men involvement and agreement is very crucial awareness creation lesson must be given for all groups of the community about VCT and PMTCT.

DISCUSSION

The purpose of this study was to examine factors influencing willingness and utilization of voluntary HIV counseling and testing among pregnant women in Dessie town. From the total study participants 300 (68.5%) had ANC follow up in government and non-government health institutions. The remaining 138 (31.5%) had no follow up for various reasons. This finding in line with EDHS 2006 indicates that nationally about 28% of pregnant women had received at least one ANC by health professionals (69 percent for urban areas where as only 24 percent for rural areas) (17). Almost all women know the existence of ante natal care and they believe it is necessary for all pregnant women.

From all ANC users those women who have private business, ninth grade and above, have better family income and government or non-government organization employed were found to have better utilization. This might be due to better information and knowledge about the availability and accessibility of the service. Majority of ANC non-user women were housewives and daily laborers. Some of their reasons were mentioned as lack of money and no serious problem experienced in their previous pregnancies. This may suggest lack of appropriate information about the purpose of ANC and free availability of the service in government health institutions.

In this study almost all respondents were aware of HIV/AIDS. Knowledge about HIV/AIDS found to be almost the same between ANC users and non users. This finding is consistent with the study done in Harar town about the intention of breast-feeding practice in the context of HIV/AIDS and in Jimma assessment of KAP in lactating mothers about VCT and feeding of infants born to HIV positive women (26, 27).

Misconceptions about HIV transmission show considerable number of women perceive as HIV can be transmitted through mosquito bite and living in the same room with HIV positive person. In line with this study EDHS 2006 indicate about 53% of females and 43%of males have misconceptions about HIV transmission (17). Study from Jimma and Gondar support this study (28, 28). Significant differences were observed in perception between ANC users and non users. Some study participant still found to have misconception about curability of HIV /AIDS. Considerable number of participant (28%) mentioned HIV can be cured. Some of their justification were the emergence of anti retroviral treatment, using holly water and believe in God. This might be due to lack of appropriate knowledge and information about ART use. These issues required careful handling and further investigation. Such misconception will have to be overcome by extensive and broad based information, education and communication (IEC) if not it may affect the existing HIV prevention and control activities. Furthermore the existing stigma, discrimination and denial of actual events related to HIV will continue to prevail.

Knowledge about MTCT of HIV, was found to be considerably high (84.7%) when compared with the study done in Gondar and BSS the proportion were lower (14, 28). This may be explained as time variation between the studies and expansion of PMTCT services in most parts of the country. Recent findings from EDHS 20006 showed knowledge on MTCT found to be 69% in women and 75% in men (17). Respondents were asked specifically about the three means of MTCT, about half of them believed that MTCT is possible during pregnancy, other two thirds of the respondent believed during delivery and majority of them agreed MTCT can occur during breast-feeding. This finding was consistent with the study done in Tigray and slightly higher from EDHS 2006 findings. In this study HIV transmission through breast feeding was better recognized by

respondents comparing to the two other means of transmissions that could suggest having a negative effect in selecting feeding options for HIV positive lactating women. This result also supported by qualitative assessment.

Misconceptions associated with MTCT were found more than 15% of the respondents mentioned that MTCT could occur through kissing, handling and caring of a child majority of women who share this misconception were ANC non-users. This could be associated the fact ANC users have better access for correct information from health facilities. These misconceptions may have contribution for stigma and discrimination of HIV positive person. Nearly half of the peri-natal HIV infection has been prevented with ARV prophylaxis (18). In spite of the fact that ARV drugs have such a potential to reduce HIV transmission in this study almost 30% of women don't know the existence of means that can reduce the risk of HIV transmission from mother to child. Comparing to the study done in Tigray and EDHS this study suggested better knowledge among the respondents. Regarding to the knowledge about condom use to reduce HIV transmission, nearly one third of the study participants agreed, as it cannot reduce the likelihood risk of HIV transmission.

Women who attended ANC were found to have better knowledge about the existence of VCT service in their locality comparing to non-users. This could be explained the fact that ANC users have better exposure for IEC while they visit health institutions for ANC. Most women who attend ANC had discussed with their partner about VCT pertaining to its importance and majority agreed that VCT is important. Despite perceived importance of VCT the number of pregnant women who had VCT in their lifetime was 59% this figure is higher comparing to the studies done in Gondar (33%) and Tigray (19%).

The number of pregnant women who had VCT during this pregnancy were about 23% which was lower than that of the study done in Harar and Jimma which were about 40%. However it was found to be higher than the study done in Tigray (32).Concerning to VCT services provided at ANC clinics those women who attended government health institutions were more likely to get counseling service than those who attended private clinics this may indicate the existing gap on IEC dissemination between government and private health institution. This problem may overcome by strengthening inter- sect oral collaborative work.

Preference of health institutions for VCT, majority of the respondents want to have it in government health institutions including MCH clinics only small number of participants 19% showed preference at private clinics. This finding was consistent with the study done in Tigray (32). Nearly half 202 (54.2) of the respondents in this study prefer to have confidential counseling and testing which is lower than the studies done in Gondar 70%and Jijjiga74.3% (28, 29). Other 31%wants of participants wants to have anonymous testing this may show the great concern about the existing stigma and discrimination and uncertainty about confidentiality. Concerning to the preference of result obtaining method for HIV test, majority of participants (84%)agreed on face to face other (9%)prefer secretive letter and only few participants wants to receive through their partner. This finding was consistent with the study done in Harar, Addis Ababa, and Tigray (9, 32, and 33).

Majority of participants agreed to discuss about their result with their partners others with health professional and families only few women mentioned they may discuss with friends. Majority of ANC user participants were willing to tell HIV positive results to

their partner if it occurred. But most FGD participants and ANC non-users were not willing to tell their positive results some of their reason mentioned were fear of divorce, fear of blame, rejection and violence. These findings were harmonious with the study done in Metu and Gore town about disclosing of HIV positive results to sexual partners (13). Barriers to disclosing HIV positive status to their sexual partners were described as fear of stigma, abandonment, rejection, fear of embarrassing family members. Another study from UNAIDS report in 2002 dangers inherent in such an approach, women in many countries have been abused, assaulted and divorced because their husbands blame them for having an HIV infection (2).

Factors that have influence on VCT utilization during pregnancy vary from country to country and from region to region. In this study factors that favor VCT utilization were being young adult, between the age of 15-34 years, having ANC follow up at present pregnancy, women who had good communication with their partner about VCT and who were in favor of better economical status. Factors that affecting VCT utilization were related to low economical and educational status, being jobless, and housewife. All the above-mentioned factors are related with the woman's status and decision-making power.

Women between the ages of fifteen to twenty four years were about four times more likely to use VCT (OR=4.09, 95%CI=1.93, 8.64). Women who have some job were in better position to utilize VCT than those no job at all. Educational status of the women found to be strong contributing factor for VCT utilization. Comparing women in primary school to those illiterate primary school women better utilized. Further more the odds of having VCT among nine and above women were six times than those illiterate. This may indicate education could be the power for behavioral change and effective means for IEC

dissemination. More over educated women may have the power to convince and influence themselves as well as their partners for the prevention and control of HIV/AIDS.

From all the study participants better VCT uptake was observed in women who had ANC follow up being primi gravida, have more than two visits and counseled for VCT during their ANC visit were positively associated with VCT utilization. The study showed similarity with the study done in armed force hospitals in Addis Ababa (33). This could be explained as MCH units serve as a good entry point for PMTCT interventions which indicates the need to expand and strengthen the existing MCH services to increase its accessibility and availability. In line with expansion of VCT and PMTCT efforts it is crucial to improve the ANC service delivery system to address marginalized women since these women are more likely to be at increased risk of HIV infection. Failing to address all pregnant women may hamper efforts made to prevent and control HIV infection in the new generation.

Women who had good knowledge of PMTCT were more willing to have VCT. This finding was comparable with the study done in Harar those women who have better knowledge on PMTCT had more intention (26)

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This study revealed that participants HIV risk perception was relatively low as compared to the perceived severity of the disease. Less than half of participants perceived as they may be at risk of acquiring HIV infection. Even though risk perception was low, ANC followers showed significant difference, that about 65% of them perceive as they may be at risk of acquiring infection. Some of the reasons mentioned not to think about HIV risk were partner faithfulness, having one partner and undergo VCT before marriage.

This finding was consistent with the studies done in Harar and Addis Ababa (26, 33). Another study done in Ethiopia as abaseline assessment of PMTCT showing the low prevalence of risk perception in lactating women who believe that they were not at risk due to partner faithfulness.

Similar to other studies done in South Africa and Tigray, factors established as inhibitors for VCT uptake were individual's fear of perceived consequence of being positive, poor couple communication, lack of woman empowerment, less utilization of ANC services and denial about HIV risk (18,32). Coherent to other studies this study showed that women may blamed for bringing the virus in to the household and expected risk of violence or discrimination of various kinds up on disclosure of their HIV status. Both the qualitative and quantitative results support the findings. The problem of violence could be particularly acute for pregnant women who for first time knew their test result.

This study demonstrates the association between discussion with male partner and VCT uptake. Those women who had open discussion with their partner were more likely to have VCT. If pregnant women are to participate fully in VCT and benefit from PMTCT efforts, their male partners must be committed and involved in the process. All the qualitative study participants suggested for effective PMTCT program male participation and commitment is mandatory. In order for a pregnant woman to be tested free discussion, positive attitude and support from her partner should be encouraged.

Strength and Limitation

Strength of the study

- Community based study unlike many facility based studies

-Complimented by qualitative study

- Participants were representative of pregnant women in the town

- Adopted standard questionnaire with reasonable modifications was used

- Data collection was carried out by the same sex nursing students

- Response rate was high

Limitation of the study

- Like any cross-sectional study it is difficult to know weather determinant or out come occurred first.

- As in other behavioral surveys respondents may not reply openly to sensitive questions

- Being influence by line of questions

9. Conclusion and Recommendation

9.1 Conclusion

- This study indicated the status and factors associated with willingness and utilization for VCT of pregnant women. This study established ANC coverage of the town was proportional with the estimate of EDHS 2005 finding for the urban areas. Almost all study participants know the existence and importance of ANC but about one-third of them didn't used. Majority of ANC non-users were housewife, daily laborer and illiterate.
- Status of knowledge of pregnant women about HIV/AIDS, VCT and PMTCT was relatively high. However despite their knowledge of HIV/AIDS participants risk perception were relatively low. It also made clear that there was marked misconception about HIV and PMTCT with in the study participants, which requires to be addressed systematically.
- This study showed that women who have ANC at government health institution have better access to VCT counseling service than private clinics which requires integration and collaborative work between government and non-government health institution.
- Factors that favor VCT utilization found to be being young adult, having ANC follow up, good communication and discussion with their partner, better economical status. This study showed participants expected physical, psychological and social problems if they disclose positive test result to their partners.
- Considerable proportions of non-tested respondents were willing to have VCT.

9.2 Recommendations

- Women empowerment through education, Employment and trainings.
- Improve and expand ANC service delivery system.
- Promote communication between partners.
- Intensify coordinated and integrated IEC program.
- Promote male partner involvement in counseling and testing.
- Strengthen community involvement and mobilization.
- Address stigma and discriminations through strong IEC.

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Annex – 1

Addis Ababa University Medical Faculty Department of Community Health

Questionnaire identification data

001 Questionnaire identification number _____ 002 Region Amhara

003 Town Dessie 004 Center _____ Sub center (Ketena) _____

005 House holds Number _____

006 Study participant

006.1 Pregnant mothers who have ANC_____

006.2 Pregnant mothers who have no ANC_____

Introduction

My Name is _____ I am working as data collector in a survey conducted by Addis Ababa University medical faculty community health department, we are interviewing pregnant women in the town about knowledge and attitude towards HIV/AIDS, voluntary counseling and testing, transmission of HIV from mother to the baby and ways of prevention in order to generate information necessary for the planning of appropriate strategies and interventions that helps to prevent HIV transmission form mother to the baby.. To attain this purpose, your honest and genuine participation by responding to the question prepared is very important and highly appreciated.

Your responses are completely confidential; your name will not be written on the form and will never be used in connection with any of the information you provide you do not have to answer any question if you don't want to and you can stop the interview at any time. How ever your honest answer to these questions will help us to better under stand factors affecting women's attitude towards voluntary HIV counseling and testing.

We would like to appreciate your participation in this study. The interview will take about 20 – 30 minutes. Would you be willing to participate?

If Yes Proceed

If No thank and stop here

Interviewer name _____ Signature _____

_____

Date of interview _____Date _____

Checked by Supervision Name _____Signature _____

007 Result code 1.Completed 2.Refused 3. Partially Completed 4.Other

SECTION I SOCIO DEMOGRAPHIC AND ECONOMIC INFORMATION

Ser no	Questions	Coding Categories	Skip	Code
101	How old are you	Age in completed years_____		
102	To which ethnic group or tribe do you belong	Amhara 1 Tigre 2 Guraghe 3 Oromo 4 Others (Specify)_____ 5		
103	What is your religion	Orthodox 1 Protestant 2 Catholic 3 Muslim 4		
104	What is your current marital status	Single 1 → 108 Married 2 → 105 Divorced 3 → 106 Widowed 4 → 106		
105	If married are you currently living with your partner	Yes 1 No 2		
106	Age at first marriage	Write in years_____		
107	Did you have HIV testing before marriage	Yes 1 No 2		
108	What is the highest level of school you completed	Illiterate 1 Literate (read and write) 2 Primary School completed 3 Secondary school completed 4 Tertiary /above 12th grade 5		
109	What is your current occupation?	House wife 1 Government ((NGO) employee 2 Daily laborer 3 Private enterprise owner 4 Student 5 Others (specify)_____ 77		

110	What is your total monthly family income?	Write in Birr_____		
111	How many times you have been pregnant including this pregnancy?	Number of pregnancies_____		
112	How many living children do you have currently?	Number of children _____		

Section II Knowledge and attitude towards ANC

No	Question	Coding categories	Skip	Code
201	Do you know about ANC service?	Yes 1 No 2 → 203		
202	What is your source of information?	Health institution 1 Mass media 2 My partner 3 Friends 4 Neighbors 5 Others (specify) _____77		
203	Do you think ANC is help full for pregnant woman?	Yes 1 No 2		
204	Do you have antenatal care at present pregnancy?	Yes 1 No 2		
205	If you attend ANC to which health institution you go?	Gov't Hospital 1 Gov't Health center 2 Private clinics 3 Others/ specify/ 77		

206	If you attend ANC How many times you visit the Health institution for the current pregnancy?	No of visits_____		
207	If you have no antenatal follow up what is/are your reason?	I am healthy 1 I don't know the importance 2 No complication in previous pregnancies 3 I don't know where to get the service 4 Lack of money 5 Others /Spesify/_____77		

Section III Knowledge about HIV and its mode of transmission

Ser no	Questions	Coding categories	Skip	Code
301	Have you ever heard of HIV or AIDS?	Yes 1 NO 2		
302	Do you know how HIV is transmitted?	Yes 1 No 2 →	304	
303	If the answer is yes which of the following are means of trans mission for HIV (Multiple response is possible)	Yes No Sexual intercourse 1 2 Using un sterile syringe & needle 1 2 Sharing sharp instruments 1 2 Mosquito bite 1 2 From mother to the baby 1 2 Sharing the same room with The patient 1 2 Through blood transfusion 1 2 Others		
304	Can HIV/ AIDS be cured?	Yes 1 No 2 I don't know 88		
305	Can a pregnant woman with HIV or AIDS transmit the virus to her baby?	Yes 1 No 2 I don't know 88 No response 99		
306	If the mother can transmit the virus to her baby what are the means of transmission?	Yes No During pregnancy 1 2 During labour 1 2 Through breast feeding 1 2 Caring and sleeping together 1 2 Through breathing and kissing 1 2		
307	Which of the following are Means to reduce HIV transmission	Yes No Limiting sexual partner to one 1 2 Use condom 1 2 Under going VCT to know status 1 2		

SECTION IV HIV VOLUNTARY COUNSELING AND TESTING

401	Have you ever heard about voluntary HIV counseling and testing	Yes 1 No 2 →	403	
402	If the answer is yes what is/are the source of information/more than one answer is possible/	- Health worker/Health facility 1 - Mass media 2 - Friends 3 - Neighbors 4		
403	Do you think VCT is helpful?	Yes 1 No 2 I don't know 88		
404	To whom do you think voluntary counseling and testing is needed?	Yes No -Commercial sex workers 1 2 -Unmarried men 1 2 -Before marriage 1 2 -For all person 1 2 -Pregnant mothers 1 2		
405	Have you ever discussed with your partner about voluntary HIV counseling and testing?	Yes 1 No 2 →	406	
406	If you don't discussed about it what was the reason?	Ashamed to discuss About it 1 2 I don't know it's use 1 2 My husband doesn't like to Discuss With this topic 1 2 To avoid miss trust 1 2 Trust each other 1 2 Others		

407	I don't want to know the result but have you ever had VCT?	Yes 1 No 2		
408	If you had HIV test what was/were your reason?	-For marriage 1 During this pregnancy 2 -Asked for visa 3 -For blood transfusion 4 -I want to know my self 5 Other /specify/ _____77		
409	Do you receive any pre- test counseling before you under take your HIV test	Yes 1 No 2		
410	Do you receive any posttest counseling?	Yes 1 No 2		
411	At present pregnancy when you attend ANC did you told about VCT	Yes 1 No 2		ANC user Only
412	Do you think VCT is important during pregnancy?	Yes 1 No 2 I don't know 88		
413	To whom do you think VCT is important during pregnancy?	Yes no For the mother only 1 2 For the baby only 1 2 For the mother and baby 1 2 For the family 1 2 For the health workers 1 2		

414	If you never had an HIV test do you have any intention (plan) to be tested?	Yes 1 NO 2 I don't know 88 No response 99	→ 416 → 415	
415	If you don't have an intension (plan) to be tested what are / is your reasons?	Yes No I don't think it is important 1 2 I don't know where to get The service 1 2 I trust my self 1 2 I trust my partner 1 2 Fear of the result 1 2 Other (specify)_____77		
416	When you decide to have VCT Would you like to talk your partner before having HIV test?(discussed)?	Yes 1 No 2 I don't know 88 No response 99		
417	If your answer for 416 is no what could be the reason?	Yes No Fear of partner response 1 2 Fear of the result 1 2 He may not agree 1 2		
418	If you are asked to bring your partner for VCT do you think you can make it possible?	Yes 1 NO 2 I don't know 88		

419	Which health institution you prefer for VCT?	Yes No Near by Govt, Hospital 1 2 Near by Govt, health center 1 2 Near by private clinic 1 2 ANC follow up clinic 1 2 Away from your area 1 2		
420	Which method of testing do you prefer?/read the option/	Confidential linked testing 1 Anonymous 2 Others Specify _____77 I don't know 88		
421	Which way do you prefer to obtain HIV test result?	Face to face (Verbally) 1 Secretive letter 2 Through relative or friends 3 Through Partner 4 I don't know 88		
422	After you collect the result with whom you want to discuss about the result?	Yes No With your partner 1 2 With parents 1 2 Brother or sisters 1 2 Friends/neighbors/ 1 2 Health professional 1 2		
423	Suppose if you do VCT and the result is positive are you going to tell the result to your partner?	Yes 1 No 2 I don't know 88 No response 99		
424	If your answer to Q.423 is no what is are your reasons not to tell to your partner?/more than one answer is possible/	Yes No Fear of rejection 1 2 Fear of breaking relation ship 1 2 Fear of violence 1 2 Not to be blamed 1 2		

425	Who can benefit from voluntary counseling and testing?	Yes no Suspected people 1 2 Health workers 1 2 Accidentally exposed 1 2 Pregnant woman 1 2 Commercial sex worker 1 2 Male individual 1 2 Who have multiple sexual partner 1 2 For all person 1 2		

Section V Knowledge on MTCT and PMTCT

Ser No	Question	Coding Categories	Skip	Code
501	I am going to read out some statements about HIV/AIDS for each statement please tell me whether you think it is true or not. Condom use during sex with an HIV infected partner can prevent HIV transmission	True _____ 1 Not true _____ 2 I don't know _____88		
502	All pregnant Women needs to have VCT during pregnancy to know their HIV status	True _____1 Not true_____2 I don't know_____88		
503	Woman with HIV infection can infect their babies with HIV during pregnancy	True_____1 Not true 2 I don't know 88		
504	Women with HIV infection can infect their babies with HIV during labor and delivery	True 1 Not True 2 I don't know 88		
505	Woman with HIV infection can infect their babies with HIV through breast feeding	Yes _____1 No _____ 2 I don't know _____ 88		

506	Do you know the existence of intervention, which reduce mother to child transmission of HIV virus?	Yes _____1 No_____2 I don't know_____88		
507	If the mother knows she is HIV positive she should take ARV treatment to protect her baby	Yes_____1 No_____2 I don't know_____88		
508	If the mother knows she is HIV positive to terminate pregnancy	Yes_____1 No_____2 I don't know_____88		
509	If the mother knows she is HIV positive to take ART prophylaxis during delivery	Yes_____1 No_____2 I don't know_____88		
510	If the mother knows she is HIV positive it is good to deliver by operation to reduce chance of transmission	Yes_____1 No_____2 I don't know_____88		
511	Exclusive breast feeding can reduce the risk of HIV transmission	Yes_____1 No_____2 I don't know_____88		
512	If it is affordable replacement feeding Can reduce the risk of transmission	Yes_____1 No_____2 I don't know_____88		

SECTION VI PERSONAL RISK PERCEPTION

Ser no	Questions	Coding categories	Skip	Code
601	Do you think you can get the virus?	- Yes 1 - No 2 → 603 - I don't know 88 - No response 99		
602	If the answer is yes what could be the reason?	- Yes No I had multiple sexual Partners 1 2 I had sexual contact with out condom 1 2 I had injection with un Sterile needle 1 2 I had sexual contact With HIV positive 1 2 I had blood transfusion 1 2 My partner had sexual Contact with others 1 2 Have no VCT before marriage 1 2 Others specify _____77		
603	If your response for question no 601 is no what are the reasons	Yes No - I trust sexual partner 1 2 - I always use condom 1 2 I had no blood transfusion 1 2 I trust my husband 1 2 Other /specify/_____77		

I have finished my questions thank you very much for your cooperation and patience

001 ¾SÖÃp SKÁ lØ`---------- 002 ¡MM : T ^
003 x}T Åc? 004 ¾kuK? T°xM---- 005 kÖ ---------- ¾u?' lØ`--------
007 ¾Ø ~ }d ò-9 007.1 ¾pÉS ¨K=É l¡U ¡'' M ¾T›ÁÅ`Ñ‹----------
0907.2 ¾pÉS ¨K=É l¡U ¡'' M ¾TÁÅ`Ñ‹----------
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104	u: G‹ ‹ c¯' ¾Òw0 G‹ ¦ U É ¬;	ÁLÑv9 1 ÁÑv9 2 ¾}ó 9 3 uV' ¾}K¾9 4	108 105 106 106	
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422	¾U ` S ^ ¨‹Ö?' - u } SKx } cK¨‹Ö?~ xT Ò` S ¨Á¾' ÃS ` ×K? /U ` Ý - ! Ã uu‹/	: - : ÃÅKU ♦ xvKu?' - Ò` 1 2 ♦ xu? } cw - Ò` 1 2 ♦ x¨ ÉU ¨ÃU I ' - Ò` 1 2 ♦ xÕÅ" 9 /Ñ‹[u? 9 / Ò` 1 2 ♦ xÖ? vKS‹Á - 9 Ò` 1 2 ♦ K?L /ÃÖke/ 77 ♦ : L ¨‹pU 88		
423	KUdK? uU ` S ^ Ñ›²? ¬Ö?~ zÃ[c‹ uÅS - ¬eØ ÇK ¾T›ÁdÃ u=J ¬Ö?~ KvKu?' - /Kï ÕÅ - /Ã Ó^K‹;	♦ : - 1 ♦ : M Ó ` U 2 ♦ : L ¨‹pU 88 SMe ¾KU 99	424	

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6®2	uzÃ[c‹ MÁ´ 9 LKG‹ wK¨‹ ¾T›Áeu‹ xJ KSÁ´ - U¡ Á' U K=J Ã9 LM /U`Ý -! Ã uu‹ x: É uLÃ SMe SeÖ' Ã0 LM/		: - : ÃÅKU		
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		♦ uzÃ[c‹ x}Á²‹ c¨‹ Ò` ¾Ów[eÒ Ó ‹ ' cKðçUx‹	1 2		
		♦ ÅU xK?L c¨‹ cK}cÖ Ü	1 2		
		♦ vKu? x ¦ K?L c¨‹ Ò` ¾ë Ó ‹ ' eK u[¨‹	1 2		
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6®3	uzÃ[c‹ ¾SÒKØ ÉM ¾K ÜU wK¨‹ ¾T›Áeu‹ xJ U¡ Á' - U K=J Ã9 LM /U`Ý ¬/Ã uw x: É uLÃ SMe Ã0 LM/		: - : ÃÅKU		
		♦ vKu?' - eKT›ÁU ‹	1 2		
		♦ G‹MÑB²? ¢ ÊU cKT›ÖkS‹	1 2		
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		♦ xÒw0 uò' ¾:?9.: Ã.y= U`S^ cLÅ[Ñ‹ K?L /ÃÖke/	1 2 77		

SÖÃl Ú`hKG‹ cLÅ[Ñ‹M Ük 'ww` cK u[-' '°Óe' u×U : ScÓ KG‹::

ANNEX: III Focus Group Discussion: - Topic Guide

Part I: - Introduction

At this moment, we would like you to introduce yourself to the rest of the group.

Let's start with the research team.

• Name

• Education

• Work experience

Part II: - Ice breaking Question/Warming up/

To show concern about people, start by asking them how they cope with life, their jobs, health, etc.

Next, we would like to hear a little about your experience or knowledge about HIV/AIDS.

1.What do you know about HIV/AIDS?

Probes: 1. Would you explain further?

2. Would you give me an example?

3.Is there any thing else?

2.Is HIV/AIDS major problem in this area?

Probes: 1. Would you explain further?

2. Would you give me an example?

3. Is there any thing else?

3.How people get HIV/AIDS?

Probes: 1. Would you explain further?

2. Would you give me an example?

3. Is there any thing else?

Part III. Knowledge and attitude towards ANC, HIV/AIDS

Now we would like to ask you about knowledge and attitude towards ANC, HIV/AIDS

1. What do you know about ANC?

Probes 1 would you explain further?

2 would you give me an example?

2. Do you think it is important for pregnant mother to have ANC?

Probes 1.would you explain it's importance?

2.would you give me an example?

3.Is there any thing to add?

3. What do you know about HIV/AIDS transmission?

Probes 1.would you explain it more?

2.Would you give me some example?

4. What do you know about Mother to child HIV transmission?

Probes 1.would you explain it more?

2.would you give me some example?

5. Mother to child HIV transmission could be a major problem in this area?

Probes 1.How it is?

2.can you give me an example?

3. Is any thing you want to add?

Part IVI. Voluntary HIV Counseling and testing

1. Have you heard of Voluntary Counseling and Testing?

Probes: 1. Would you explain further?

2. Would you give me an example?

3. Is there any thing else?

2. What do you know about testing for HIV/AIDS? What is positive HIV test result mean?

What is negative HIV test result mean?

Probes: 1. Would you explain further?

2. Would you give me an example?

3.Is there any thing else?

3. Can you tell us about the VCT service in your area?

Probes: 1. Would you explain further?

2. Would you give me an example?

3.Is there any thing else?

4. For whom do you think VCT is needed?

Why? Would you explain it more?

6. What is/are people's perception towards VCT?

Probes 1 would you explain it more?

2 please give me an example?

7. Do you think VCT is important for pregnant mothers?

How? Please explain it more ?

8. Is there any cultural and religious practice in the area that could promote/ prevents VCT service utilization? Please give an example? Is it acceptable why?

Probes: 1 would you explain further?

2. Would you give me an example?

3.Is there any thing?

Can you give me an example?

9. You are pregnant woman do you have an intention to have VCT?

Yes/no why?

10. Suppose if you plan to have VCT are you going to discuss with your partner?

If yes why you want to discuss?

How you discuss?

On what points you are going to discuss?

If no why? Would you explain it more?

11. Is it possible for married woman to decide on her own to have VCT?

Why?

Can you give me some example?

12. What could be the response if the Woman ask her male partner for VCT?

Probes: 1. Would you explain further?

2. Would you give me an example?

3. Is there any thing else?

13. What will be the attitude of male partner about VCT?

Are they positive or negative?

What could be the reason for negative and positive attitude?

14. For the woman under going VCT if she becomes HIV positive what could be the implication of the result on her life, social relationship, marriage and occupation?

Probes 1 would you explain it more?

2 can you give me some example?

3 do you want to add more?

15. If she is a married woman what could be the attitude and reaction of her husband towards the result?

Probes why? would you explain it more?

Can you give me an example?

22. Do you know any means that can reduce HIV MTCT?

Would you explain it more?

Can you give me an example?

23. What can do HIV positive mother to protect her baby from HIV?

24. Suppose if you found that you are HIV positive do you agree to engage in PMTCT program and plan to take ART prophylaxis?

Why? Would you explain it more?

Part V. Recommendation /Suggestion/

Up to now we have talked about HIV/AIDS, it's transmission VCT and one of its preventive programs of mother to child transmission. We would like to ask you what other things could be done to make VCT and PMTCT program better. Thinking about the issues we have discussed, what recommendations/suggestions you would like to forward to make VCT and PMTCT more acceptable in the community?

Probes: - 1. What do the rest of you think?

2. Would you explain further?

3. Would you give me an example?

4. Is there any thing else, remained?

We thank each of you for giving as your valuable time and cooperation we also appreciate your active participation thank you every body for your suggestions and ideas.