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ASSESSMENT OF KNOWLEDGE AND ATTITUDE ABOUT PREVENTION OF MOTHER TO CHILD TRANSIMION OF HIV OPTION B^+ AND ASSOCIATED FACTORS AMONG ANC CLIENTS IN DESSIE TOWN, SOUTH WOLLO AMHARA REGIONAL STATE

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AAU – Addis Ababa University

ANC- Antenatal care

ART- Antiretroviral therapy

ARV- Antiretroviral

C-ART- Combine antiretroviral therapy

CBC- Communication behavioral change

CDC- Communicative disease control

E-MTCT – eliminate mother to child transmission of HIV

FGD- Focus group discussion

HAART- Highly active antiretroviral therapy

HIV- Human immunodeficiency virus

HTC-HIV testing and counseling

G.C- Gregorian calendar

IEC- Information education communication

LTFU-Loss to follow up

MNCH- Maternal newborn and child health

MOH- Ministry of health

NGO- Non- governmental organization

NVP – Nivirapine

OIs- Opportunistic infections

PMTCT – Prevention of mother to child transmission of HIV

UNAIDS- Joint United Nations Programme for HIV and AIDS

WHO- World health organization

ABSTRACT:

Introduction:

HIV still remains a major challenge globally despite decades of, advocacy, awareness raising and investing in programs to control the spread of HIV. The Global Plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive was well underway, with ambitious goals of reducing the number of new HIV infections in children by 90% and HIV-related maternal deaths by 50%. There was now unprecedented collaboration and political will to accomplish these goals. The national PMTCT program in Ethiopia was launched in 2001 through implementing the first PMTCT guideline that was focusing on opt-in approach and use of single dose NVP for the mother and the baby. Following the launch of the Global e-MTCT plan in 2011, Ethiopia has launched the accelerated plan of PMTCT in 2012 focusing on site expansion, quality improvement, demand creation and use of more efficient PMTCT regimen and adapted PMTCT option B+ .

Objective: To assess knowledge, attitude about PMTCT option B+ and associated factors among ANC clients in Dessie.

Method: A cross sectional study design that employed simple &systematic random probability sampling, quantitative data collection method supplemented by qualitative FGD conducted on a sample size of 301 study subjects from march 14 to April16 2015G.C. Descriptive, bivariate and multivariate logistic regression

analyses were conducted. Statistical tests were done at a level of significance of p = 0.05. Tables and graphs were used to present result.

Results: In this study 297 (99.7 %) of the required sample pregnant women attending antenatal care were participate 199(66.1%) had positive attitude and 167(55%) had the knowledge of HIV/AIDS transmission ways. 168(55.8%) were known what the service PMTCT option B+ mean, however, 129(42.9%) were not have clear understanding. 243(80.7 %) study participants thought to receive reactive results face to face without their husband. Professional women were 4.53 times [Adj.OR & (95%CI) = 4.53(1.23-15.31)] more than 1-4th grade women positive opinion for the PMTCT option B+ services utilization and Muslim followers were 0.03 times [Adj.OR & (95%CI) = 0.03(0.15-0.83)] more positive opinion on PMTCT option B+ services utilization than orthodox followers.

Conclusion: Most of the study participants in this study knew that HIV could be transmitted from an infected mother to her baby and most of them know what did the service PMTCT option B+ mean and its benefit and they had also positive attitude on PMTCT option B+ service but worried about discrimination by their partner.

Key words: Prevention of mother to child transmission option B+ Antenatal care

CHAPTER ONE

1. INTRODUCTION:

Human immunodeficiency virus (HIV) still remains a major challenge globally despite decades of advocacy, awareness raising and investing in programs to control the spread of HIV. But it was continues to be a major global public health issue, having claimed more than 39 million lives so far globally, among of these 20.6 million from Sub-Saharan Africa and 4.5 million in Ethiopia [1].In 2013, 1.5 million people died from HIV-related causes globally and there were approximately 35.0 million people living with HIV. At the same year Sub-Saharan Africa was the most affected region, with 24.7 million people living with HIV [1]. Furthermore 2.1 million people becoming newly infected with HIV globally. From these, Sub-Saharan Africa accounts about 70% infections [1].In addition in Sub-Saharan Africa an estimated 60% of people living with HIV were women, mostly in the reproductive age group [1]. Each year approximately 1.4 million women living with HIV become pregnant globally and 0.98% among these clients in sub-Saharan Africa, the proportion of women living with HIV ranges from 5% to as high as 30% [1]. In Ethiopia 1,216,908 people were living with HIV/AIDS and estimated 90,311 HIV-positive pregnant women are anticipated in 2010[2].

Due to these challenge WHO develops PMTCT treatment guidelines have evolved considerably over time in sub-Saharan Africa, following the first recommendation for ARV drugs for PMTCT in 2000(short-course prophylaxis starting late in pregnancy or during labour, including single-dose-NVP for mothers and infants)and subsequent revisions in 2004 (standardization and simplification of regimens) and 2006 which emphasized the importance of providing c-ART to pregnant women for their own health (c-ART for those with CD4 counts below 200 cells/mm3, or (AZT) prophylaxis starting from 28 weeks of pregnancy, single-dose NVP during labour and

delivery, and infant prophylaxis for one week) [2].WHO continuously updated the treatment guide in 2010 and had recommendations include an option (A) women receive antenatal and intrapartum antiretroviral prophylaxis along with an antiretroviral postpartum "tail" regimen to reduce risk of drug resistance, while infants receive postpartum antiretroviral prophylaxis throughout the duration of breastfeeding. WHO also develops option (B) and had a simpler clinical flow in which all pregnant and lactating women with HIV initially are offered ART – beginning in the antenatal period and continuing throughout the duration of breastfeeding, but at the end of breastfeeding those women who do not yet require ART for their own health would discontinue the prophylaxis and continue to monitor their CD4 count, eventually re-starting ART when the CD4 falls below 350 cells/mm^3 [1].

WHO further develops option B+(ARV therapy for all HIV-positive pregnant women continued for life) was expected to be formally recommended in 2013, with foreseen benefits including further simplification and operational simplicity, avoidance of stopping and starting ARV drugs, protection against vertical transmission in future pregnancies and protection against sexual transmission to serodiscordant partners [2-3].

The national PMTCT program in Ethiopia was launched in 2001 through implementing the first PMTCT guideline that was focusing on opt-in approach and use of single dose NVP for the mother and the baby [4].

Ethiopia has revised its PMTCT guidelines successively in 2007 and 2012 to adapt the 2006 and 2010 WHO guidelines based on Option A respectively. Following the launch of the Global e-MTCT plan in 2011, Ethiopia has launched the accelerated plan of PMTCT in 2012 focusing on site expansion, quality improvement, demand creation and use of more efficient PMTCT regimen[4].In light of the global and country commitments to the elimination of new pediatric

infections and new evidence, Ethiopia has examined its PMTCT program goals and implementation experience to make optimal programmatic choices [5].Although Ethiopia's experience with option "A" implementation is limited, it had decided to make a rapid switch from option A to Option B+ approach, because of the substantial clinical and programmatic advantage of option B+ [5].It had developed and launched the operational plan for the implementation of Option B+ in 2013 to contribute to the national elimination plan [5].The plan follows a phased roll out strategy to implement option B+ in all existing and new PMTCT facilities by the end of December 2013.Through this approach Ethiopia was aiming at scaling up PMTCT, in order to achieve the goals of the national e-MTCT plan [5].

2. STATEMENT OF THE PROBLEM:

A range of factors within the health care setting emerged that affected women's experiences in PMTCT services. These related primarily to inadequate counseling at the time of diagnosis, perceptions of mandatory testing, real and perceived breaches of confidentiality and suboptimal health worker–client interactions such as health workers' discriminatory attitudes and behavior probably reflect societal attitudes, long waiting times and cost of transport to the health facility[6].

In a study in Malawi regarding retention in care, 78% of ANC HIV+ women in 2012 were retained on B+ regimen [5].Transmission of HIV, and high rates of loss-to-follow-up (LTFU) were other systematic problems for both PMTCT and ART that need attention regardless of which regimen was implemented, a study in South Africa shows 22.3% LTFU at 12 months [6].

Furthermore, irregular antenatal care attendance and low levels of trust in health workers, which may stem from experiences within PMTCT, were associated with non-use of antiretroviral prophylaxis for PMTCT [6].

Factors within the broader community clearly also affect women's care-seeking behavior and thus were require attention in any efforts to improve the uptake of HIV-related services. On the other hand barriers to attending PMTCT B+ services outside the health facility included: denial of the HIV diagnosis, financial barriers, lack of information, competing obligations, lack of perceived need, unsupportive partners and stigma[6].

While the benefit of Option B+ is given that ART requires adherence for life, it was essential to invest in evidence-based interventions that create and sustain demand for services. But with specific regard to the use of antiretroviral for PMTCT Option B^{+}, little evidence suggested that this was linked to women's experiences in PMTCT B+ services [6].

Overall, the evidence regarding how women's experiences in PMTCT option B+ services affect their subsequent care-seeking behavior remains sparse, since few studies had specifically sought to assess this link. This appears particularly true with regard to the uptake of both long-term HIV care and treatment for the woman's own HIV infection and infant HIV testing and related services.

However women's experiences of and perspectives on current and proposed interventions and how these influence subsequent care-seeking behavior needed better understood to ensure that an appropriate and acceptable package of services could be offered and that the virtual elimination of mother-to-child HIV transmission become an attainable goal[5].

Therefore, this study was conducted to assess knowledge and attitude about PMTCT Option B^+ and associated factors among ANC follow up clients in Dessie town North Ethiopia.

3. SIGNIFICANCE OF THE STUDY:

One of the major modes of HIV transmission is vertical and a better understanding of PMTCT option B+ service and women's who understand their HIV status was beneficial due to ARV medication becoming available and lifelong. Therefore the study signifies the following listed points:

This study was used for evidence based decision making to reduce MTCT of HIV in the study area and national wide.

In addition, this study was provided information about the PMTCT option B+ simplified regimen and service delivery and harmonization with ART programmes for the community.

Furthermore, this study was enhanced protection against mother-to-child transmission in future pregnancies.

Also, this study was strengthening a continuing prevention benefit against sexual transmission to serodiscordant partners.

And, this study was providing information about the disadvantages of stopping and starting of ARV drugs for the community.

Moreover this research finding is used to serve as a base line for conducting further research on the problem in our country.

4. HYPOTHESES:

Hypothesis 1: Attitude of pregnant women toward PMTCT option B+ significantly associated with reducing lost to follow up.

Hypothesis 2: PMTCT option B+ service was significantly associated with more reduction in stigma and discrimination towards mothers.

5. LITERATURE REVIEW:

In the absence of any interventions during pregnancy, labour, delivery or breastfeeding, rates of HIV transmission from mother-to-child can be between 15-45%. MTCT could be nearly fully prevented if both the mother and the child are provided with ARV drugs throughout the stages when infection could occur [7].

The coalition of global efforts toward elimination of Mother-To-Child Transmission of HIV (e-MTCT) has brought hope of ending vertical transmission of HIV from pregnant mother to the child. This is built around a growing body of evidence pointing to the fact that vertical transmission of HIV could be eliminated. As more and more efficacious treatment options become available, it had become increasingly imperative for governments and partners to do all they can to ensure that HIV infected pregnant women and HIV exposed or infected children get the care they very much deserve [8].

The Global Plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive was well underway, with ambitious goals of reducing the number of new HIV infections in children by 90% and HIV-related maternal deaths by 50%. There was unprecedented collaboration and political will to accomplish these goals, and many countries have made exceptional progress [8].

Availability and accessibility of PMTCT option B+ services **for pregnant women:**

Currently, women accessing PMTCT services were counseled, tested and initiated on ART on the same day. This policy aims to reduce missed opportunities. However, the interaction with both the health care providers and clients reveal some misgivings about this practice. Some health workers were not comfortable about initiating women on the same day, arguing that the clients would not have been adequately prepared. Some of the clients also say they need time to prepare psychologically for this, as they could be getting to know their status for the first time. Others argue that they need to discuss the results with their spouses or a relative before initiating treatment [9].

Global access to ART among pregnant women in need was reached at 34% in 2013[10]. In Malawi the total numbers of all patients initiating ART in the national program increased by an astounding 88% after implementation of option B+ for only one quarter [10].While these dramatic proportions were expected to decrease somewhat in future quarters after an initial backlog of women have all enrolled on Option B+, it is still predicted that almost 25% of all people newly initiating ART in Malawi would be pregnant once the system reaches steady state [10]. With Option B+ increasingly over time the majority of women in the ART program would enter it through PMTCT [10]. A similar study done shows that in the first full quarter of implementation of Option B+ at all MNCH facilities, pregnant women represented about 40% of all new patients initiating ART in that country[10]. The proportion of women starting treatment through antenatal care (ANC) as the entry point may increase further, since many women living with HIV who are starting ART at a late point in programs today would in the future have already started treatment in ANC [11].Similarly another study done in Malawi about implementation of B+ shows in rapid expansion of integrated PMTCT option B+ services to all

MNCH sites. The number of sites providing ART increased from 300 (2nd quarter 2011) to 641 (3rd quarter 2012), with 573 of these providing B+ services [5]. HIV testing and counseling (HTC) services are offered to all women accessing ANC and over 70% of the pregnant women testing positive are initiated on the B+ regimen [5].Worldwide low access of pregnant women to ART exists despite the fact that coverage of HIV testing is generally much higher in pregnant women, while poor ART access for pregnant women is a pervasive problem for many PMTCT programs; it disproportionately affects women their children living in areas far from ART sites or in settings with weak health systems [12].

The same study done by CDC in 2011, shows only 45 percent of women had access to prevention of mother-to-child transmission of HIV (PMTCT) services and, of those that did, many could not complete the treatment due to inadequate access to care [12].

In other study at the same year by UNAIDS estimates, in 2011, 57% of pregnant women living with HIV in low and middle-income countries received effective antiretroviral drugs for prevention of mother to child transmission (PMTCT), a substantial increase from 48% in 2010[13].

Furthermore the WHO ARV guidelines 2013 shows, provision of antiretroviral for the prevention of mother-to-child transmission has increased to over 900 000 women in 2012 which is 67% of the estimated 1.4 million pregnant women living with HIV in low- and middle-income countries received effective antiretroviral drugs to avoid transmission to their children, up from 47% in 2009 [14].

A study done in Ethiopia shows that the number of women initiated on ART increased from 1,257 in 2011 (prior to Option B+) to 10,663 in 2012 (one year after implementation) a 74.8% increase. 4,839 health workers were trained to provide lifelong ART to pregnant women.

The number of health centers providing ART to pregnant women living with HIV more than doubled from 303 sites in June 2011 to 641 in September 2012[15].

Similarly the findings of FGD in Uganda and Malawi, about PMTCT option B+ services studies have low availabilities and accessibility. Most of the FGD from Uganda agreed about the availabilities, but had complained on its accessibilities. For example one FGD3#2 stated that PMTCT option B+ service is critical since taking the ART will life long, but stock might be empty and loss to follow up will be increases." Similarly most of the FGD from Malawi also have the same idea. For example One FGD 4#5 stated that "I am reactive, I feed my kid breast milk, this decrease costs for formula milk and supplement food, but the ART drug some time not accessible here nearby health institution"[16].

The advantage of PMTCT option B+ **services:**

Placing mothers on triple ARVs early as treatment may decrease HIV related morbidity due opportunistic infections such as tuberculosis [17].Option B+ will likely increase maternal life expectancy for those who adhere [18].This is likely to have an indirect effect on reducing under-5 mortality. Parental HIV-positive status is associated with a 20-40% increase in the risk of mortality in children under-5 regardless of their HIV status [19].Further, leveraging the close relationship between PMTCT and maternal, newborn, and child health programs offers an opportunity for a mutually enforcing effort. Hospitalization and specialist care for HIV-associated morbidity, if quantified, would be an additional cost of failure for infected mothers, infants, and serodiscordant partners as they suffer from increasingly compromised immune systems over time, leading to opportunistic infections, and, ultimately, end of life care [20]. Productivity benefits, in particular from the increase in life years for mothers, dramatically increase the monetary benefits associated with Option B+. Higher retention of pregnant mothers

and earlier initiation on ART treatment under Option B+ will drive lower mortality rates. And these increased life years have a potential economic benefit [20].

Similarly a study done in Uganda and Malawi 2013[16] was consistent and one FGD1#2 stated as “Painfully, I could not give my baby the breast. Painfully, I paid through the nose to feed by baby. And painfully, I was in and out of the clinics and I thought that was really expensive for my baby. And even now, I think that her immunity is low because definitely she never breastfed. I wish my baby had breastfed. So I think Option B+ will be really good” [16].

Pregnant women’s satisfaction and Continuum of care (adherence) on PMTCT option B+ service:

One multicounty study found that quantitative measures of satisfaction with counseling among women who were tested for HIV in PMTCT services were very high, thus 83% had the meaning of positive and negative results explained to them and 87% reported that post-test information was sufficient [21].

Furthermore, a study done in Malawi about implementation of B+ indicates that the PMTCT option B+ services were more acceptable and appreciated and many more clients are retained in care and were showing satisfaction[5]. The results of the national cohort ‘survival’ analysis by MOH from 3rd quarter 2012 showed that 83% of clients were retained in care for six months and 78% were retained in care for 12 months [5]. A similar study done in rural district Malawi shows that among the 50/601 (8.3%) pregnant did not return after the first visit [22]. In addition a study conduct about universal ART retention of women, who started PMTCT ART under Option B+, shows that 17% appeared to be lost to follow-up 6 months after ART initiation [23].

Moreover, a study done by CDC shows that the number of women initiated on ART increased from 1,257 in 2011 (prior to Option B+) to 10,663 in 2012 (one year after implementation) a 748

percent increase [24]. The percent of pregnant women who remained on Option B+ twelve months after initiation 77% was similar to the12-month ART retention rate among adults who initiated ART prior to Option B+ implementation 80% [24]. However, a recent data show that adequate adherence drops from 75.7% (95% CI: 71.5 - 79.7%) during pregnancy to 53% (95% CI 32.8 - 72.7) postpartum among women who meet present ART criteria [25]. But, a study done in Ethiopia shows that 77% of pregnant women remained on Option B+ twelve months after initiation 2012 [15].

A similar study done from Uganda and Malawi also shows that good satisfaction and adherence on the service. FGD1#5 states that "We were ill with diseases but now that we are taking the medication we have good health and we expect to have this for life" [16].

Knowledge of pregnant women towards PMTCT option B+ services:

A woman's knowledge of her HIV status is the first essential requirement for the application of PMTCT interventions.

A study done in Malawi, shows that knowledge about PMTCT option B+ was low, and women reported that counseling was overly biomedical with inadequate attention given to psychosocial issues, poverty, education, transport and food insecurity and shows18-32% of women do not ascertain their HIV status prior to delivery, which is similar to national estimates of 17% of women [26].

A similar study in Jamaica, about knowledge gaps were attributed to the limited counseling provided by health workers and to conflicting information from health workers, the internet and other media [27]. Similarly a study in Benin reported that only half the study participants had been told how to protect their infant from HIV during pregnancy, delivery or postpartum [27].

Furthermore, a study done in Ugandan women also reported low levels of knowledge, about PMTCT option B+ service and explaining that they had not felt sufficiently empowered to ask questions during the session [28]. Moreover, in VietNam, no information was provided on the treatment of opportunistic infections [29]. Also a study done in South Africa revealed important gaps in knowledge regarding women's own health as well as 52% women planning suboptimal feeding methods post-counseling [30].

In the context of Ethiopia a study done in Gondar indicated that, the vast majority of the respondents (90%) were aware that one could check his/ her HIV status through blood test, and about 98% of respondents felt that PMTCT option B+ services are necessary[31].

Similarly study revealed that a small proportion of mothers in Jimma Town had sufficient knowledge about MTCT (38.8 %) and PMTCT option B+ of HIV (41.8%) [32]. In the same study area, 84% of mothers visited health institutions for antenatal care out of which 35.7% used VCT services during their last pregnancy[32].

A similar finding from FGD in Uganda and Malawi showed that almost all the FGD had good knowledge on MTCT. However, some of them were confused on PMTCT B+ option. For example from Uganda FGD2#3 stated as "it is difficult to understand the B and it's + sign for me." [16].

Attitude of pregnant women towards PMTCT option B+ services:

A pregnant women attitude toward the PMTCT option B+ service utilization were a cornerstone for the enhancement of adherence and decrement of women lost follow up after initiating ART. Women fear to come and test and very few disclose their HIV status to their partners [32].

A study done in Jimma showed that 62.4 % of pregnant mothers had good attitude towards PMTCT B+ option [32]. A similar a study done in Zambia findings shows that there was a high

level of stigma against HIV/AIDS patients. The community tends to shun persons who are known to be HIV infected or have symptoms of AIDS [33].

Furthermore a study done in Kenya about PMTCT option B+ service in Nairobi and Mara Masai areas, still have little experience with ARVs, stigma and misconceptions about the drugs have emerged as important obstacles to acceptance and effective use. With limited access, PMTCT option B+ programs have made special efforts to help women adhere to the often difficult-to-follow ARV treatment regimens [34].

A similar study from Malawi [16] shows contradicts result. Most of the FGD agreed on its advantages for long life. One FGD5#3 stated that "I do not know what happed in my life if this program is not started, my family might be going to street life."

Challenges of PMTCT option B+ services for pregnant women:

Studies done in Lusaka showed that 70% of respondents (women) share their test results with their partners. Women who disclose their sero-status were more likely to experience physical abuse, compared to those who did not [35].

A similar study report from Zimbabwe revealed collection of test result and mother-child follow-up were among the most common challenges which call for district approach and community involvement that were critical to develop PMTCT option B+ program in rural settings [35]. This was due to several barriers prevents people from accessing PMTCT option B+ services. Barriers included worries about confidentiality; perceived pressure to notify partners or family members; inaccurate risk perception; fear of stigma; lack of information about the realities of living with HIV; and inadequate post-test support care and treatment; PMTCT option B+ was also unavailable in many areas; and services needed to be expanded to reach more people from all risk groups [35].

Moreover, a study done in Kenya shows, 60.8% (n = 306) of the women with HIV disclosed their HIV status to their partners immediately; 8.5% (n = 43) disclosed within the first year after diagnosis; and 5.2% (n = 26) disclosed their status more than one year after diagnosis. A quarter of the women (25.5%), did not respond to a question about their disclosure to their partner in the survey [38].

Findings from qualitative research conducted in the South East Zone Malawi [37] women feel that men need extra encouragement to access PMTCT option B+ service, and that greater male involvement would support women in testing and entering into HIV care. Mothers from FGD 4#6 “fears of being judged, stigmatized and blamed for being infected their children and partners was the challenges for not used the service.”The possible reason were anxiety and stress associated with a potentially fatal diagnosis, compel women to refuse testing, hide test results or develop strategies to keep their HIV status unknown or undisclosed. Some used the negative test result of a child or partner as a proxy for their own HIV status.

Male involvement/Family/community centeredness for PMTCT option B+ services:

Although Malawi has done a commendable job in trying to involve male partners in PMTCT option B+ service, especially through the use of village chiefs, much more remains to be done. Similarly study projects done in Tanzania, Zimbabwe, and South Africa showed 63.4%, 67.2%, 61.2% and 23%, 19% discus with their partner and family respectively [5, 18, 29].

A study in Ethiopia in mother support groups, pregnant women newly diagnosed with HIV are mentored by women who have previously gone through this life-changing event. An evaluation of this approach found that, among infants whose mothers were enrolled in a support group, HIV prevalence was 57% lower than among infants whose mothers were not enrolled in a support group [15].

A similar study from Malawi [16] has done a commendable job in trying to involve male partners in PMTCT option B+ service, especially through the use of village chiefs, much more remains to be done. Female participants in FGDs as well as health workers feel that greater male involvement is critical for increased uptake and retention. For example one FGD4#1 stated that "discussion about test result is cornerstone for the health of our family

6. CONCEPTUAL FRAME WORK:

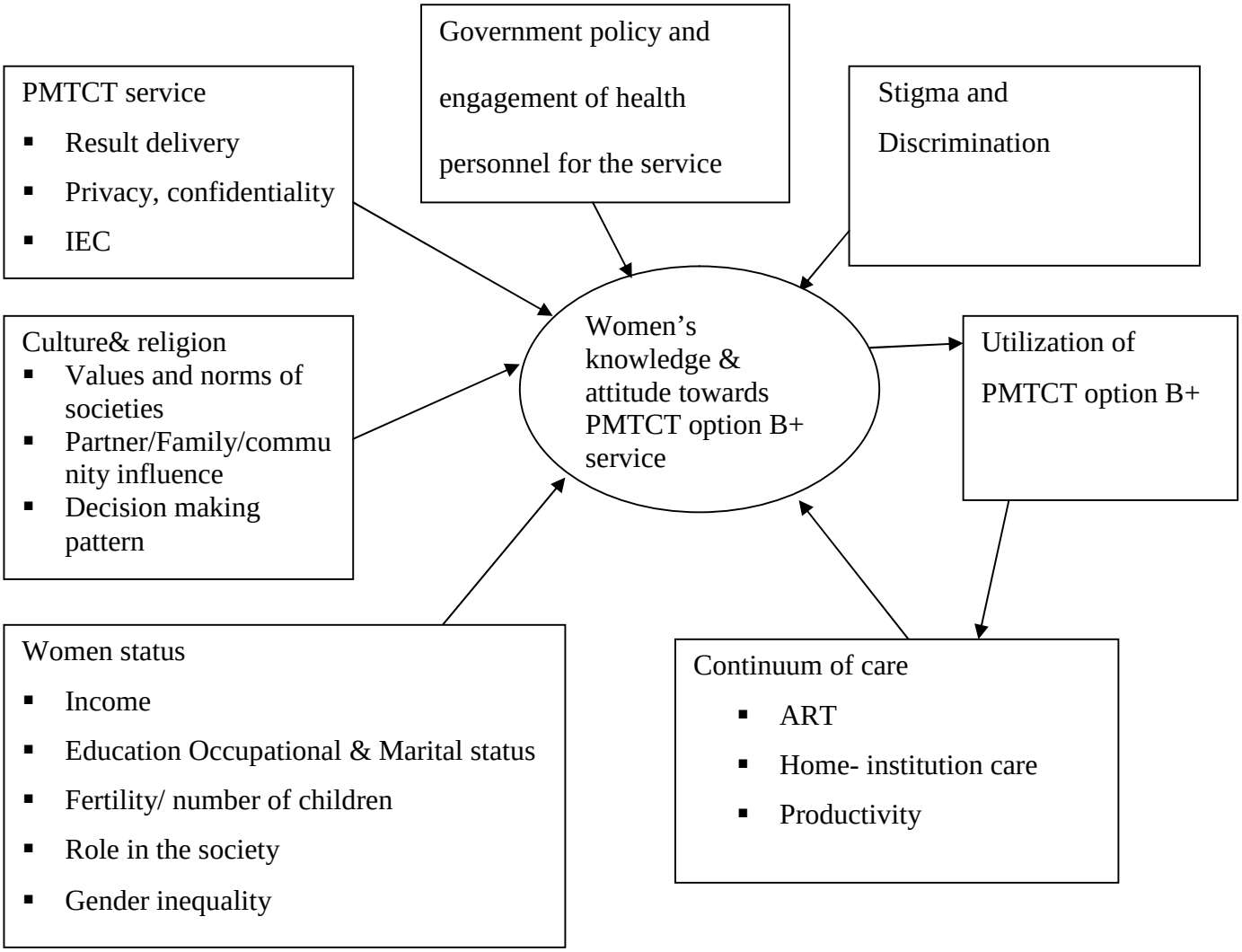

Figure 1: Conceptual frame work showing the linkage between Women's experiences and attitude to PMTCT option B+ and other factor developed from literature review.

CHAPTER TWO

OBJECTIVES:

General objective:

To assess knowledge, attitude about PMTCT option B+ and associated factors among ANC clients.

Specific objective:

- ✓ To examine pregnant women's level of knowledge about PMTCT option B+ service
- ✓ To examine pregnant women's attitude about PMTCT option B+ service
- ✓ To identify associated factors about PMTCT option B+ among pregnant women.

CHAPTER THREE

METHODOLOGY:

3.1 Study area and period

The study area was in Dessie town, situated eastern part of Amhara regional state in south Wollo zone, 401km north of Addis Ababa the capital of Ethiopia and 480 km from Bahir-Dar capital of the regional state. It sits at a latitude and longitude of 11°8′N 39°38′E, with an elevation between 2,470 and 2,550 meters above sea level. It had ten subcity and six rural Kebeles. Based on the EDHS 2011[39] report a total population of 151,174, of whom 72,932 were men and 78,242 women; 120,095 or 79.44% were urban inhabitants living in the town of Dessie, the rest of the population were living at rural kebeles around. There were two governmental and three private hospitals, eight health centers and thirty six private clinics, two NGO clinics, forty seven pharmacies and five private laboratories. Counting a total number of 880 ANC followers were booking from January to February 13, 2015, with 1st, 2nd and 3rd visit in all the health institutions in the town. Among of those 790 in governmental, 80 in private and 10 in NGOs. The study period was from March to May, 2015 G.C.

3.2. Study design

- ✓ Institutional based cross sectional survey was used to employed quantitative data collection method. For qualitative data focus group discussion (FGD) was conducted at the field with two groups of pregnant women and seven members for each.

3.3. Population and sampling

*3.3.*1 Source of population:

- ✓ The source population for the study was HIV+ve pregnant women visiting government health institution.

3.3.2 Study population:

- ✓ HIV+ve pregnant women having ANC follow up at selected government health institutions

Inclusion criteria:

- ✓ Pregnant women attending antenatal care in Government health institutions (1 hospital and 3 health centers).

Exclusion criteria:

- ✓ Those who refuse to participate
- ✓ Inability to communicate
- ✓ Those that was not registered as antenatal follow-up clients.
- ✓ Those who had follow up in private and NGO institutions.
- ✓ Those having the fourth visit

3.3.4 Sample size calculation

3.3.4.1 Quantitative method:

the actual sample size for the study was determined using the formula for single population proportion by assuming 5% marginal error and 95% confidence interval (∂ (alpha)=0.05) and the prevalence of ANC follow up was 50%

Using this formula:

$$n=\frac{\left(Z\frac{\sim}{2}\right)^2 p(1-p)}{d^2}=\frac{Z^2 p(1-p)}{d^2}= (1.96)^2 \text{ x } 0.5(1\text{-}0.5) / (0.05)^2 =384$$

n = the required sample size

z = the value of the standard normal curve score corresponding to the given confidence interval=1.96

p = Assumed proportion of ANC follower= 50%

d = the permissible margin of error (the required precision) = 5%

Since the total numbers 790ANC clients were less than 10,000, the desired sample size calculated using the following correction factor formula as follows: n= n/(1+ [n/N]) ,where N= study population n= 384/(1+[384/790])= 259.4

- ✓ with 15% non-response rate the total sample size = 301

3.3.4.2 Qualitative method:

For qualitative method the minimum number of PMTCT option B+ under ART planed were discussed 14 females who have ANC follow up in study period.

3.4. Sampling procedure

3.4.1 Quantitative method:

- ✓ The study hospitals and health centers were selected by probability method.

Step 1:- Simple random probability without replacement $\left\{\frac{1}{(N_n)}\right\}$ sampling were used by employing lottery method for the study site from the prepared sample frame.

N = number of Governmental Institution in Dessie town which provide PMTCT option B+ service = 2 hospitals and 8 health centers

n = the required study site needed by the investigator. = One hospital and 3 health centers

(N_n) - was the required sample frame to select the required study unit.

$1/(N_n)\}$ = was the required unit selection from the given sample frame by lottery method i.e. ½ and 3/8 which was Dessie hospital and Banbuwuha, Dessie and Gerado health centers were selected.

Step 2:- the desired numbers of study participants were computed proportionally for each study site.

Step 3:- systemic random sampling technique of every 2nd ANC booking recorded woman were used to selected as study subjects until the desired proportionate sample size (n= 301) obtained from all the study site. ANC clients who were not available during the data collection period, the next register woman were selected as a study subject.

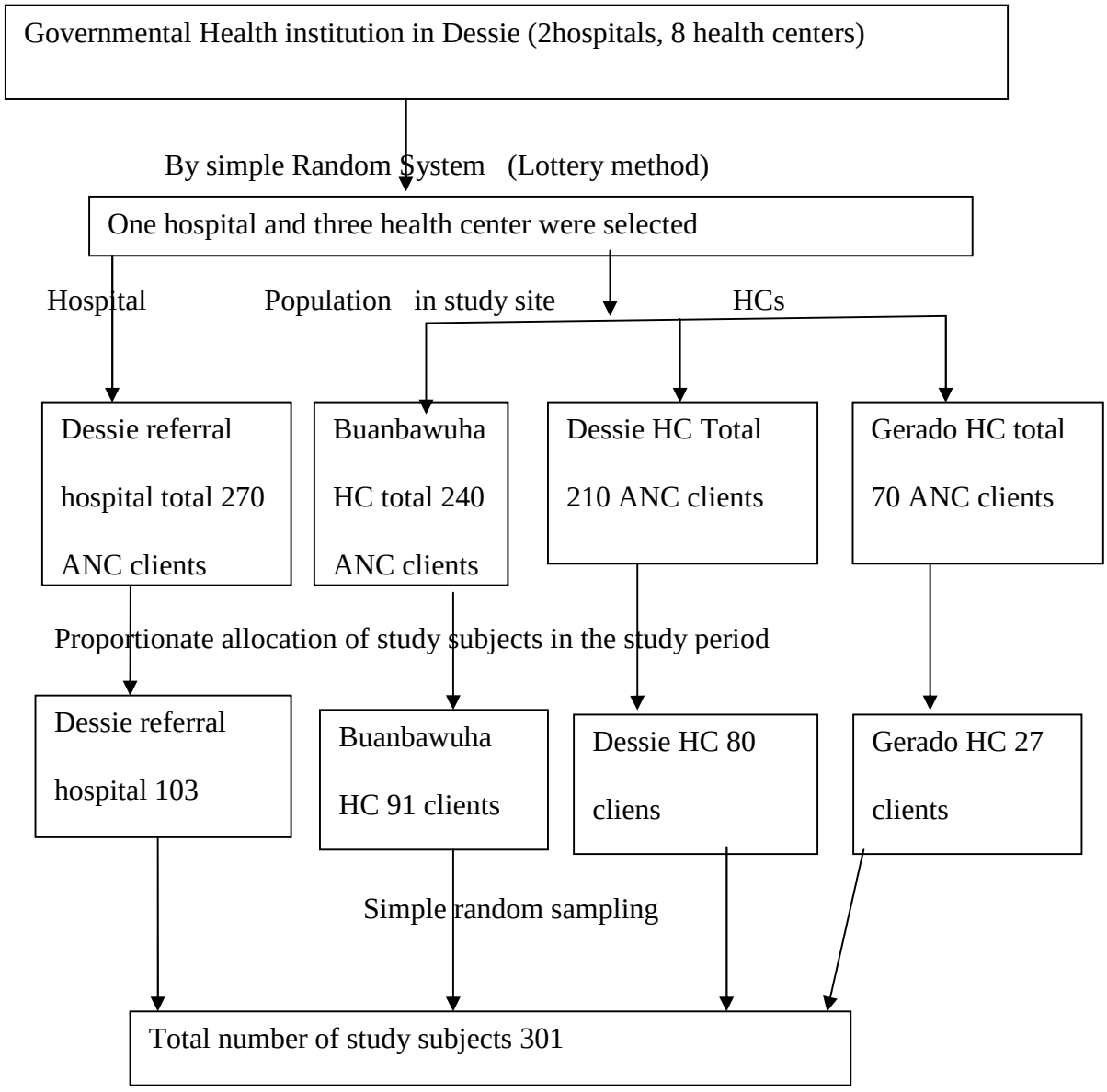

Figure 2: Schematic presentation of the sampling technique /procedure in Dessie town, 2015.

3.4.2 Qualitative method:

- ✓ For the FGDs, purposive sampling was used to select the study subjects based on socio demographic characteristics of participants.

3.5. Variables

3.5.1 **Independent Variables:**

- ✓ Socio-demographic variables =age, ethnicity, religion, education, occupation, family size, monthly household income, marital status, number of pregnancies, number of births, gestational age and number of antenatal care visits,
- ✓ Male partner's reaction to HIV positive result
- ✓ Risk perception
- ✓ Stigma and discrimination

3.5.2 **Dependent Variables:**

- ✓ ANC follow women's knowledge on PMTCT option B+ service
- ✓ ANC follow women's attitude on PMTCT option B+ service

3.6. Data collection instruments

A structured questionnaire were used and prepared in English and translated into Amharic and then, translated back in to English and to check for consistency for the quantitative data and Semi- structure questionnaire guide for qualitative data. Main points included in the questionnaire was socio demographic characteristics, knowledge of HIV and PMTCT option B+, male partner's reaction to HIV positive result and Stigma and discrimination. The main issue addressed was assessing knowledge and attitude of ANC follow up women on PMTCT B+ option and adopts standard questionnaire from the Joint United Nations Programme on HIV/AIDS (UNAIDS) [8] after considerable modifications.

3.7. Pre-test /pilot study

Pilot study were conducted on ANC follow up thirty women to test its variability and subjects, who were involved in the pre-test excluded from the study, then the questionnaire was assessed for its clarity, length and completeness and the necessary correction was done accordingly.

3.8. Data collection procedure/method

Data were collected from March 28 to April30, 2015 G.C. to Administer the structured questionnaire one Bsc midwifery professional as supervisor and four diploma midwives as data collector were selected and given training for two days on the objective, relevance of the study, confidentiality of information, Respondent Rights, Informed consent, and technique of interview. All field questionnaires were reviewed each night and errors were corrected.

3.9. Quality control (Data quality assurance)

10% of the data were verified by the principal investigator during the initial stage of data collection for pre- test and appropriate instruction were given to the data collector and supervisor and also to ensured the data quality. The data collectors and supervisor were appropriately trained for two days. Procedure manual for data collection method were prepared and distributed for data collectors and supervisor. Supervisor and principal investigators were closely following the data collection process. Privacy and confidentiality of the respondents as well as good interaction between respondents and interviewer were maintained, filed questionnaires were checked daily for completeness and errors were corrected.

3.10. Data processing

All data were summarized on master sheet then were coded. Data were feed to computers SPSS version 20 to make them ready for Analysis.

3.11. Data analysis

Data were entered in to a SPSS and analysis is made using SPSS version 20 statistical package, errors related to inconsistency of data were checked and corrected during data cleaning. Univariate analysis of percentage and frequency distribution, and appropriate graphic presentation and in addition to these measure of central tendency and measure of dispersions were used for describing data. Bivariate analysis of socio-demographic variable and Knowledge and attitude associated with PMTCT option B+ service were done.

Multivariate logistic regression were employed to control confounding variable to those significantly related at least to one of the two outcome variable at the bivariate level and odds' ratio were used and p-value was determined to compare the variables and to measure their association and some of the result were compared with results of other studies available.

To analyze the qualitative data, each set of notes were read and re-read until the investigator became intimately familiar with the contents. The recorded tape was carefully reviewed for patterns, possible relationship between themes, contradictory response, or gaps in understanding. Content analysis was performed by categorizing concepts or themes from groups of lower data points and then assessed for similarities and differences. Summary was written in a concise form to make it understandable.

3.12. Ethical Consideration

Ethical approval of the research proposal was obtained from the ethical review committee of Addis Ababa University allied school of Nursing and Midwifery.

A formal letter was written by the department of Nursing and Midwifery to the concerned office. Permission was asked from the responsible authorities of each health institution of the study site.

Detailed Explanation about the objective (purpose) and benefit of the study was described to the study subjects and their full cooperation, verbal and written consent was taken. Only volunteer respondents who were selected in the sample size without written their name was interviewed by diploma midwifery health professionals.

Used reference materials for the study coated and cited with their proper Authors, funding organization, the study subject, the institution, advisors ,secretary and people supporting in searching literature(Liberian) data collector, supervisors and all peoples contribute genuine suggestion and advise duly acknowledged.

Dissemination of the study:

A copy of the final paper of this study will be given to the relevant authorities and the result of the study will be communicated to the appropriate government bodies

3.13. Operational definition of variable:

Antenatal care (ANC): is the care of a pregnant woman and her unborn baby throughout a pregnancy.

Factors: A phenomena which affects PMTCT option B+ service utilization

PMTCT option B+: all pregnant women living with HIV were offered life-long ART, regardless of their CD4 count.

Knowledge- individual who answer the question and score above the mean were knowledgeable whereas who score below mean were unknowledgeable on PMTCT option B+.

Attitude- individual who answer the question and score above the mean had positive attitude and below mean had negative attitude on PMTCT option B+.

CHAPTER FOUR

RESULT AND DISCUSION

Results:

Introduction:

This chapter presents the findings of the study. Socio-demographic characteristics Knowledge towards HIV, MTCT and PMTCT option B+ , Attitude towards HIV, MTCT and PMTCT option B+, HIV result communication, decision making, stigma and discrimination of pregnant women and association between the dependent variable attitude on the usage of PMTCT option B+ service and explanatory variables

4. 1. Socio-demographic characteristics of pregnant women:

In this study 297(99.7 %) of the required sample pregnant women attending antenatal care were included and 4 (1.3 %) study participants refuse to participate.

Majority of the respondents were live in Dessie town 273(90.4%), while the remaining were from the Rural area of Gerado 24 (9.3%). And almost all the study respondents, 284 (94.4%) belongs to the Amhara ethnic group and few of them were Tigrians13 (4.3%). Regarding to the educational status, 114(37.9%) were 9-12th grade, 65(21.5%) were 5-8th grade and 52(17.3%) were diploma and above (See table 1).

Moreover, majority of the study respondents 184(61.1 %) were housewives and 54(17.9%) were governmental employees, pertaining their husbands occupation 113(37.5%) governmental employees and110 (36.5%) were merchants. Concerning to the marital status majority of the study participants 257(85.4%) were married, 31(10.5 %) were unmarried. Majority of respondents were Muslims 180 (59.8%) and 117 (38.9%) were orthodox Christians (See table 1).

On the other hand the age of study respondents ranged from 15 - 45 years and the mean age was 25.13 + 5.84 SD year's standard deviation. In addition the median household monthly income of study subjects was 2,523.98 Eth. Birr (See table 1), while the mean gestational age was 23.04 week with standard deviation of 8.229 weeks. Regarding the gravidity of the women 132(43.9%) were primigravida and 72(23.9%) multigravida. Despite of the pregnant women who visited health institutions for the third visit were 108(35.9%) and for the 1st visit were 92(30.6%) (See table 1).

Table 1: Socio-demographic characteristics of the pregnant women in Dessie town South Wollo administration Zone of Amhara Regional state Ethiopia June 2015 G.C.

Variables	Frequency	%
Age in years:		
15-20	57	18.9
21-25	104	34.6
26-30	101	33.6
31-35	30	10.0
36-45	5	1.6
Total	**297**	**98.7**
Residence :		
Dessie (urban)	273	90.7
Gerado (rural)	24	8.0
Total	**297**	**98.7**
Ethnicity:		
Amhara	284	94.4
Tigray	13	4.3
Total	**297**	**98.7**
Educational status:		
1-4th grade	50	16.8
5-8th grade	74	24.9
9-12th grade	107	35.0
Professional	66	22.0
Total	**297**	**98.7**
Occupational status of woman:		
Housewife	184	61.1
Merchant	24	8.0
Home servant	2	0.7
Students	54	17.9
Governmental employee	33	11.0
Total	**297**	**98.7**

Husband occupational status:		
Carpenter	12	4.0
Driver	18	6.0
Farmer	33	11.0
Government employee	110	36.5
Labourer*	3	1.0
Merchant	110	36.5
Student	11	3.7
Total	**297**	**98.7**
Family size of more than two	150	52.1
Marital status:		
Married	257	85.4
Unmarried	31	10.3
Widow	9	3.0
Total	**297**	**98.7**
Religion:		
Muslim	180	59.8
Orthodox Christian	117	38.9
Total	**297**	**98.7**
Gestational week:		
1-16	67	22.3
17-24	86	28.6
25-34	144	47.8
Total	**297**	**98.7**
Number of pregnancy(gravida):		
1	132	43.9
2	72	23.9
3	54	17.9
4	26	8.6
5	3	1.0
6	10	3.3
Total	**297**	**98.7**
Number of ANC visits:		
1st	92	30.6
2nd	84	27.9
3rd	108	35.9
other*	13	4.3
Total	297	98.7
Transport fee:		
Free	208	70.00
1-10birr	60	19.0
>10birr	29	9.7
Total	**297**	**98.7**
Income(eth.birr):		
<1000	50	16.6
1000-2000	126	41.9
2100-3000	54	17.9
>3100	66	21.9
Total	**297**	**98.7**

Other* =pregnant women having GW <34weeks visit due to pregnancy disorder more than three times

Labourer*= working ordinary activities like cleaning roads, carrying barrela.

4. 2. Knowledge of pregnant women towards PMTCT B+ option service:

Majority of the study participants 167(55.8 %) were knowledgeable about PMTCT option B+ service.

All the study participants 297(98.7%) have heard about HIV/AIDS and its impact in community in terms of illness, death, economic problems, orphanage. Moreover, majority of the study participants 282(93.4%) had the knowledge of HIV/AIDS transmission ways, and also 90(63.1%) were knows all of the methods of HIV/AIDS transmission prevention methods. Furthermore, majority of the study participants 243(80.7%) were known that infected pregnant woman could be transmit the virus to her baby and 217(72.1%) of them said time of HIV transmission was during pregnancy, delivery and breast feeding. In addition majority of the study participants 168(55.8%) were known what the service PMTCT option B+ mean, among of these 101(33.6%) had source of information from health personnel. However, 129(42.9%) were not have clear understanding what does PMTCT option B+ mean. And almost half of the study participants 151(50.2%) clearly having the knowledge of benefits of PMTCT option B+ approach, but 108(35.9%) were not sure. Regarding the counseling time, 107(35.5%) study participants agreed to took counseling before blood test. On the other hand majority of the study participants 154(51.2%) were known PMTCT option B+ had have advantages on confidentiality keeping of test result, whereas 107(35.5%) of them had not the knowledge about its advantages (See table 2).

A total of fourteen women with age 21- 40 years; had an educational state of 4th -12th grade; eight Muslim, four orthodox and two protestant; five farmer, four merchant and two government employee and two housewives; six from Gerado, eight from Dessie and all were Amhara ethnic

group participated in FGD. Regarding to their gravidity five primigravida and nine multigravida with their first to third visit were included in the study.

Findings from the qualitative data similarly shows that all FGD participants were pregnant women and stated that HIV has created a burden to the community in terms of illness, death, economic problems, orphanage and increased suffering of old people due to death of the young. They had also explained HIV has hampered development and aggravated poverty. Furthermore all the FGD participants except one pregnant woman (from Gerado) were aware about HIV/AIDS, mother-to-child transmission of HIV (MTCT) and PMTCT option B+ services. And the major sources of information were health personals in health institution and radio. Similarly almost all the FGD participants said that "HIV can be transmitted from mother to child during pregnancy, during child birth and breast feeding and it has prevention methods". However, one from Dessie town and two from Gerado study participants said that "there is no chance of being free from HIV for a baby born from an infected mother and no prevention method has it."

In addition majority of FGD participants explained the advantages of PMTCT option B+ service to know the status before and prevent the vertical transmission of virus to the babies. But some of the FGD from both study participants were confused on the literal meaning of the phrase PMTCT option B+. One participant of FG from Dessie asked that "Am just getting more and more confused. My first question is, what does the B stand for and what about the + sign?"

Table 2: Knowledge of pregnant women towards HIV, MTCT and PMTCT option B+ in Dessie town South Wollo administration Zone of Amhara Regional state Ethiopia June 2015 G.C.

Variables	Frequency	%
Heard about HIV/AIDS:		
Yes	297	98.7
NO	0	0
Total	**297**	**98.7**
Knowledge about HIV transmission:		
I do not know	4	1.3
Partially	11	3.7
Yes	282	93.7
Total	**297**	**98.7**
Knowledge about ways of HIV/AIDS transmission to baby:		
Multiple answers *	190	63.1
Contaminated sharp injury	4	1.3
Infected blood	12	4.0
Mother to child	14	4.7
Unsafe sexual intercourse	77	25.6
Total	**297**	**98.7**
Discussion about HIV/AIDS transmission:		
Multiple answers *	66	21.6
Father and mother	22	7.3
Health professional	15	5.
Husband and neighbor	1	0.3
Husband-friend	182	60.5
Neighbor	4	1.3
Sister and brother	7	2.7
Total	**297**	**98.7**
HIV/AIDS spread prevention methods:		
Abstinence	3	1.0
Abstinence or one to one	3	1.0
Multiple answers *	127	42.2
One to one	137	45.5
Prevent from sharp damage	27	9.0
Total	**297**	**98.7**
Is infected pregnant woman transmit the HIV to her baby:		
I do not know	32	10.6
No	22	7.4
Yes	243	80.7
Total	**297**	**98.7**
Time of HIV transmission:		
After delivery	19	6.3
Multiple answers *	217	72.1
Delivery	19	6.3
Delivery and after delivery	6	2.0
Pregnancy	36	12.0
Total	**297**	**98.7**
Do you know any means to avoid transmission of HIV from mother to baby:		
I do not know	79	26.2
No	7	2.4
Skip*	1	0.3
Yes	210	69.8

Total	**297**	**98.7**
Do you know the existence of intervention which can reduce mother to child transmission:		
Skip*	84	27.6
Yes	213	71.1
Total	**297**	**98.7**
What is/are the means / intervention which can reduce mother to child transmission:		
Use ART drug	142	47.2
No breast feed	45	15.0
Both are answered	26	8.6
Skip*	84	27.9
Total	**297**	**98.7**
Have you ever heard about HIV testing and PMTCT option B+ service:		
No	129	42.9
Yes	168	55.8
Total	**297**	**98.7**
What is your source of Information:		
Multiple answers *	17	5.6
Friends	14	4.7
Health personnel	101	33.6
Kebele meeting	20	6.6
Neighbors	18	6.0
Radio/TV	19	6.3
Skip*	108	35.9
Total	**297**	**98.7**
What is the benefit of PMTCT option B+ for pregnant women do you know:		
Multiple answers *	24	8.0
Skip*	108	35.9
To know self	11	3.7
To prevent transmission to her baby	151	50.1
To prevent transmission to her husband	3	1.0
Total	**297**	**98.7**
How is the beneficiary women get counseling about option B+ PMTCT:		
After result	42	14.0
Multiple answers	8	2.7
Before blood test	107	35.5
Lifelong	32	10.6
Skip	108	35.9
Total	**297**	**98.7**
Is it necessary to keep confidentiality for the test result:		
No	36	12.0
Skip	107	35.5
Yes	154	51.2
Total	297	98.7

Multiple answers *-all the options on the given row were answered
Skip*- not given any answered

4.3. Attitude of pregnant women towards PMTCT option B+ service:

Majority of the study participants 199(66.1%) had positive attitude about PMTCT option B+ service. Furthermore, most of the study participants 270(90%) were not afraid about their risk perception and 200(67.3%) of the study participant also thought that women might be infected if they had multiple sexual partner. In addition, most of them 260(87.0%) and 255(80.0%) respectively were having disagree response to neglect by family and marital breakage if their test result were reactive. On the other hand 191(64.1)

And 194(65.3) respectively were having agree response on the support of the religious leaders and community financial funding, if they had positive result. Furthermore, when asked about their intention to counseled and received test result for HIV, 228(75.0) of study participants were having agree response with face to face without their husband. In addition majority of the study participant 251(82.1) thought to receive their test result at the same time with counseling and testing. 173(58.2%) and 171(56.8%) of the study participant having an agree response on female sex preference for counseling. On the other hand majority of the study participants 283(95.2.0) were having an agree response on the government health service. Moreover, all of the study participants 297(98.7%) were having agreed responses for adherence on the service and positive attitude increased on the service of PMTCT option B+ lost to follow up could be decrease(See table 3.2).

Similarly, finding from the qualitative shows similar result and almost all FGD participants said that the counseling, testing and initiating ART drug at the same day was their preferable time. In addition most of them were not worried about the age of the counselor. Despite of the places to have PMTCT option B+ services, most of the study participants were specifically relay on the choice of governmental health institutions. Furthermore, females were preferred for counseling

and testing of HIV, this was due to matured enough and wise counselors were the most favored according to the FGD participants. However, very few participants (one from Dessie town and two from the rural side Gerado) said that "they did not mind about the sex and age rather they are concerned about the competence of the professional and confidentiality of the testing process. "One participant from the Gerado said "HIV/AIDS and blood testing is the most feared & sensitive issue to talk about."

Table 3.1: Risk perception of pregnant women towards HIV in Dessie town South Wollo administration Zone of Amhara Regional state Ethiopia June 2015 G.C.

Sr.no	Question	Frequency	%
301	Do you think you can contract HIV virus? Yes No I do not know	 20 270 7	 6.7 90 0.2
302	What is your chance of contracting HIV infection? Low Moderate High I do not know	 245 20 32	 82.5 6.7 1.7
303	If the answer is low moderate or high to (302) Tell me the reason/s for being at risk? (More than one answer is possible) a) If I had multiple sexual Partners b) Injection with unsterile needle	 200 97	 67.3 32.6

Table 3.2: Attitude of pregnant women towards HIV, MTCT and PMTCT option B+ in Dessie town South Wollo administration Zone of Amhara Regional state Ethiopia June 2015 G.C.

Sr.no	Statements	Frequency (%)		
		disagree	Neither	Agree
304	If test result is positive what is the response? a) Neglect by family b) Marital breakage c) Spiritual support from religious leader d) Financial support from community	 260(87.0) 255(85.0) 106(32.6) 71(23.1)	 9(3.0) 5(1.3) 6(2.0) 32(10.3)	 28(8.0) 37(12.4) 191(64.1) 194(65.3)
305	Best ways to received your result: a) Face to face alone b) Face to face with family	 6(2.0) 30(10.2)	 63(21.0) 45(15.2)	 228(75.0) 222(74.6)

306	The ideal time to receive test result:			
	a) During blood testing day	2(0.6)	45(15.2)	251(82.1)
	b) After one day blood testing	100(33.6)	82(26.9)	115(38.2)
307	Females counselors are more accepted than male:	11(3.0)	12(4.0)	274(91.7)
308	Best site for convenient tested:			
	a) Government health institution	11(4.0)	3(1.1)	283(95.2.0)
	b) NGO clinic	219(72.6)	70(23.5)	8(2.6)
	c) Private health institution	215(72.0)	23(7.3)	59(19.4)
309	Women's adherence on PMTCT B+ option is necessary to decrease transmission rate of the virus.	0	0	297(98.7)
310	As a positive attitude of pregnant women increase the rate of lost to follow up will be decrease.	0	0	297(98.7)

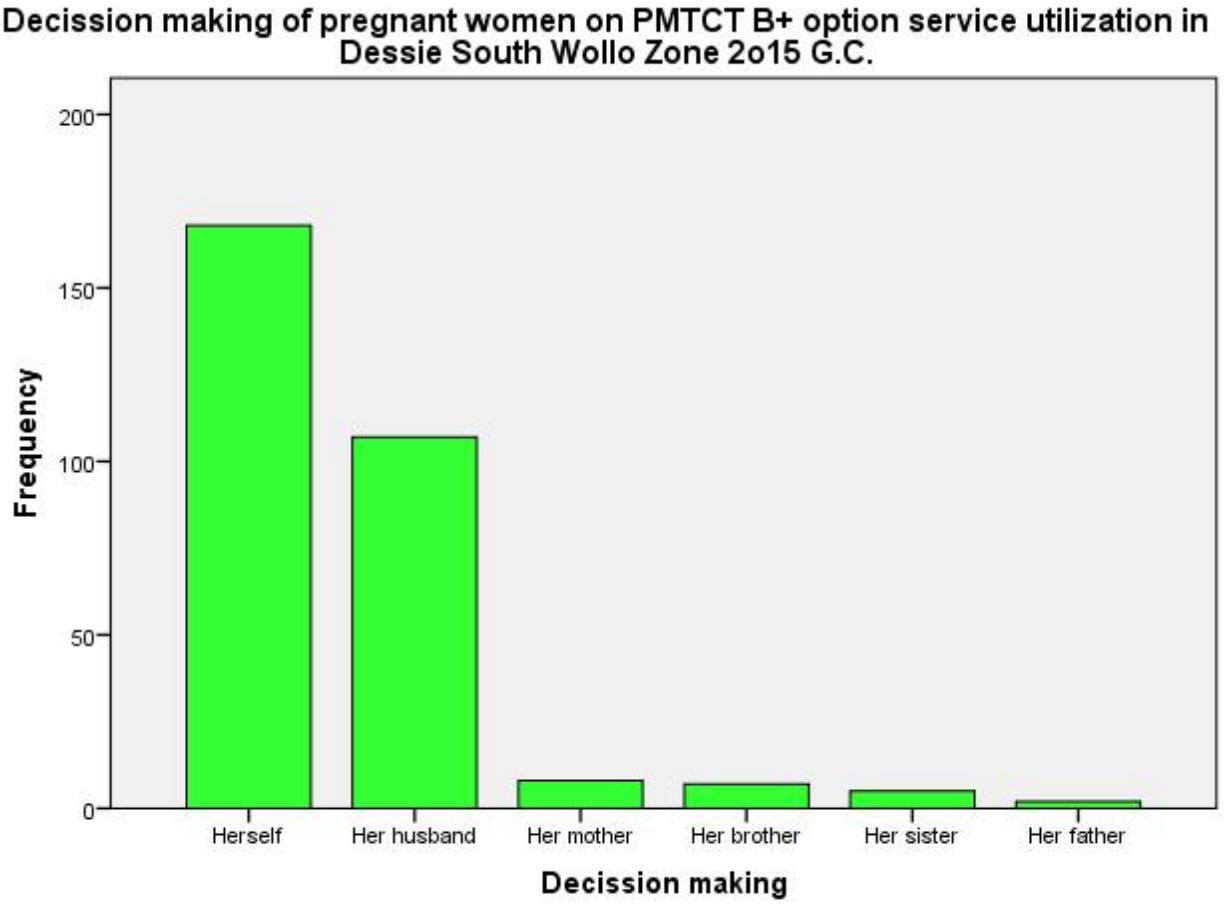

Figure 3: Decision making opinion of pregnant women on PMTCT B+ option service utilation

4.4 Association between the dependent variable attitude on the usage of PMTCT option B+ service and explanatory variables.

In order to measure the association between the dependent variable expressed in terms of attitude on the usage of PMTCT option B+ service and a number of independent variables, crude OR and adjusted OR with 95% CI were employed. After controlling for confounders, the association between selected explanatory variables and attitude on usage of PMTCT B+ option is presented. All variables found to have association were included for Multivariate logistic regression analysis to control for confounders.

Bivariate analysis was done for: age, residence, transport fee, income, religion, occupation, education, marital status, gestational age, ANC visits, gravidity, knowledge of HIV, knowledge of PMTCT B+, benefit and why to rejected PMTCT option B+, discussion with male partner and community, and stigmatization and discrimination disclosure of test result.

The logistic regression showed that the age, occupation of the women, occupation of their husband, income, transport fee, residence of the ANC follow up, gravidity, knowledge of HIV, knowledge of PMTCT option B+ benefit and why to rejected PMTCT option B+, discussion with male partner and community, and stigmatization and discrimination disclosure of test result, women's adherence on PMTCT option B+ decrease transmission rate of the virus and positive attitude of pregnant women decrease the rate of lost to follow up were not significant association.(See tables 4).

Table 4: Binary logistic regression result of the dependent variable expressed willingness to PMTCT option B+ service and explanatory variables of pregnant women attending ANC at Dessie South Wollo Zone Amhara Regional State, north Ethiopia June 2015 G.C.

Variables	Willingness of pregnant women on PMTCT option B+ service utilization		Crude OR(95%CI)
	Yes	No	
Age in years:			
15-20	45	12	0(0-0)
21-25	93	11	0(0-0)
26-30	88	13	0(0-0)
31-40	31	4	0(0-0)
Residence:			
Dessie town	236	34	0(0-0)
Gerado district	20	7	0.41(0.16-1.06)
Religion:			
Orthodox	109	8	1.50(0.15-14.8)
Muslim	148	32	0.33(0.14- 0.74)
Marital status:			
Marred	227	27	0(0-0)
Unmarried	23	9	0.29(0.07-1.22)
Widow	7	4	0.91(1.93-4.34)
Educational status:			
1-4th grade	35	7	0(0-0)
5-8th grade	66	6	3.73(0.90-15.39)
9-12th grade	99	25	1.69(0.40-7.09)
Professional	56	3	4.71(1.36-16.31)
Woman occupational status:			
Student	22	3	1(0-0)
Housewife	154	32	7.70(0-0)
Merchant	27	5	3.70(0-0)
Governmental	51	3	2.20(0-0)
Husband occupational status:			
Student	9	2	0(0-0)
Farmer	3	0	0.98(0.18-5.13)
Merchant	94	12	0(0-0)
Governmental	97	15	0.56(0.23-1.34)
Others*	53	12	0.68(0.29-1.56)
Transport fee:			
Free	146	28	0(0-0)
More than 10 eth.birr	101	22	1.08(0.43-2.67)
Number of pregnancy:			
Primigravida	111	21	0. (0-0)
>= 2 Multigravida	138	16	0.33(0.08-1.23)
>=6 Grandmultigravida	7	4	0.20(0.05-0.77)
Number of ANC visits:			
1st	80	17	0 (0-0)
2nd	80	8	2.98(0.36-24.41)
3rd	96	16	1.36(0.15-11.87)

Knowledge about HIV transmission:			
Yes	240	38	0(0-0)
I do not know	5	1	0.87(0.18-4.08)
Partially	11	2	1.10(0.08-15.15)
Discussion about HIV/AIDS transmission:			
Partner	173	30	0(0-0)
Father-Mother	17	1	1.28(0.53-3.10)
Sister-Brother	7	0	0.43(0.05-3.81)
Community	2	1	0(0-0)
Health personnel	7	2	3.71(0.29-46.47)
Multiple answered	51	7	2.12(0.36-12.31)
Benefit of PMTCT option B+:			
To know my status	9	2	0(0-0)
To protect partner	135	20	1.50(0.29-7.70)
To protect baby	17	5	1.00(0.48-2.09)
I do not know	95	14	1.99(0.63-6.26)
Rejection of PMTCT B+ option service :			
Lack of service	34	10	0(0-0)
Lack of confidence on the service	159	20	1.68(0.65-4.36)
Multiple answers	65	11	0.72(0.32-1.59)
For positive test result what partner's reaction does expect?			
Discrimination	108	14	1.00(0-0)
Stigmatization	63	9	20.9(0-0)
Both are answered	72	18	2.81(0-0)
No punishment	13	0	4.8(0-0)
Women adherence on PMTCT B+ option is decrease transmission rate of the virus:			
Yes	235	35	0 (0-0)
No	21	6	0.52(0.19-1.38)
Positive attitude of pregnant women toward PMTCT B option service increase the rate of lost to follow up will be decrease:			
Yes	215	35	0(0-0)
No	41	6	1.11(0.44-2.81)

Educational status professional women were 4.53 times [Adj.OR & (95%CI) = 4.53(1.23-15.31)] more than 1-4th grade women positive opinion for the PMTCT option B+ option services utilization. This association was statistically significant. Similarly Muslim followers were 0.03 times [Adj.OR & (95%CI) = 0.03(0.15-0.83)] more positive opinion on PMTCT option B+ services utilization than orthodox followers and this association was also statistically significant.

Concerning the number of pregnancy pimigravida women were 1.6 times [Adj.OR & (95%CI) = 1.6(0.31-23.37)] more have good attitude on the PMTCT option B+ service utilization than Multigravida also has statistically associated (See table 5)

Table 5: Multivariate logistic regression analysis results of expressed willingness to PMTCT option B+ service and explanatory variables of pregnant women attending ANC at Dessie South Wollo Zone Amhara Regional State, north Ethiopia June 2015 G.C.

Variables	Willingness of pregnant women on PMTCT option B+ service utilization		Crude OR	Adjust OR	P-value
	Yes	No			
Religion:					
Orthodox	109	8	1.50(0.15-14.8)	2.82(0-0)	0.72
Muslim	148	30	0.33(0.14- 0.74)	0.36*(0.15-0.83)	0.01
Educational status:					
1-4th grade	35	7	0(0-0)	0(0-0)	0.99
5-8th grade	66	6	3.73(0.90-15.39)	6.16*(1.15-21.01)	0.02
9-12th grade	99	25	1.69(0.40-7.09)	1.77(0.41- 7.53)	0.46
Professional	56	3	4.71(1.36-16.31)	4.53*(1.23-15.31)	0.01
Number of pregnancy:					
Primigravida	111	21	0. (0-0)	2.72(0.31-23.37)	0.99
>= 2 Multigravida	138	16	0.33(0.08-1.23)	1.13(0.13-10.83)	0.09
>=6 Grandmultigravida	7	4	0.20(0.05-0.77)	2.06(0.24-17.76)	0.01

Discussion:

Introduction

This chapter discusses the findings of the study. The discussion compares the findings of this study with similar previous studies and also attempts to highlight similarities and differences.

Availability and accessibility of PMTCT option B+ services:

Currently women accessing PMTCT option B+ services were counseled, tested and initiated on ART on the same day. This strategy is successful and fruitful if there is availability and accessibility of the service well distributed and support with necessary materials and training man power and its aims is to reduce missed opportunities of PMTCT option B+ service.

According to the findings of this study about 272 (90.4%) of the study participants agreed on the counseling, testing and initiating of ART at the same day, this might be due to, strong policy support of the government, initiation of the health personnel to prepare psychologically for women and influence of the health extension worker and the community by large. A similar study done in South Africa did not agree with this study finding and most of the clients need time to prepare psychologically as they could be getting to know their status for the first time. Others argue that they need to discuss the results with their spouses or a relative before initiating treatment [9].

Majority of the study participants 282(93.7%) were satisfied on the availability and accessibility of service in health institution they used. This is due to relatively well distribution of health center towards the rural area with necessary materials and training man power. However, 15(5.0%) the study participant from Gerado rural district were argue that far distance of the health center to get the service were one of the reasons for lost follow up and decrease of adherence on the service. As comparing to this study finding from a study done by business case

for option PMTCT option B+ global access to ART among pregnant women in need was around 34% 2013[10] and this was very low. The same study done by CDC and UNAIDS in 2011[11-12] respectively and a study done by WHO ARV guidelines 2013[13] showed lower coverage than this study findings. The possible reason might be those studies were done in remote areas with low coverage of infrastructure and the time they published were older than this study done.

Similarly most of the FGD participants have positive attitude about the service availabilities and accessibilities. However, some FGD who come from rural district of Gerado have complain and worried about far distance of the health center and this was their main reasons for decrease adherence on the service of PMTCT option B+ utilization. One FGD, said that "there was more than 50 eth.birr needed to reach Gerado health center in addition to that one hour walk with foot. This was consistent with the findings of FGD done in Uganda and Malawi [16].

The advantage of PMTCT option B+ service

PMTCT option B+ service had has advantages in reduction in sexual transmission of HIV, reducing incidence of OIs, reduction in maternal mortality, increased uptake of ART, and even benefits for other MNCH and family planning programs.

Therefore in this study 155(51.5%) of the study participants assumed that this service has an advantages on the prevention of the vertical transmission to the baby, and about 11(3.7%) thoughts that the service where important to know self status. Furthermore about 130(43.2%) agreed PMTCT option B+ service where important for all the community, and it could be decease cost due to reduction of opportunistic infections (OIs). Moreover decrease under five morbidity and mortality and this leads to increase productivity benefits, in particular from the increase in life years for mothers, dramatically increase the monetary benefits and also decrease the time of hospitalization. However, about 109(36.2%) has not clearly mention weather it has

advantage or disadvantages. This might be a gap on the counselor to educate specifically about B+ mean. A study done by Lancet had consistent with study findings [17]. Furthermore, a study conduct about option PMTCT option B+ will likely increase maternal life expectancy for those who adhere and it was an indirect effect on reducing under-5 mortality [18-19].

Similarly all the FGD participants had positive opinion on the advantage of PMTCT option B+ service utilization on continuation of breast feeding. One FGD from Dessie stated "starting ART is decreased cost of hospitalization and supplementation of breast feeding." This study was also similar to the study done in Uganda 2013[16].

Pregnant women satisfaction and Continuum of care (adherence) on PMTCT option B+ service

PMTCT option B+ service has great impact on the adherence and continuum of care among the women who initiate ART treatment. In this study 270(89.7%) of the participant agreed on the service offer in the health institution and continuation of care for the health of women and her child and family. However, 27(9.0%) of the study participants disagree with this idea. As compared the findings of this study and a survey done in Ethiopia to assess the implementation strategy 3rd quarter of 2012 [15], shows that 77% coverage rate reached and it was somehow consistent to my study findings. Similarly a study done in Malawi 3rd quarter 2012[5], showed that 83% of clients were agreed to retained in care for six months (n = 9130) and 78% (n = 2392) for 12 months. Further a multicountry study showed the quantitative measures of satisfaction with counseling among women who were tested for HIV in PMTCT option B+ services were 83% [22] and this consistent with my findings. However, a study done in rural district Malawi shows that among the 50/601 (8.3%) pregnant did not need to return after the first visit and this is also matched with my study findings. In addition a study conduct about universal ART

retention of women who started PMTCT ART under Option B+ [24] shows that 17% appeared to be lost to follow-up 6 months after ART initiation. This was higher than from the findings of my study and it might be due to lack of IEC.

Findings from the FGD participants of this study also consistent with quantitative findings of this study, and almost all the FGD agreed about the PMTCT option B+ service and its continues follow up on the care given. This study finding was better to the similar study done from Malawi [16], and it might be due to IEC.

Knowledge of pregnant women toward PMTCT option B+ service

A woman's knowledge on her HIV status is the first essential requirement for the application of PMTCT option B+ services.

This study assessed the knowledge of pregnant mothers on MTCT and PMTCT option B+ service and majority of the study participants 282(93.4%) having the knowledge on MTCT of HIV and this finding were consistent with study findings from Gonder and Addis Ababa where 89.8%, 89.8% respectively. But, higher than the findings in China and Ghana where 57%, 25% [41- 42] respectively.

Furthermore majority of the study participants 168(55.8%) knows what did the service PMTCT option B+ mean, among of these 101(33.6%) have source of information from health personnel, but 129(42.9%) were not have clear understanding what did PMTCT B+ option mean. This study finding was lesser than from a study findings of Malawi in 2011, were 68% [26]. This might be due to lack IEC and cultural factors on the study site.

Majority 151(50.2%) of the study participants clearly having the knowledge of benefits of PMTCT B+ option approach, but 108(35.9%) did not. On the other hand 190(63.1%) study participants where knew all of the methods PMTCT of HIV. The findings of this study where

lesser than from the findings of a study done in Gondar 98% [31] and higher than the findings from Jimma town (41.8%) [32]. This might be due to the site of study done influences on the IEC, that is Jimma study were in Rural and Gonder were in Urban wheare as my study was urban and rural. Moreover, study findings from Jamaica and Benin were 25% and 24% respective [27-28] shows lower result than this study finding. This might be due to cultural influence on IEC.

About 107(35.5%) study participants agreed the counseling time were before blood test and it was higher than from Benin and lesser than from Gonder findings [28, 31].

Moreover, 130(43.2%) study participants had information about the important of PMTCT option B+ for the prevention of OIs, but 60(19.9%) had not any information and 107(35.5%) could not able to well mention about OIs, this might be due to unclear information was provided by health personnel. However, this study was good as comparing to the study done in Viet Nam shows no information was provided on the treatment of opportunistic infections [29]. However, my study had lesser progressive than South Africa study findings 52% [30]. This was the reason relied on development.

Regarding the findings of qualitative study all the FGD participants except one pregnant woman (from Gerado) were aware of mother-to-child transmission of HIV and the major sources of information were health personals in health institution, radio and TV. Almost all the FGD participants said that “HIV can be transmitted from mother to child during pregnancy, child birth and breast feeding and it has prevention methods”.

On the other hand one from Dessie town and two study participants from the Gerado sites said that “there is no chance of being free from HIV for a baby born from an infected mother and no prevention has for HIV.”

Amongst those that had heard something about Option B+ PMTCT service, the main elements they identified about the programme were: a) pregnant women who test positive for HIV are put on treatment for life at their first antenatal clinic visit; b) women can breastfeed longer; c) women are put on treatment even if their CD4 counts are high. Majority participants explained the importance of PMTCT option B+ to know the status before and prevent the vertical transmission of virus to the babies. But few of the FGD participants were confused on the literal meaning of the phrase PMTCT option B+. One participant of FGD1 asked "Am just getting more and more confused. My first question is, what does the B stand for and what about the + sign?"

This study was matched with the study done in Uganda. That was almost all the FGD had good knowledge on MTCT. However, some of them were confused on PMTCT option B+ [16].

Attitude of pregnant women toward PMTCT option B+ service

A pregnant women attitude toward the PMTCT option B+ service utilization were a cornerstone for the enhancement of adherence and decrement of women lost follow up after initiating ART.

About 260(86.4%) the study participant had positive attitude on PMTCT option B+ service and this was higher than a study done in Jimma 62.4 % [32]. Furthermore, it was also higher than a study done Kenya 68.3% [34].

Majority of study participants 170(56.5%) were not worried about the sex of their counselor and 148(49.2%) also had not preferred any age group in counseling. This was also better than from the study done in Malawi and Kenya 42.2% and 45.7% respectively [34].

In addition 296(98.3%) were preferred to receive their test result face to face alone from the health personnel. Moreover, 179 (59.5%) of the study participant thought loss of confidence on

the service were the main reason for rejection of the service utilization. As compared to the study done in Malawi and Kenya 68.7% and 65.1% respectively [34] were much higher.

Similarly almost of all of the FGD had good attitude on PMTCT option B+ service. They thought life was easily, privacy and confidence were kept. For example one FGD of Dessie site stated that “since the reactive woman take the drug every day for life long, she can feed breast milk for her baby ,so that anybody were not know whether she is reactive or not. But if she cannot take the drug the virus can easily transmit to the baby, in order to prevent she cannot give breast, so that the community assumed she is reactive because she cannot feed breast for her baby.” However, one FGD from Dessie site had complained on the continuation with ART for life long. She state as “there is difficult for me to remember every day to take drug and the drug has many side effective.” A similar study from Malawi shows contradicted results. That was most of the FGD agreed on its advantages for long life and their point of view were how to save their babies life they were not worried about the drug’s side effecte16].

Challenges of PMTCT option B+ service

Several barriers prevent women from accessing PMTCT option B+ services. Barriers include worries about confidentiality; perceived pressure to notify partners or family members; inaccurate risk perception; fear of stigma; lack of information about the realities of living with HIV; and inadequate post-test support care and treatment ;PMTCT option B+ was also unavailable in many areas; and services needed to be expanded to reach more people from all risk groups [33].

Findings from this study point out that among the study participants 123(40.9%) assumed that discrimination occurred if disclosed their test result by their partner, family and community, at the same time 72(23.9%) thought about stigmatization and 90(29.9%) worried for both

discrimination and stigma. It was inconsistent with study done in Lusaka and which shows 32.4% and 36% of discrimination and stigmatization respectively [33] and this was due to lack of information. But, it was consistent with report from Zimbabwe 39.4% and 24.1% of discrimination and stigmatization respectively [34].

Similarly most of the FGDs participants of this study agreed about the challenges to disclose test results to partner, family and community, because disclose may revealed by partner, family or community. But all the FGDs of these study participants also urged male participation for the success of the program. For example one FGD participant from Gerado site said that "in order for a pregnant woman to be tested, free discussion with her partner and other members of family should be encouraged and this is the best way to enhanced PMTCT B+ service utilization." Comparing this study with qualitative research conducted in the South East Zone Malawi women feel that men need extra encouragement to access PMTCT option B+ service, and that greater male involvement would support women in testing and entering into HIV care [37]were matched.

Male involvement/Family/community centeredness on PMTCT option B+ service

In order for a pregnant woman to be tested, free discussion with her partner and other members of family and community should be encouraged. In spite of this fact, free discussion was not accepted by considerable number of study participants. This could hamper the intention of pregnant women to be tested thereby hindering the advantage from PMTCT option B+ and subsequent care and treatment [29].

From the study participants 203(67.4%) with partner, 18(6.0%) father- mother, 7(2.35), sister-brother, and 3(1.0%) neighbor were discussion about the clarity of the service of PMTCT option

B+ + option. Similarly study projects done in Tanzania, Zimbabwe, and South Africa showed 63.4%, 67.2% and 61.2% discus with their partner respectively [5, 18, 29].

In the same way a study finding from the FGD shows that discus with sex partner was greater impact on the effective and continuation of the PMTCT option B+ service utilization. For example one FGD from Dessie site stated that “my husband is the leader of my house, so he knows everything. Therefore, in my assumption discussion about PMTCT option B+ with him will be enhancing the service.”A similar study from Malawi [5], matched with this study findings.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

6.1. Conclusion:

- ✓ Most of the study participants in this study knew that HIV could be transmitted from an infected mother to her baby.
- ✓ Majority of the study participants knows what did the service PMTCT option B+ mean and its benefit.
- ✓ Most of the study participant had positive attitude on PMTCT option B+ service.
- ✓ Some of the study participants confused about the PMTCT option B+ service
- ✓ Findings from this study point out that some of the study participants assumed about discrimination occurred if disclosed their test result by their partner, family and community. However, majority of them discus with partner, family and community about the PMTCT option B+ service.

6.2. Recommendation:

- ✓ Empowerment of women to make informed choices about PMTCT option B+ service. This could ensure easy access for prevention, treatment, care and support.
- ✓ Intensify coordinated and targeted IEC program to convince pregnant women in order to utilize PMTCT option B+ service.
- ✓ Develop gender sensitive IEC campaign to the community.
- ✓ Address stigma and discrimination through strong IEC.
- ✓ Promote couple counseling.
- ✓ Strengthen post test counseling and care and support services for pregnant women.
- ✓ Develop strategy for community mobilization and support of the program.

- ✓ Develop a strategy for monitoring and evaluation of the program and training of health professionals.

STRENGTH AND LIMITATION

7.1. Strength of the study

- ✓ The sample size was large enough with precision of 5%.
- ✓ Intensive training and day-to-day supervision were conducted for data collectors.
- ✓ Data collection was carried out by same sex (female) health professional
- ✓ The study incorporated health institutions at the grass root level,

7.2. Limitation of the study

- ✓ It was institution based not included community
- ✓ Like any cross sectional study it fails to show causal relationship

The study population was consider ANC service utilize women in 1^{st} , 2^{nd} and 3^{rd} visit, not included 4^{th} visit.

REFERENCES:

1. WHO ARV guidelines 15 facts on HIV treatment scale-up and Available from: http://whqlibdoc.who.int/publications/2010/9789241599535_eng.pdf,accessed 2013;
2. Federal Ministry of Health guidelines for Prevention of Mother-to Child Transmission of HIV in Ethiopia in 2011.
3. UNICEF overview of the PMTCT program in Ethiopia: Experience in rolling out option B+ approach Available from: http:// who.int/publishe2015/934447878978.2015
4. National Comprehensive PMTCT/MNCH Training Package Reference Manual 5 ethiopia Federal Ministry of Health October 2011.
5. WHO Regional Office for Africa, Implementation of Option B+ for Prevention of Mother-To-Child Transmission of HIV 2014.
6. UNICEF overview of Options A, B, and B+ for PMTCT Coceka Nandipha Mnyani 28 November 2012.
7. UNICEF options B and B+ key considerations for countries to eliminated new HIV infection among children and keeping mothers living with HIV alive and well 2013.
8. WHO, 2015.Geneva,UNAIDS,2011:Available from:http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2011/20110609 JC2137-Global-Plan- Elimination-HIV-, accessed 11 July 2012
9. Dr Erik Schouten, PMTCT Option B+: Lessons Learned and Considerations for Implementation 9 October 2012 SADC Meeting, Johannesburg.
10. Business Leadership Council, abusiness case for options B&B+ to eliminate mother to child transmission of HIV by 2015

11. UNAIDS Use of Antiretroviral Drugs for Treating Pregnant Women and Preventing HIV Infection in Infants 2011.
12. MSH and the US Centers for Disease Control and Prevention (CDC) in August prevention of mother to child transmission among ANC followers in Tigray North ethiopia 2013,
13. WHO programmatic update: Use of Antiretroviral Drugs for Treating Pregnant Women and Preventing HIV Infection in Infants, April 2012.
14. Myron C M.D., Ying Q. Chen, Ph.D., Marybeth McCauley, M.P.H., Theresa Gamble, Ph.D.,Mina C.Hosseinipour, M.D et al. Prevention of HIV-1 infection with early antiretroviral treatment. The New England Journal of Medicine. 2011; 365: 493-505.
15. Ethiopia Network for HIV/AIDS Treatment, Care, and Support (ENHAT-CS) Project. Available from: http://www.uaids.org/2012.
16. Uganda and Malawi ministry of health understanding the perspectives and/or experiences of women living with HIV regarding Option B+ in 201; 3(1).
17. Erik J Schouten, Andreas Jahn, Dalitso Midiani, Simon D Makombe, Austin Mnthambala, Zengani Chirwa,et.at 2011, Prevention of mother-to-child transmission of HIV and the health-related Millennium Development Goals: time for a public health approach. The Lancet, 2011, 378: 282–84.
18. Cataldo F, Chiwaula L, Nkhata M, van Lettow M, Kasende F, Rosenberg R, et al. Exploring women and health care workers experiences in the context of PMTCT Option B Plus in Malawi. ABSTRACT ICASA 2014.
19. MOH, Malawi National Plan for the Elimination of Mother to Child Transmission 2012.
20. Moth, I.A., A.B. Ayayo, and D.O. Kaseje, Assessment of utilisation of PMTCT services at Nyanza Provincial Hospital, Kenya. SAHARA J, 2005; 2(2):244-50.

21. Tenthani L, Haas A, Tweya H, Jahn A, van Oosterhout J, Chimbwandira F, et al. Prevention of mother-to-child transmission of HIV: reviewing a programme in Benin. Sante Publique, 2008; 20(6):575-587.
22. Rebecca M. Coulborn, Laura Triviño Duran, Carol Metcalf, Yvonne Namala, Zengani Chirwa, Michael Murowa, et.al.Preliminary findings of a routine PMTCT Option B+ programme in a rural district in Malawi 2012
23. WHO women's retention on ART Available from: http://journals.lww.com/aidsonline/Abstract/2014/02200/Retention care under universalantiretroviral.15.
24. Embargoed Until Noon ET Contact: CDC Division of News and Electronic Media Thursday, February 28, 2013
25. WHO Adherence to antiretroviral therapy during and after pregnancy in low-, middle- and high-income countries: A systematic review and meta-analysis. AIDS 2012;26(16):30393052.Availablefrom:http://dx.doi.org/101097/QAD0b013e328359590f
26. Hardon Anita, Eva Vernooij, Grace Bongololo-Mbera, Peter Cherutich, Alice Desclaux, David Kyaddondo, et.al, 2012. Women's views on consent, counselling and confidentiality in PMTCT: a mixed-methods study in four African countries. BMC Public Health. 2012; 12: 26.
27. Larsson E.C. Anna Thorson, George Pariyo, Paul Conrad, Moses Arinaitwe, Margaret Kemigis et al. Opt-out HIV testing during antenatal care: experiences of pregnant women in rural Uganda. Health Policy Plan, 2012; 27(1):69-75.

28. Megan Landes, Monique van Lettow, Fabian Cataldo, Adrienne K Chan, Beth Tippett Barr,Anthony D Harries et. al. women's expectations of treatment and care after an antenatal HIV diagnosis in Lilongwe, Malawi. Reprod Health Matters, 2009; 17(33):152-61
29. Hardon Anita, Eva Vernooij, Grace Bongololo-Mbera, Peter Cherutich, Alice Desclaux, David Kyaddondo et al. Preventing mother-to-child transmission of HIV in Vietnam and Indonesia: diverging care dynamics. Soc Sci Med, 2009; 69(6):838-45
30. Landes M, van Lettow M, Cataldo F, Chan AK, Tippett Barr B, Harries AD, and Bedell R. Building a National Direction for Research in thePrevention of Mother t Child Transmission of HIV: Results from anational prioritization initiative in Malawi. Health Res Policy Syst. 2013Oct 26;11:40.
31. Alemu S, Abseno N, Degu G , Wondemkun Y, Amsalu S. Knowledge and attitude towards voluntary counseling and testing for HIV, A community based study in North West Ethiopia. Ethiopian Journal of Health Development 2004;18(2) 55.
32. Hailu.C. Assessment of Knowledge Attitude &Practice among mothers; about VCT and feeding of infants to HIV positive women Jimma town: Addis Ababa University Master's thesis, 2005, Addis Ababa, Ethiopia .
33. UNAIDS, Manual for use of cost effectiveness tool for evaluating Antiretroviral drugs and substitute feeding interventions to prevent MTCT of HIV). (2001); 20(1)
34. Rutenberg; Integrating HIV prevention and care into maternal and child health care settings. Lessons learnt from horizon studies. Published by USAID publication, 2002: USA).
35. Government of Malawi Ministry of Health (2011) Integrated HIV Program Report April-June 2011. Available at

http://www.hivunitmohmw.org/uploads/Main/Quarterly_HIV_Programme_Report_2011_Q2.pdf.

36. FHI. Scaling up VCT in Africa, snap shots from the field. FHI, 2004.
37. Richard ladele,Josh Berma,Fabain Targeting Research for the Elimination of Mother-to-Child HIV Transmission in Malawi's Option B+ Era 2013. Richard Bed
38. WHO the case for Option B and Optional B+: Ensuring that South Africa's commitment to eliminating mother-to-child transmission of HIV becomes a reality 2011.
39. Ethiopia Demographic and Health Survey 2011 Preliminary Report by Central Statistical Agency Addis Ababa, Ethiopia Mega enterprise.
40. Choi Fung H: HIV/AIDS and risk behaviors in Hong Kong Chinese pregnant women. J Adv Nurs 2003, 43(3):238–245.
41. Hesketh T, Duo L, Li L, Mtomkins A: Attitudes to HIV and HIV testing in high prevalence areas of China. Sex Transm Infect 2003, 81:108–112.

ANNEXES

1. Problems prioritizing criteria table

Problem/ Topic	Criteria							
	R	A	F	P	APPL	U	E	T
1	3	2	3	3	2	2	3	18
2****	3	2	3	3	3	3	3	20**
3	3	1	3	3	1	2	3	16

- ✓ Prevalence of Hepatitis B surface Antigen [HBs Ag] vaccination and its impact on health service improvement among health care professionals at Governmental health institutions in Dessie Town health institution based cross-sectional survey.
- ✓ Assessment of knowledge and attitude about PMTCT Option B^+ and associated factors among ANC clients in Dessie South Wollo Zone Health institution based cross-sectional survey.
- ✓ Assessment of knowledge and attitude about Pre-conceptional care among reproductive age group women in Dessie Town. Community based cross-section survey.

According to the PPC From the 1st problem to the least in the following descending order is 2, 3,1 then according to the selection criteria problem 2 is selected

NB. PPC- Problem prioritizing criteria:

R- Relevance

A- Avoid duplication

F- Feasibility

P- Political acceptance

APPLI – Applicability

U-Urgency

E – Ethical acceptance

T – Total

2. English version questionnaire and consent form

I: Individual consent form for quantitative study

Section 0: Questionnaire Identification

001-Date___/____/_____

002Qustionnaire Identification Number _____

003 health institution _____

Introduction

My name is _____. I am working as data collector in the survey conducted by Addis Ababa University Medical faculty Nursing and Midwifery health department. I am interviewing pregnant women here about knowledge; attitude and associated factors of PMTCT option B+. This study is designed to generate information for MTCT prevention in the area and elsewhere with similar characteristics. To attain this purpose, your honest and genuine participation by responding to the question prepared is very important highly appreciated.

Confidentiality and consent

I would like you to answer some personal questions that some people may find it difficult to answer .Your answers are completely confidential. Your name will not be written on this form. You can refuses to answer a single question, more than one question to the extent to stop the interview at any step if you are not comfortable. However your honest answer to these Questions will help me to understand the knowledge; attitude and associated factors of PMTCT option B+

among ANC clients with the Acceptance of the service I appreciate your kindness to be part of the study. The interview will take about 15- 25 minutes. Are you willing to participate?

IF the answer is yes _ Continue

No _ Stop

Name of health institution_____

Signature of the interviewee certified that respondent has given informed consent verbally

Checked by supervisor name_____ sig_____

date_____

Section 1: Socio demographic and economic information

Sr.no	Question	Coding category	Skip
101	Where is resident place? Dessie Gerado	 1 2	
102	How old are you? (in year) 15-20 21-25 26-30 31-35 36-40 41-45	 1 2 3 4 5 6	
103	To what ethnic group you belong? Amhara Tigray Oromo Afar Others(specify)_____	 1 2 3 4 5	
104	What is your religion? Orthodox Muslim Protestant Catholic Others(specify)_____	 1 2 3 4 5	

105	What is the highest level of education you reached? 1-4th grade 5-8th grade 9-12th grade Diploma and above Illiterate	 1 2 3 4 5	
106	What is your marital status? Married Unmarried Widow	 1 2 3	
107	What is your occupation at this time? Merchant Housewife Home servant Students Governmental employee Others(specify)_____	 1 2 3 4 5 6	
108	What is your husband occupation at this time? Carpenter Driver Farmer Government employee Housewife Labourer Merchant Student Others(specify)_____	 1 2 3 4 5 6 7 8 9	
109	Transport fee: Free 1-10 birr >10birr		
110	What is your Household earning estimated in birr per month? (by ethi.birr) <1000 1000-2000 2100-3000 3100-4000 >4000	 1 2 3 4 5	
111	Condition of pregnancies you have?(including the current one) Primigravida (one) Multigravida(two-five) Grandmultigravida(more than six)	 1 2 3	

112	How many months of gestation are you now?(approximate in week) 1-16 17-24 25-34	 1 2 3	
113	How many antenatal care visits you made in the current pregnancy? 1st 2nd 3rd Others (specify)_____	 1 2 3 4	
114	Family size of greater than two	_____	

Section 2: Knowledge towards HIV, MTCT and PMTCT B+ option service

Sr.no	Question	Coding category	Skip
201	Have you ever heard of HIV or disease called AIDS? Yes NO	 1 2	
202	Do you know how HIV is transmitted? No Partially Yes	 1 2 3 →	 203
203	If your answer to question no 202 is yes mention the way HIV/ AIDS is transmitted? (More than one answer is possible) Contaminated sharp injury Infected blood Mother to child Unsafe sexual intercourse	 1 2 3 4	
204	Have you discussion about HIV/AIDS transmission? Father and mother Health professional Husband and neighbor Husband-friend Neighbor Sister and brother	 1 2 3 4 5 6	
205	What are the HIV/AIDS spread prevention methods(multiple answer is possible): Abstinence Abstinence or one to one One to one Prevent from sharp damage	 1 2 3 4	

206	Can a pregnant women living with HIV/AIDS transmit the disease to her un born baby? I do not know No Yes	 1 2 3	
207	Time of HIV transmission (multiple answer is possible) Pregnancy Delivery Breast feeding	 1 2 3 →	 209
208	Is there any means to avoid transmission of HIV from mother to her child? I do not know No Yes	 1 2 3 →	 210
209	Do you know the existence of intervention which can reduce mother to child transmission? Yes No I do not know	 1 → 2 3	 211
210	What is/are the Means /intervention which can reduce mother to child transmission?(multiple answer is possible) I do not know Use ART drug No breast feed	 1 2 3	
211	Have you ever heard about HIV testing and PMTCT option B+ service? No Yes	 1 2 →	 213
212	What is your source of Information?(multiple answer possible) Friends Health personnel Kebele meeting Neighbors Radio/TV	 1 2 3 4 5	
213	What is the benefit of PMTCT option B+ for pregnant women do you know?(multiple answer is possible) To know self To prevent transmission to her baby To prevent transmission to her husband	 1 2 3	
214	How is the beneficiary women get counseling about option B+ PMTCT?(multiple answer is possible) After result Before blood test	 1 2	

	Lifelong	3	
215	Is it necessary to keep confidentiality for the test Result? No Yes	 1 2	

Section 3: Attitude of pregnant women towards HIV, MTCT and PMTCT option B+ in Dessie town South Wollo administration Zone of Amhara Regional state Ethiopia 2015 G.C.

I. Personal risk perception

Sr.no	Question	Coding category	Skip
301	Do you think you can contract HIV virus? Yes No I do not know	 1 2 3	
302	What is your chance of contracting HIV infection? Low Moderate High I do not know	 1 2 3 4	
303	If the answer is low moderate or high to (302) Tell me the reason/s for being at risk? (More than one answer is possible) c) If I had multiple sexual Partners d) If I had un protected sex e) I don't trust my f) Husband g) Injection with un h) sterile needle i) sexual contact with j) HIV positive person k) Invasive traditional l) Medicine m) Others(specify)_____	 1 2 3 4 5 6 7 8 9 10 11	

II. Stigma and discrimination

Instructions: This questionnaire to understand how to feel towards your PMTCT B+ option. Please indicate how much you disagree or agree with each statement using the scale given below (from 1 to 5). Number (1) very disagree (2) disagree (3) neither disagree nor agree (4) agree (5) very agree

Sr.no	Question	Very disagree	disagree	Neither	agree	Very agree
401	If your test result is positive how likely the following is might happen? e) Neglect by family f) Marital breakage g) Physical abuse by spouse/partner h) Neglect by friends i) Increase emotional support from friends j) Strengthen relationship with spouse k) Increased emotional support from health professional l) Stop sexual relationship m) Spiritual support from religious leader n) Skill building training from community o) Financial support from community p) Economic support from religious institutions q) Loose hope r) Take revenge s) Disclose test result to the public					
	Best ways to received your result: ✓ Face to face alone ✓ Face to face with family ✓ Face to face with friend ✓ cell-phone					
	The ideal time to receive test result: After one week of blood testing c) During blood testing day d) After one day blood testing					
	Females are more accepted to be a counselors than male:					
	Best site for convenient tested: d) Government hospital					

	e) Health center f) NGO clinic g) Private clinic h) Private hospital					
	Women adherence on PMTCT B+ option is necessary to decrease transmission rate of the virus.					
	As positive attitude of pregnant women increase the rate of lost to follow up will be decrease.					

This is the end of my questionnaire thank you very much for taking your time to answer those questions; I appreciate your co operation thank you!

II: Topic guide for FGD to pregnant women

You are all welcome!

I am happy that you devote your precious time to discuss with us. I am A.A.U Nursing and midwifery department. I am conducting a study

About assessment of knowledge and attitude and associated factors in pregnant women about PMTCT B+ and I will like to see the determinant factors. The results generated from this study will be useful for program designing and expansion in this area and elsewhere when deemed important.

You all are selected for my reach information you have to share with me. You should feel free to provide your information. Your name will not be disclosed to anyone. If you don't want to say anything you can avoid it, you can also refuse to continue the discussion.

Date_____

Time started_____

1. Please tell me how much a trait is HIV for your community?
2. Can you tell me what you pregnant women knew about VCT?

Probe - What is your Experience?

- Would you explain it?
- Anything else?

3. What information have you received about preventing transmission to the unborn baby?

   Probe - What does it mean to you?

   - How does it make you feel?

4. What do you know about Option B+?

   - What messages have women living with HIV received about Option B+?
   - From who/where?
   - What does it mean to you?
   - How does it make you feel?

5. How have your communities perceived Option B+?
6. What stories or media reports have you heard about Option B+?

   - How does it make you feel? What could be the implications for you?
   - Is civil society engaged in Option B+ programmes in Dessie?
   - If yes, how?
   - Has civil society in dessie raised any questions or concerns about Option B+?

7. What measures are Useful in prevention of mother to child transmission?

   probe for more explanation ?

   - How can it be applied to the context of our community?
   - Explain more?
   - Give your experience?

8. What will be the possible reaction of men (husband/ boy friend) if A pregnant women tell him she is positive for HIV test and on B+?

   Probe- Please more explanation? What else? What is your Experience?

9. What do you understand are the benefits? Probe

a) What are the potential positive consequences?

b) Does Option B+ provide any benefit to communities or partners of pregnant women?

3. Amharic version questionnaire and consent form

ቅፅ I: በደሴ ከተማ ጤና ተቋማት የቅድመ ወሊድ ክትትል ለሚያድርጉ ነፍሰጡር እናቶች የተዘጋጀ ቃለመጠይቅ

ክፍል 0: የጥያቄዎች መለያ ኮድ

001-ቀን___/____/_____

002-የጥያቄዎች መለያ ኮድ ቁጥር_____

003 የጤና ተቋም _____

መግቢይ

ስሜ _____ እባላለሁኝ፡፡በአዲስ አበባ ዩኒቨርሲቲ ሕክምና ፋኩሊቲ ነርሲንግና ሚድዋይፈሪ ት/ት ቤት በPMTCT option B+ በሚደረገው ጥናት ላይ ነፍሰጡር እናቶች ያላቸው እውቀትና አመለካከት እንዲሁም ሌሎች ተዛማች ነገሮችን የሚረዱ መረጀዎች ለመሰብሰብ ነው፡፡ በመሆኑም የርስዎ ትብብር ለጥናቱ የማይተካ ሚና አለው፡፡ የእርስዎ መረጃ ያለፍቃድዎ ለማንም አይገለጽም፤ስሞትን በዚህ ቅጽ አጻፍም ፤መረጃ የሚስጡኝም ፍቃደኛ ከሆኑ ብቻ ነው፡፡

እሺ ካሉ _ ቃለመጠይቁ ይቀጥላል

እምቢ ካሉ _ ይቆማል

የጤና ጠቋሙ ስም_____

ክፍል 1: ማሕበራዊና ኢኮኖሚያዊ መረጃዎች የሚመለከቱ ጥያቄዎች

ተ.ቁ	ጥያቄዎች	መልስ	
101	እድሜዎት ስንት ነው? 15-20 21-25 26-30 31-35 36-40 41-45 >46	☐ ☐☐ ☐ ☐ ☐ ☐ ☐	
102	ቢሔረሰበዎትን ቢነግሩኝ?	አማራ	
		ትግራይ	

		ኦሮሞ	
		አፋር	
		ሌላ(ይገለጽ)	
103	ሀይማኖቶ ቢገልፅሉኝ?	ኦርቶዶክስ ክርስቲያን	
		ሙስሊም	
		ፕሮቲስታን ክርስቲያን	
		ካቶሊክ ክርስቲያን	
		ሌላ(ይገለጽ)	
104	የትምህርት ደረጃዎትን ቢገልጽሉኝ?	ያልተማሩ	
		1 - 4 ኛ	
		5-8 ኛ	
		9-12 ኛ	
		ሙሩቅ	
105	ስራዎትን ቢነግሩኝ?	ተማረ	
		የቤት እመቤት	
		ያለተቀጠሩ	
		የሰው ቤት ሰራተኛ	
		የቀን ሰራተኛ	
		ነጋዴ	
		የመንግስት ሰራተኛ	
		የግል ሰራተኛ	
		ገበሬ	
		ሌላ(ይገለጽ)	
106	በወር የሚያገኙት ገቢ ምን ያህል ነው?	_____ብር	
107	የትዳር ሁኔታ?	ያላገቡ	
		ያገቡ	
		የፈቱ	
		የፈታች	
108	ባለትዳር ከሆኑ፤ አብራቹ ትኖራላችህን?	አዎ	
		አይደለም	
109	ተፋትት ከሆኑ፤ ስንት ያህል ጊዜ ሆኖት?	< 1 ወር	
		1 ወር-6ወር	
		> 6ወር	
110	ያሁን ጨምሮ ስንት ጊዜ አረገዙ? አንዴ ከሁለት እሰከ አምስተ ጊዜ ስድስትና ከዚያ በላይ		
111	ያህኑ እርግዝናዎ በግምት ስንት ሳምንት ይሆነዋል?	_____ሳምንታት	
112	ይህ ስንተኛው የርግዝና ጊዜ ክትትልዎ ነው ?	የመጀመሪያው	
		ሁለተኛው	

		ሶስተኛው	
		አራተኛ	
		ሌላ	
113	የባልቲቤቶ ስራ ምንድነው?	ተማሪ	
		ወታድር	
		የሰው ቤት ሰራተኛ	
		የቀን ሰራተኛ	
		ነጋዴ	
		የመንግስት ሰራተኛ	
		የግል ሰራተኛ	
		ገበሬ	
		ሌላ(ይገለጽ)	
114	**ከሁለት በላይ በተሰብ አሎትን**?		

ክፍል 2: PMTCT option B+ እውቀት የሚመለከቱ ጥያቄዎች

ተ.ቁ	ጥያቄዎች	መልስ	
201	ኤድስ የሚባል በሽታ ሰምተው ያቃሉ?	አዎ	
		አላውቅም	
202	የኤድስ መተላለፍያ መንገዶችን ያውቃሉ?	አዎ	
		አላውቅም	
203	ለጥያቄ 202 አዎ ከሆነ፤ የመተላለፊያ መንገዶቹን ይግለጹ? (ከአንድ በላይ መልስ መግለጽ ይቻላል)	በግብረ ስጋ ግንኙነት	
		በተበከለ ደም ንኪኪ	
		በስለታም	
		ከናት ወደ ልጅ	
		በተበከለ መርፌ	
		ሌላ	
204	ሰዎች ከኤድስ በሽታ ራሳቸውን እንዴት የጠብቃሉ? (ከአንድ በላይ መልስ መግለጽ ይቻላል)	በመታቀብ	
		አንድ ለአንድ በመወሰን	
		ከስለታም በመጠበቅ	
		አጎበር በመጠቀም	
		ከሰዎች ንክኪ በመታቀብ	
		አብሮ ባለመብላት	
		አብሮ ባለሞር	
		ሌላ	
205	ከባይረሱ የምትኖር ነፍሰጡር እናት ወደ ልጇ ባይረሱ የምታስተላልፍ ይምስሎታል?	አዎ	
		አታስተላልፍም	

		አላውቅም	
206	በእርግዝና ወቅት የምታስተላልፍስ ይመስሎታል?	አዎ	
		አታስተላልፍም	
		አላውቅም	
207	በምጥ ወቅት የምታስተላልፍስ ይመስሎታል??	አዎ	
		አታስተላልፍም	
		አላውቅም	
208	ታስተላልፍለች ብለው ካሉ፤ መከላከያስ አለው ብለው ያስባሉ?	አዎ	
		የለውም	
		አላውቅም	
209	ከናት ወደ ልጅ ቫይረሱ መተላለፍን የሚቀንስ መድሃኒት መኖሩስ ያውቃሉ ?	አዎ	
		የለውም	
		አላውቅም	
210	መልስዎ አዎ ከሆነ፤ ከሚከተሉት የተኞቹ ይመስሎታል?	ጡት ባለማጥባት	
		ፀረ-አድስ መድሃኒት በመጠቀም	
		ሌላ ካለ ይግለፁ	
211	ስለ ኤድስ መከላከያ ዜዴ ከሌሎች ሰዎች ጋር ተወያይተው ከነበረ? (ከአንድ በላይ መልስ ይቻላል)	ከባል/ጓደኛ	
		ከአባት	
		ከናት	
		ከእህት	
		ከወንድም	
		ከጎረቤት	
		ሌላ	
212	አንድ ሰው የኤች አይ ቪ ኤድስ ውጤቱ እንዴት ሊያውቅ ይችላል ? (ከአንድ በላይ መልስ ይቻላል)	በደም ምርመራ	
		በመመልከት	
		በፊዚካል ምርመራ	
		አላውቅም	
		ሌላ	
213	ስለ ኤድስ ምርመራ እና PMTCT option B+ አገልግሎት ሰምተው ያውቃሉ?	አዎ	
		አላውቅም	
214	ከሰሙ የመረጃ ምንጭዎ ምንድ ነው?	ረድዮ	
		ቴልቭጅን	
		ጤና ተቋም /የጤና ባለሙያ	
		ከጓደኛ	
		ከጎረቤት	
		በቀበሌ ስብሰባ	
		ከፖስተር	
		ሌላ	
215	የPMTCT option B+ ጠቀሜታዎች ምንድ ናቸው?	ወደ የትዳር አጋር እንዳይተላለፍ	

	(ከአንድ በላይ መልስ ይቻላል)	ይከላከላል	
		ተመርምሮ ለራስ ለመጠበቅ	
		ለቀጣይ እርግዝና ደህንነት	
		ከናት ወደ ልጅ እንዳይተላለፍ ለመከላከል	
		ሌላ	
216	የኤድስ ምርመራ ካደረጉ መቼ ነበር?	በስድስት ወር ውስጥ	
		6-12 ወር በፊት	
		1-2 በፊት	
		> 2 በፊት	
		አላውቀዉም	
217	የኤች አይ ቪ ምርመራ ያደረጉት ለምን አላማ ነበረ? (ከአንድ መልስ በላይ ካለዎት ይቻላል)	ለጋብቻ	
		ወደ ህፃኑ እንዳይተላለፍ ለመከላከል	
		ወደ ባል እንዳይተላለፍ ለመከላከል	
		ተመርምሬ ለራሴ ለማወቅ	
		ሌላ	
218	የኤች አይ ቪ ምርመራ ከማድረግዎ የምክር አገልግሎት ነበርዎት?	አዎ	
		የለኝም	
219	የምክር አገልግሎት ሲያገኙ የክፍሉ ምስጢር ጠባቂነት የተጠበቀ ነበር?	አዎ	
		አይደለም	
		አላወቅም	
220	የኤች አይቪ ውጤቶ የተነገርዎት እንዴት ነበር?	በአካል በመገኘት	
		በጋደኛ	
		በቤተሰብ	
		በስራ ሃላፊ	
		በስልክ	
		ሌላ	
221	የድህረ መርመራ ውጤት ተሰጦት ?	አዎ	
		አልተሰጠኝም	
222	ለነፍሰጡር አናቶች የተኛው የምርመራ አይነት ጥሩ ነው ብለው ያስባሉ?	ሚስጢሩ የተጠበቀ	
		እንደማነኛውም ምርመራ	
		ሌላ	
223	የኤች አይቪ ውጤቶ ትክክለኛ የሚገለጸው መቼ ቢሆን ይላሉ?	በምርመራ ቀን	
		ከአንድ ቀን በኋላ	
		ከአንድ ሳመንት በኋላ	
		ሌላ	
224	ወንድ ነው ወይስ ሴት ብትመረምርዎት የሚመርጡ?	ወንድ	
		ሴት	
		ሁሉም	
225	ምርመራ የሚያደርግሎት እድሜስ?	በእኔ እድሜ ክልል	
		ከእኔ እድሜ በታች	
		ከእኔ እድሜ በላይ	

		ማነኛውም			
226	የተኛው የጤና ጠቋም ቢመረመሩ ይመርጡ ነበር?	ክሊኒክ			
		ጤና ጣቢያ			
		ሆስፒታል			
		ሌላ			
227	ወደ ጤና ተቋም ለምርመራ ሲመጡ ምንያህል ብር ያወጣሉ? ነፃ ከአስር ብር በታች ከአስር ብር በላይ	1 2 3			
228	ቫይረሱ በደምዎ ቢገኝ ውጾን ለማን መንገር ይፈልጋሉ? ሁሉንም ጠይቅ	ለትዳር አጋር		አዎ	
				አይደለም	
		ለአባት		አዎ	
				አይደለም	
		ለእናት		አዎ	
				አይደለም	
		ለእህት		አዎ	
				አይደለም	
		ለወንድም		አዎ	
				አይደለም	
		ለጎረቤት		አዎ	
				አይደለም	
		ለአከባቢው አስተዳደር		አዎ	
				አይደለም	
		ሌላ			
229	ለትዳር አጋርዎ/ጋደኛዎ ቫይረሱ በደምዎ መኖሩን ቢነግሩት መልሱ ምን ሚሆን ይመስሎታል?	ይሰድበኛል	አዎ	አይ ደለም	አላወቅም
		ይፈታኛል	አዎ	አይ ደለም	አላወቅም
			አዎ	አይ ደለም	አላወቅም
		ይመታል	አዎ	አይ ደለም	አላወቅም
			አዎ	አይ ደለም	አላወቅም
		ሳይኮለጂካል ጫና ያበዛብኛል	አዎ	አይ ደለም	አላወቅም
			አዎ	አይ ደለም	አላወቅም
		ምንም አይለኝም	አዎ	አይ ደለም	አላወቅም
			አዎ	አይ ደለም	አላወቅም
		የገንዘብ ርዳታው ያቁማል	አዎ	አይ	አላወቅም

				ደለም	
			አዎ	አይ ደለም	አላወቅም
		ሌላ	አዎ	አይ ደለም	አላወቅም
230	ኤች አይቪ ቫይረስ በደሚያለባት እናት PMTCT option B+ አገልግሎት ለመጠቀም ማን ይወስንላታል?	ባሏ			
		አባቷ			
		እናቷ			
		እህቷ			
		ወንድዋ			
		ጎቤቷ			
		የአከባቢው አስተዳደር			
		የጤና ባለሙያ			
		ሌሎች			
231	ለምንድነው ነፍስጡር እናቶች PMTCT option B+ አገልግሎት ተጠቃሚ የማይሆኑት?	አገልገሎቱ ስለሌለ			
		በጭንቀት.			
		ባል ይፈታኛል ብሎ በመፍራት			
		በምስጢረነቱ ላይ እምነት ስለሌለኝ			
		በአድልዎ/መገለል ፍራቻ			
		የገንዘብ እጥረት			
		ሌላ			

ክፍል 3: በኤድስ ላይ ያሎት የግል አመለካከት

ተ.ቀ	ጥያቄዎች	መልስ	
301	ካለተመረመሩ ቫይረሱ በደመዎ እንዳይኖር ይሰጋሉ?	አዎ	
		አልሰጋም	
		አላውቅም	
302	ቫይረሱ በደምዎ የመኖሩ እድል ምንያህል ነው ብለው ያስባሉ?	ዝቅተኛ	
		መካከለኛ	
		ከፍተኛ	
		አላውቅም	
303	ለጥያቄ ቁጥር (302) መልስዎ ዝቅተኛ፤ መካከለኛ ወይም ከፍተኛ ከሆነ ምክንያቱ ምንእንደሆነ ይግለጹሉኝ? (ከአንድ በላይ መልስ መመለስ ይቻላል)	ብዙ የግብረ ስጋ ግንኙነት ጓዶች ነበርዎት?	አዎ
			አይደለም
		ያልታቀበ ግብረ ስጋ ግንኙነት አድርገው ነበርን?	አዎ
			አይደለም
		ባለቲቤቶ ያምኑታል?	አዎ
			አይደለም
		ንጽህናው ባልጠበቀ መርፌ ተወግተው ነበረን?	አዎ
			አይደለም
		ከታወቀ ፖሲቲቭ ሰው ግብረስጋ ፈጽመው ነበርን?	አዎ
			አይደለም

		የተለምዶ መድሃኒቶች ተጠቅመው ነበርን?	አዎ
			አይደለም
		ሌላ?	አዎ
			አይደለም

ክፍል 4: አድልዎና መገለል የሚመለከ ጥያቄዎች

ተ.ቁ	ጥያቄዎች	መልስ	በጣም አልስማማም	አልሰማማም	ከሁሉም ውጭ	እስማማሎህ	በታም እስማመሎህ
501	የኤች አይቪ ውጤቶ ፖዚቲቭ ቢሆን ሌሎች ሰዎች በርሶ ላይ ምን የሚያደርጉ ይመስሎታል?	ቤተሰቦቼ ያገሉኛል					
		ትዳሬ ሊበተን ይችላል					
		ባልቲ ቤቴ ሊመታኝ ይችላል					
		ጋደኛዬ ሊተወኝ ይችላል					
		ከጋደኛ ያለው ድጋፍ ሊጨምር ይችላል					
		ከባል ጋር ያለው ፍቅር ሊጨምር ይችላል					
		ከጤና ባለሙያ ያለው ሊጨምር ይችላል					
		ከባለቤት ጋር ያለው የግብረስጋ ግንኙነት ይቆማል					
		ከእምነት አባቶች የምከር ድጋፍ ይጨምራል					
		ሙያዊ ትምህር ይሰጠኛል					
		ከህብረተሰቡ የገንዘብ ድጋፍ ይጨምራል					
		ከሃይማኖት አባቶች የገንዘብ ድጋፍ ይጨምራል					
		ተስፋ ማጣት ያጋጥማል					
		የበቀል እርምጃ ይፈጽሙቡኛል					
		ሌላ					

ጥያቄዎቼን ጨርሻለሁ:: በጣም አመስግናሎህ!

ቅፅ II: ነፍሰጡር እናቶች በPMTCT B+ ላይ ውይይት

እንኳን ደህና መጣችሁ::

ስሜ---------- ይባላል፤ አዲሰአበባ ዩንቨርሲቲ ነርስናሚድዋይፍ ት/ክፍል የ2ኛ ድግሪ መመረቂያ ጥናታዊ ጽሁፍ በመስራት ላይ ነኝ፤ ነፍሰጡር እናቶች PMTCT B+ ላይ ያላቸውን እውቀትና አመለካከት በማጥናት፤ የጥናቱም ውጤት አገልገሎቱን የበለጠ ተደራሽና ጥራት ያለው ለማድረግ የሚያግዝ ይሆናል:: ስሞትም አይተፃፍም፤ ውይይቱን በፍቃደኝነት የተመሰረቱ ነው::

ቀን _____

የተጀመረበት ሰአት_____


Dessie

5. Assurance of principal investigator for Declaration

I undersigned here agrees to accept responsibility for scientific ethical and technical conduct of the research project and for provision of required progress reports as per terms and the condition of the research publication office in effect at the time of the grant is forwarded as the result of this application.

Name of Principal investigator:

Tadessge G/egziabher kahsay

Date _____ Signature _____