

Assessment of Factors Affecting “PMTCT” Service Utilization Among Pregnant Women Attending Ante Natal Care at Public Health Facility, Mizan-Aman Town, Bench Maji Zone, 2016

Sisay Shewasinad^{1*} and Sophonias Negash²

¹Lecturer, Department of Nursing, Debre Birhan University, College of Health Science, Ethiopia

²Amref Health Africa, Addis Ababa, Ethiopia

***Corresponding Author:** Sisay Shewasinad, Lecturer, Department of Nursing, Debre Birhan University, College of Health Science, Ethiopia.

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Abstract

Introduction: About one third of children born to HIV positive women acquire HIV infection from their mother. The overall transmission among non-breast feeding infants is reported to be 15% to 25% and about 20% to 45% in breast feeding infants. Institution based cross sectional study design was used with a total sample size of 205. In these study 53.7% of multigravida mothers were utilize PMTCT service this shows continuous exposure to ANC follow up causes client to utilize PMTCT services. A study which was conducted on determinant of acceptance of HIV/AIDS testing among pregnant mother attending ANC clinic in selected health center shows that those with third, fourth pregnancies were found to accept HIV test than those with second pregnancy. Rural residents were 3.3 times less likely to utilize PMTCT of HIV/AIDS when they are compared to that of urban residents; multigravida was most 2.44 times likely to utilize PMTCT of HIV/AIDS service, when they are compared to prim gravid.

Keywords: PMTCT; HIV/AIDS; Pregnant Women; ANC

Introduction

Background

Worldwide, 1% of pregnant women are HIV-positive. However, sub-Saharan Africa where 95% of HIV positive women live carries the vast majority of this burden [1]. Without treatment, approximately 25% - 50% of HIV-positive mothers will transmit the virus to their newborns during pregnancy, childbirth, or breastfeeding [2]. The severity of the MTCT problem in sub-Saharan Africa is due to the high rate of HIV infection in women of reproductive age, high birth rates and lack of effective MTCT prevention interventions [3].

Mother to child transmission of HIV (MTCT) [4] continues to be the major source of HIV infection among children under the age of 15 [5]. estimation a total of 128,922 new HIV infections occurred in our country Ethiopia. Of these 30,338 was HIV positive births (mother to child infection) and in the same year 134,500 AIDS deaths occurred out of which 20,900 in children under 15 years [6].

The medical recommendations made in PMTCT programs are often difficult for women to implement as they are overshadowed by community norms, values and beliefs [7].

Nearly 90% of MTCT of HIV occurred in sub-Saharan Africa. Without appropriate treatment, out of these infected children approximately half of them will die before the second birth day [6]. In South Africa an evaluation of PMTCT in pilot sites found that it is feasible to implement PMTCT but that there are also numerous operational challenges for establishing and expanding a PMTCT programme under routine health service conditions [7].

While evidence and experience indicates that currently in sub-Saharan Africa deaths of children due to AIDS show a decline trend mainly due to PMTCT services. However in most sub-Saharan African countries including Ethiopia the PMTCT service are not utilized as most utilized needed [6]. In these countries women's are not willing to disclose their HIV status due to fear of stigma and discrimination [8].

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In Addis Ababa in 20006/7 the antenatal service coverage was 81%. Pregnant mothers tested for HIV are only 38.7%. Of the total tested pregnant mothers, 5.8% were HIV positive. From HIV positive pregnant mothers, 44% had received nevirapine and babies born of HIV positive mothers 75% had received prophylaxis [9].

Objective

General objective

- To assess factors affecting “PMTCT” service utilization among pregnant women attending ANC at public health facility, Mizan-Aman Town, Bench Maji Zone, 2016.

Specific objective

- To assess the level of utilization of antenatal HIV counseling in PMTCT program.
- To determine the level of utilization of antenatal HIV testing in the PMTCT program.
- To examine factors influencing acceptance of counseling and testing among pregnant women.

Materials and Methods

Study area and period

The study will be conducted in Mizan-Aman Town public health facility, Bench Maji Zone, south west Ethiopia. This Mizan Aman town is 561 km away from the capital Addis Ababa. The study was conducted from April 1 to May 30, 2016.

Study design

Institution based quantitative cross sectional study was conducted to assess factors affecting PMTCT service utilization among pregnant mother attending ANC at Mizan Aman Town public health facility.

Source population

All pregnant women who have ANC follow up in selected public health facility.

Study population

All sampled women who come for ANC follow up in Mizan Aman Town public health facility during the data collection period.

Inclusion criteria

Women who attend ANC follow up during the data collation period.

Exclusion criteria

Those who are physically and mentally incapable to be interviewed.

Sample size determination

Sample size (n) was determined based on single population proportion with the formula:

$$n = (Z_{\alpha/2})^2 \frac{p(1-p)}{d^2}$$

Since local data for the value of P was not available, it was taken to be 50% (P = 0.5) to allow maximum sample size. Allowing 5% for expected margin of error (d) and with 95% confidence interval and $z_{\alpha/2}$ is equal to 1.96; then

$$(1.96)^2 \frac{0.15(1-0.15)}{0.05^2} = 38.$$

Where n: Sample Size

p: Proportion of the subject

d: Margin of error

But our source population was less than the sample size that we have calculated and the total populations of the town were 6992 though we were decides to use reduction formula. i.e.

$$nf = \frac{no}{1 + \frac{no}{N}} \quad \text{with 10\% non-respondent rate it was 205.}$$

where nf = final sample size no= initial sample size N = source population, then

$$nf = \frac{384}{1 + \frac{384}{360}} = 186$$

Sampling procedure

The sample was collected using simple random sampling, initially we were estimate the total number of ANC followers with the help of previous documented information of last year, based on their flow to ANC clinic were interviewed till desired sample size.

Study Variables

Dependent variable

- PMTCT service utilization

Independent variable

Socio demographic characteristics:

- Age
- educational status
- marital status
- Occupation

Maternal characteristics

- Parity
- Gravidity

Data collection methods

Instruments

Face to face interview with structured Questionnaires were used by reviewing relevant literatures and adapting from previous similar other studies. The English version was translated to Amharic and retranslated into English to check for consistency. Finally, pretested Amharic version were used to collect data. Questionnaire was checked for completeness after each interview.

Pre testing

Prior to the main fieldwork, a pretest was conducted on 5% of sample pregnant women in Tepi health center. These mothers were characteristically similar to the participant ones.

Data quality control

During data collection translators was included, if they are needed for those who are unable to speak Amharic. After each date of data collection completeness and cross checking of the data was be revised by the data collectors. pre-test were conducted.

Data analysis

The data analysis was done by using manual tally, making frequency table and calculating percentage using scientific calculator and computer software (Epi Info V 3.5.3) were used to calculate association of factors. The final result was organized by statement form, tables, bar graph and pie chart.

Ethical consideration

Ethical approval was sought from the ethical review committee of the health office of bench maji zone. Consent was obtained from the health facility before conducting the study. Informed consent was also being obtained from participants before they fill in questionnaires. Specifically, participants were informed about the objectives of the study and their participation is purely voluntary and their right not to answer any part of the question will be respected. Confidentiality was maintained.

Dissemination of the result

The result of the study will be given to organization working on maternal health in the town.

Result

In these study a total of 205 respondents were involved from them 62.4% of them was urban residents and most of (68%) were protestant religion follower.

Among the total population of 205, 97 (47.3%) of them say's the message delivered by PMTCT staff was very clear, 104 (50.7%) say's clear and 4 (1.9%) were not want to respond the clearness of the message delivered by PMTCT staff.

From the total study population 159 (77.6%) were accept to come to health facility for counseling if they were positive for testing, 40 (19.5%) were not accept to come to health facility for counseling if they were positive for testing, 6 (2.9%) were not responded for to come to health facility if they were positive for HIV/AIDS testing.

Among the total study population 175 (85%) of them says that it's necessary to recheck HIV/AIDS status even if they are negative for the current pregnancy, 21 (10.7%) of them says that recheck up is unnecessary if once negative for the current pregnancy whereas the rest of them 9 (4.3%) were not sure about it.

Socio demography of the respondents

A total number of 205 pregnant women were included in this study. The age of pregnant women included in this study ranged between 15 and 49 years. From these 128 (62.4%) are from urban area of the community whereas 77 (37.6%) of them are from rural area. Most of the subjects in the study were in the age group between 25 - 29 (34.1%).

	Age group	Frequency	Percent (%)
Age	15 - 19	36	17.5
	20 - 24	63	30.7
	25 - 29	70	34.1
	30 - 34	24	11.7
	35 - 39	10	4.8
	40 - 44	2	0.97
Total		205	100
Level of education	Un able to read and write	30	14.6
	Only able to read and write	56	27.3
	1 - 6	42	20.48
	7 - 12	67	32.68
	University/collage	10	4.87
Total		205	100

Table 1: Socio demography of pregnant women who attend ANC in Mizan -Aman health facility 2016.

From the total study population most (140 (68.1%)) of them were protestant religion follower.

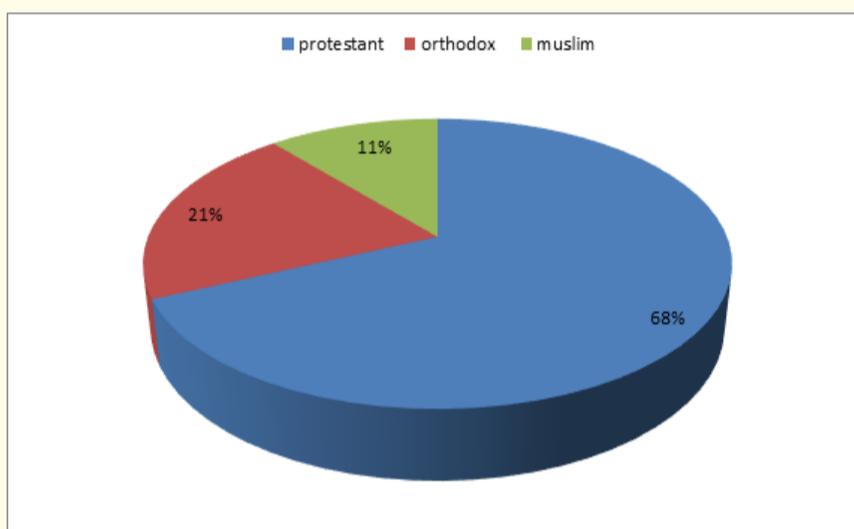


Figure 1: Religion of pregnant women who attend ANC in Mizan -Aman health facility 2016.

Among 205 total subjects of the study 174 (84.8%) of them mostly attend religious subjects and praying ceremonies whereas the rest 31 (15.1%) were sometimes attend religious subjects and praying ceremonies.

From the total population 191 (93.2%) were married, 5 (2.4%) were single and never married, 8 (3.9%) were separated but not divorced, 1 (0.48%) were widowed and there is no one who was divorced. Among these subjects 133 (64.8%) have gave birth before and 72 (35.1%) haven't gave birth before. From those who have gave birth before 146 (85.8%) have less than or equal to five children and 24 (14.2%) have greater than or equal to five children.

From the total study population most 133 (64.8%) were house wife and 8 (3.9%) were included under other.

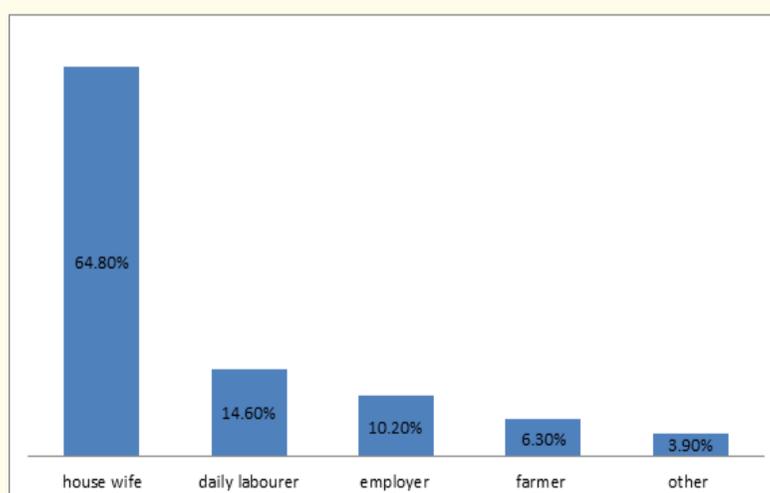


Figure 2: Occupational status of pregnant women who attend ANC in Mizan -Aman health facility 2016.

Knowledge attitude and behavior towards HIV/AIDS

Among the total population of 205, 97 (47.3%) of them say’s the message delivered by PMTCT staff was very clear, 104 (50.7%) say’s clear and 4 (1.9%) were not want to respond the clearness of the message delivered by PMTCT staff.

From total study population 159 (77.6%) were accept to come to health facility for counseling if they were positive for testing, 40 (19.5%) were not accept to come to health facility for counseling if they were positive for testing, 6 (2.9%) were not responded for to come to health facility if they were positive for HIV/AIDS testing.

Among the total study population 175 (85%) of them says that it’s necessary to recheck HIV/AIDS status even if they are negative for the current pregnancy, 21 (10.7%) of them says that recheck up is unnecessary if once negative for the current pregnancy whereas the rest of them 9 (4.3%) were not sure about it.

From the total population of 205, 202 (98.5%) were heard about HIV/AIDS whereas 3 (1.5%) were never heard about it. From those who heard about HIV/AIDS 70 (34.6%) were heard from friends, 42 (20.8) were heard from relatives, 54 (26.7%) were heard from teachers, 57 (77.7%) were heard from health institution, 62 (30.7%) were heard from radio, 43 (21.3%) were heard from television and 5 (2.5%) were heard from magazine.

From the total stud population of the study 198 (96.58%) were likely knows about HIV/AIDS transmission from person to person whereas 7 (33.42%) were likely doesn’t about HIV/AIDS transmission from person to person. From those who likely knows ways of transmission of HIV/AIDS from person to person most of 174 (87.8%) were knows about transmission of HIV/AIDS by sexual intercourse.

		Frequency	Percent (%)
Ways of transmission	Sexual intercourse	174	87.8
	Getting injections	133	62.2
	Blood transfusion	116	58.5
	MTCT during pregnancy	58	29.3
	MTCT during delivery	28	14.14
	MTCT through breast milk	38	19.2
Discuss with their partner	Yes	104	50.7%
	No	101	49.3%

Table 2: Ways of transmission of HIV/AIDS knowledge clients who discussed with their partner. About PMTCT of pregnant women who attend ANC in Mizan-Aman health facility 2016.

Among the total population of 205, 180 (87.8%) were likely knows about prevention of HIV/AIDS transmission from person to person and 25 (12.2%) were likely doesn’t know about prevention of HIV/AIDS transmission. From those who knows about the prevention method of HIV/AIDS 123 (68%), 114 (63.3%), 82 (45.5%), 51 (28.3%), 12 (6.6%), 2 (1.1%) were likely knows about prevention of HIV/AIDS transmission by limiting sexual partner possible only one, changing high risk sexual behavior; avoiding unsterile injections, avoiding unscreened blood transfusions, aborting pregnancy of HIV/AIDS infected women, avoiding breast feeding by HIV/AIDS infected mothers respectively.

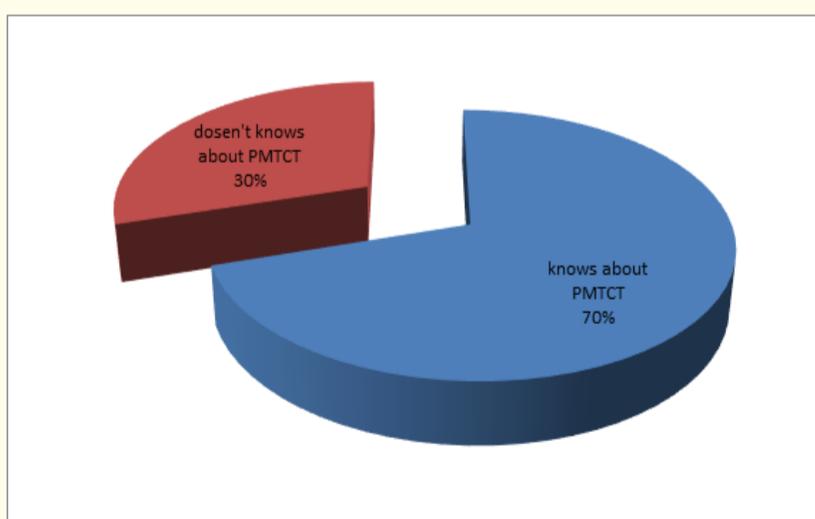


Figure 3: Knowledge about PMTCT of HIV/AIDS of pregnant women who attend ANC in Mizan -Aman health facility 2016.

From the total study population reason for pregnant women following ANC will not be volunteer to test HIV/AIDS 155 (75.6%), 39 (19%), 14 (6.8%) and 10 (4.9%) due to afraid of coping with HIV/AIDS status, afraid of the consequences (in the community) of knowing that they might be positive, don’t like to give blood at all respectively.

From the total of 205 study population 199 (97.1%) were believe that couples should screened for HIV/AIDS test before they have had married and 6 (2.9%) were not believe that couples should screened for HIV/AIDS test before they have had married.

From the total study population 62 (30.2%) think that a pregnant women who is HIV/AIDS positive should abort pregnancy and 143 (69.8%) think that a pregnant women who is HIV/AIDS positive should not abort pregnancy. All of the subjects think as people living with HIV/AIDS should handle as any other sick people.

HIV/AIDS related Behavior and Beliefs

From those asked subjects says the message conveyed by PMTCT staff 176 (85.5%) of them says appropriate, 28 (13.6%) says inappropriate and only 1 (0.48%) told us that she don’t want to respond the asked question about the message conveyed by PMTCT staff. From those who says inappropriate 20 (71.4%) of them says shortage of time makes it inappropriate whereas 8 (28.5%) of them says it’s inappropriate due to not comfortable testing procedure.

From the total respondents who were asked to suppose they have tested 165 (80.48%) of them expects negative result, 2 (0.97) expects positive result, 37 (18%) were don’t want to answer the asked question and only 1 (0.48) says I don’t want to tested at all.

From the total respondents 196 (95.6%) of them says I had have accept the result if I have been tested, 7 (3.4%) say haven’t accept the result and 1 (0.48%) were don’t respond the question.

HIV/AIDS related Behavior, Stigma and discrimination

From the total study population 198 (96.5%) of them says that their willing to accompany them to have ANC follow up, 3 (1.5%) of the respondents husband were not willing to have ANC follow up whereas 4 (2%) of the respondents husband were doesn’t care about it.

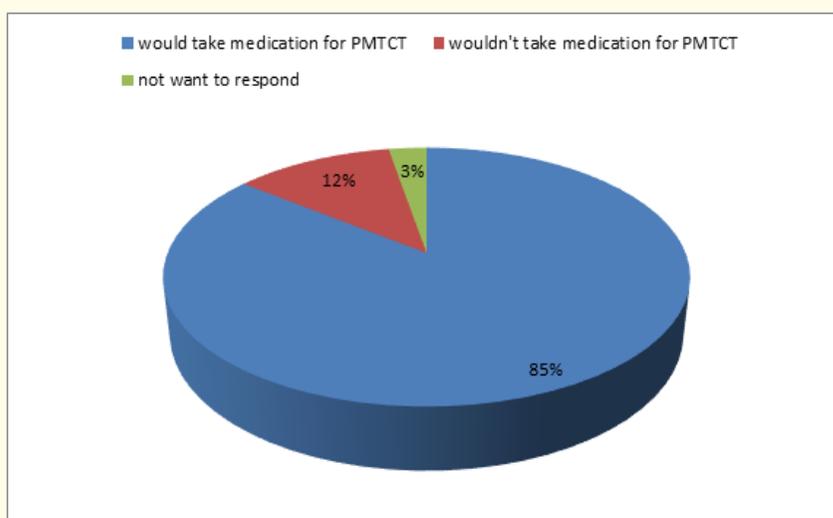


Figure 4: Mothers who have accept taking medication for PMTCT if they were positive in women who attend ANC in Mizan -Aman health facility 2016.

From pregnant mothers who don’t want to take medication if they were positive for PMTCT 16 (69.5%) of them thinks that ARV prophylaxis is ineffective, 2 (8.7%) of them fears that being identified as PLWHA, 5 (21.8%) of them fears drug side effect.

Associated factors with PMTCT of HIV/AIDS service utilization

In the analysis, PMTCT of HIV/AIDS service utilization was found to be significantly associated with four variables. These are being a rural resident (OR 3.3), being prim gravid (OR 2.44), being unable to read and write(OR 2.18) and being a farmer and daily laborer (OR 3.98).

Rural residents were 3.3 times less likely to utilize PMTCT of HIV/AIDS when they are compared to that of urban residents; multi-gravida were 2.44 most likely to utilize PMTCT of HIV/AIDS service, when they are compared to prim gravid.

In contrast being unable to read and write were 1.7 times,2.94 times, 4.7 times and 18 times less likely to utilize PMCT of HIV/AIDS services than that of being able to read and write, grade 1 to 6, grade 7 to 12 and university/collage learners respectively. Being a farmer was 4 times less likely to utilize PMTCT of HIV/AIDS services than that of employer.

Factors		Ever used PMTCT service		Odds ratio (CI 95%)	X ²	P value
		Yes F (%)	No F (%)			
Address	Urban	100 (48.8)	28 (13.6)	1	15.21	0.00018
	Rural	40 (19.5)	37 (18)	3.3		
Age	15 to 19 yrs	20 (9.7)	16 (7.8)	1	0.46	0.4989
	≥ 35 yr	8 (3.9)	4 (1.9)	0.63		
Educational status	University/collage	7 (3.4)	3 (1.5)	1	12.54	0.0004
	Grade 7 to 12	56 (27)	11 (5.4)	2.18		
	Grade 1 to 6	27 (13)	15 (7.6)	0.77		
	Read and write	43 (20.9)	13 (6.5)	1.42		
	Unable to read	10 (4.9)	20 (9.8)	0.21		
Occupation	Gov't employer	90 (46.1)	43 (22)	1	10.44	0.00123
	House wife	50 (25.6)	6 (3)	3.98		
	Daily laborer	12 (6)	30 (15.3)	0.19		
	Farmer	30 (15.3)	37 (18.8)	0.39		
Number of pregnancy	Primigravida	15 (7.3)	20 (9.7)	1	5.82	0.026
	Multigravida	110 (53.7)	60 (29.3)	2.44		

Table 3: Factors associated with PMTCT of HIV/AIDS service utilization of women who attend ANC in Mizan -Aman health facility 2016.

Discussion

A study which was conducted on determinant of acceptance of HIV/AIDS testing among pregnant mother attending ANC clinic in selected health center in Addis Ababa shows that those with third, fourth pregnancies were found to accept HIV test than those with second pregnancy [10] where as in these study 53.7% of multigravida mothers were utilize PMTCT service this shows continuous exposure to ANC follow up causes client to utilize PMTCT services.

In these study different barriers for the utilization of PMTCT services were examined. Being a rural resident, being a farmer, being illiterate seemed strong limiting factors for both counseling and testing. Likewise Oromia regional health bureau (ORHB), Annual health reports 2007/8 reports that, among a number of factors that affect the spread of HIV/AIDS from mother to child transmission were poverty, low education, stigma and discrimination of those living with HIV, migration, presence of sex workers, difference between gender and traditional practices were included [11].

According to Ministry of health/national HIV/AIDS prevention and control office Ethiopia [6] AIDS in Ethiopia sixth report the pregnant women decision making for HIV testing and counseling depends on many factors, one of the factor is client perception regarding ANC and PMTCT services and benefits such as getting care and support knowing free ART drugs for herself and the baby and having future follow-up [6]. Similarly in this study wrong perceptions associated with HIV/AIDS are also limiting factors for undergoing counseling. The perception that HIV is curse sent as a penalty for the sin of people (30% of the respondents) was among the factors associated with less likelihood of undergoing voluntary counseling and testing for HIV in the ANC setting. A noteworthy proportion of pregnant women are afraid of discussing the sinful picture of HIV with the service providers. The most frequently stated reason by the subjects for avoiding counseling was fear to cope for self if positive for HIV; they better not know their status.

According SNNPR Health Bureau (2007) Regional report on HIV/AIDS, pregnant women who perceived that the communities out cast PLWHA were more likely to differ from undergoing voluntary counseling for HIV testing compared to those who thought that they are cared for. These could be due to the fear of rejection in the family and community [12]. Likewise in this study many issues that herald the prevalence of HIV associated stigma are identified. It was revealed that pregnant women who were afraid of being identified as HIV positive in the community were more likely to abandon VCT in the ANC setting. Therefore, efforts to minimize the various stigma associated with HIV should be undertaken through education and empowerment of women. Particularly, male husbands should be motivated to take part in taking care of women and the pregnancy.

In this study 81.5% of the subjects were planned to have delivery at health facility where as in the Ethiopian situation, only 28% of women who give birth in the past five years received ANC from health facilities at least once and only less than 10% had institutional delivery according to Ethiopian demographic health survey 2011 report.

Conclusion

Different barriers for the utilization of PMTCT services were examined. Being a rural resident, being a farmer, being illiterate, being prim gravid were strong limiting factors for both counseling and testing.

Rural residents were 3.3 times less likely to utilize PMTCT of HIV/AIDS when they are compared to that of urban residents; multigravida was most 2.44 times likely to utilize PMTCT of HIV/AIDS service, when they are compared to prim gravid; these result of the study shows rural residents need more awareness on PMTCT service utilization.

A noteworthy proportion of pregnant women are afraid of discussing the sinful picture of HIV with the service providers. The most frequently stated reason by the subjects for avoiding counseling was fear to cope for self if positive for HIV; they better not know their status.

It was revealed that pregnant women who were afraid of being identified as HIV positive in the community were more likely to abandon VCT in the ANC setting.

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