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The Role of Male Partner Involvement on Mother's Adherence to PMTCT Care and Support, Tigray, Northern Ethiopia

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Abstract

Background: Ethiopia is one of the top 20 countries affected by HIV in the world. Not only a proportion of women receiving antiretroviral prophylaxis in PMTCT program are small, but also adherence among the users is poor. The utilization and adherence of PMTCT services by the pregnant women may be influenced both by factors related to health system and individual factors. This study aimed to point out the role of male-partner involvement on mother's adherence to PMTCT care and support in Tigray, northern Ethiopia.

Method: Cross-sectional study was conducted in Tigray region from May to June, 2013 among 315 HIV positive pregnant women who had been taking antiretroviral drugs in the PMTCT program. We selected the study participants using systematic random sampling using medical registration number. Descriptive and multivariate logistic regression analyses were performed to estimate the predictors that affect the level of adherence to PMTCT using SPSS 20 for windows.

Result: The adherence rate of mothers towards PMTCT care and support was 84.9%. HIV positive pregnant mothers with better male involvement had 8 times more odds to adhere to PMTCT care and support as compared to their counterpart (AOR=8.4; 95% CI:4.2, 12.9). Similarly, mothers with higher knowledge on PMTCT care and support (AOR=6.20, 95% CI of (3.10, 9.30), positive attitude (AOR=8.2; 95% CI: 4.3, 12.6), who had preferred birth spacing (AOR=8.2, 95% CI: 3.8, 14.1) and those who had prior discussion on HIV test with their partners (AOR=12.0; 95% CI: 6.2, 15.3) were more likely to adhere to PMTCT care and support.

Conclusion: The adherence rate of mothers towards PMTCT care and support was fair. Attitude towards to and knowledge on PMTCT, discussion with husband on an HIV test, male partner involvement, access to information through radio and sufficient birth space were significant predictors of adherence to PMTCT.

Keywords: Adherence; Male involvement; PMTCT; Tigray; Ethiopia

Introduction

World Health Organization (WHO) promotes prevention of HIV infection, unintended pregnancies, perinatal HIV infection and providing care and support for HIV positive mothers and their families [1]. Adherence to antiretroviral drugs is necessary to prevent drug resistance and achieve the prevention of HIV transmission to children through Mother to Child Transmission (MTCT). Important strides have been made in recent years in the PMTCT of the HIV. Yet, despite these advances, approximately 15% of all new cases of HIV infection have been diagnosed in children in developing countries [2]. Between one half and two thirds of children who become infected with HIV die before their second birthday [3].

In 2010, only 48% of HIV-positive pregnant mothers received antiretroviral medicines to prevent MTCT and around 390,000 children aged less than 15 became infected with HIV [4]. Almost all of these infections occur in low- and middle-income countries, and more than 90% are the result of MTCT during pregnancy, labor and delivery, or breastfeeding [5]. Beside this, Ethiopia is one of the top 20 countries affected by HIV in the world [6]. Only 26% of the pregnant women were tested for HIV. Fifty three percent of known HIV-positive mothers and 48% of known HIV - exposed infants have received ARV prophylaxis and the estimated ARV among HIV positive mother coverage was only 11.6% and 8.4% of their babies [7]. One of the reasons could be low male partner involvement in PMTCT care and support.

Furthermore, WHO's 2010- 2015 PMTCT strategic vision emphasizes the need to involve male partners in scaling up PMTCT services in Sub-Saharan Africa (SSA) [6]. Studies have also shown that the utilization and adherence of PMTCT services by the pregnant women is influenced by both factors related to the health system such as accessibility of Voluntary Counseling and Testing (VCT) services and individual factors such as fear of disclosure of HIV results and lack of male partner support [8,9]. Therefore, the objective of this study was to examine the role of male partner's involvement in improving adherence of HIV positive women to PMTCT care and support.

Methods

Study setting and population

Cross-sectional study, which contains quantitative methods of data collection, was conducted from May to June 2013. The study was carried out in health centers of Tigray region, northern Ethiopia, among HIV positive pregnant women attending ART. There are about 16 governmental, four private hospitals and 256 health centers in Tigray region. The PMTCT program is operational in hospitals and health centers [10]. Mothers receive PMTCT packages free of charge on a monthly basis.

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Sampling

The sample size was estimated a single population proportion formula with the assumption of 95% confidence level, 5% margin of error and male involvement of 26% in the Uganda study [11]. To compensate the non-response rate, 10% of the estimated sample was added up to make the total sample of 326 HIV positive pregnant women.

Systematic random sampling was used to select mothers participating in the study. There were a total of 60 public health centers supported by ENHAT CS in the different zone of the region, from 20 health centers were selected by simple random sampling technique. Mothers were selected at equal interval. Mothers who didn't satisfy the inclusion criteria were excluded and were replaced by next mothers in the list. However, mothers who refused to participate in the study were considered as non-respondent.

Data collection procedure

Data were collected using structured and pre-tested questionnaire by face-to-face interview. It was first prepared in English, translated to Tigrigna- the local language- and then translated back to English to check consistency of the questions. The questionnaire constituted questions that provide information on socio-demographic and economic characteristics of respondents, adherence of mothers to PMTCT drugs, health and health care related factors, male partner factors, mother's behavior, knowledge and attitude of mothers towards PMTCT drugs. The questionnaire was adapted from literature reviews and considering the local situation of the study areas and subjects [7, 11,12]. Before the actual data collection, the questionnaire was pre-tested on 16 HIV positive women in Quiha health center which was excluded from the study. Based on the pre-test, modifications on the translation, time needed to complete interview and a number of data collectors needed were estimated.

Twenty clinical nurses for data collectors and six degree holder nurses for supervision were recruited and trained for two consecutive days on purpose, data collection tools and interview techniques. Each interview was conducted in a place where the woman feels free to express her feelings and ideas. The filled out questionnaires were checked for completeness and errors by the supervisors on a daily basis.

The composite measure of male partner involvement towards PMTCT care and support was measured by the total number of 10 questions with a minimum score of 0 and maximum of 10. Finally, it was categorized into three "better", "moderate" and "less" male partner involvements by calculating and categorizing of the responses of the respondents out of 10. With correct answers for at least seven questions, male involvement was considered better. Male involvement was considered moderate if the correct answers were 4-6 and correct answers less than 4 were designated as less male involvement. Adherence to PMTCT care and support was measured by three items: adherence to PMTCT prophylactic drugs, ANC visit and their plan of delivery. Then it was dichotomized to adherent and non-adherent. The respondent was taken as adherent to PMTCT care and support, when they take greater than or equal to 95% of PMTCT prophylactic drugs, misses only one appointment day for ANC follows up and has a plan to give birth at the health facility.

For the study, the composite measure of knowledge towards PMTCT was measured by the total number of correct answers to 6 items of knowledge with a minimum score of 0 and maximum of 6. Finally, it was categorized into three "high", "moderate" and "low knowledgeable" by calculating and categorizing of the responses of the respondents out of 100%. Women were said "highly Knowledgeable" if their answers 80% and above distinct characteristics of PMTCT care and support from knowledge questions. In addition, "moderate knowledgeable" those who knows 60 up to 79% distinct characteristics of PMTCT care and support from knowledge questions. They were labeled as "low knowledgeable" if they answer less than 60% characteristics of any of the PMTCT care and support.

For analysis items the attitude of the respondents towards PMTCT was grouped into three "strongly agrees" and "agree", as "agree", "neutral" as "neutral" and, "disagree" and "strongly disagree" as "disagree". Finally by adding the overall variables the total score of HIV positive pregnant women's attitude towards PMTCT was done based on mean. Then, they were said to have Positive Attitude, if their scores above mean to the correct answers from attitude measuring PMTCT care and support questions and having a negative attitude if they score mean and below the mean.

Data analysis

Data were entered into and cleaned in Epi-DATA version 3.1. Further analyses were done using SPSS 20 for windows (SPSS Inc. Version 20, Chicago, Illinois). Descriptive analyses were computed for the level of male involvement in PMTCT care and support and other important characteristics of the study participants. We computed crude odds ratio (COR) using bivariate logistic regression. To identify adjusted effect of predictors on adherence to PMTCT care and support, a multiple logistic regression model was employed. The effect of each predictor was adjusted for the rest of the variables to get net effect. The sample effect sizes were depicted using odds ratio (OR) and effects of the factors in the community was estimated using 95% confidence interval of adjusted OR. Multi collinearity among independent factors was checked using VIF. A P-value of less than 0.05 was set for the significance of estimates.

Ethical consideration

The study protocol was approved by Research and ethical review committees in Mekelle University, College of health sciences. Written consent was obtained from each participant to ensure their voluntariness to participate in the study and they were told that all have a right to withdraw at any time or to put an end for single question, segment of questions or refuse to participate at all with no negative repercussions.

Result

Characteristics of the study subjects

A total of 299 HIV positive pregnant mothers were included in the study making the response rate to 91.7%. Slightly lower than half of the mothers were in the age range of 25-29 years old. A higher proportion of the mothers (66.4%) were resident of urban and 86.3% of the respondents were followers of Orthodox Christianity Pertaining to educational status, 120(40.1%) of respondents were unable to read and write. Nearly to 39% of the respondents didn't have job. They were limited to indoor activities. Of the total respondents, 198(66.2%) and 96(32.1%) had radio and television, respectively. One hundred sixty five (55.2%) of the respondents had household monthly income of 51.3-102.56 $ with a median amount of 120$ (Table 1).

Clinical characteristics of respondents

The majority, 181(60.5%), of the respondents was using ART. Of those, 101(33.8%) of them were currently on the ART regimen of D4T-

Variables	Number	Percent
Age		
20-24	68	22.7
25-29	125	41.8
30-34	71	23.7
35-39	35	11.7
Place of residence		
Urban	199	66.4
Rural	100	33.4
Religion		
Orthodox	258	86.3
Other	41	13.7
Education status of wife		
Unable to read and write	120	40.1
Able to read and write	62	20.7
Primary	82	27.4
Secondary	22	7.4
College and above	13	4.3
Education status of husband		
Unable to read and write	56	18.7
Able to read and write	63	21.1
Primary	52	17.4
Secondary	82	27.4
College and above	46	15.4
Occupation status of wife		
	52	17.4
Business	43	14.4
Housewife	117	39.1
Daily laborer	87	29.1
Occupation of husband		
	78	26.1
Business	53	17.7
Farmer	112	37.5
Daily laborer	56	18.7
Household monthly income		
< 51.28 $	91	30.4
51.3-102.56 $	165	55.2
> 102.6 $	43	14.4
Exposure to radio		
Yes	198	66.2
No	101	33.8
Exposure to television		
Yes	96	32.1
No	203	67.9

Table 1: Socio demographic and economic characteristics of respondents and their partner, Tigray, northern Ethiopia, 2013

3TC-EFP. A majority, 190 (63.5%) of the participants were in WHO stage of III during they start treatment. While 65.6% of them had CD4 count less than 200/mm3. During the study period, however, 65.6% of the women were at WHO stage T1 and 97.3% had CD4 count over 200/mm3. Pertaining to their anthropometric composition during the study period, 44.6% of the women had a Body Mass Index (BMI) of less than 18.5 kg/m2 (Table 2).

Reproductive history of the respondents

Average age at marriage was 18.45 yrs (± 3.2 yrs) and age at first birth was 20 yrs (+ 2.5). While 64.2% of the women got married below the age of 18, 85.1% gave birth to their first child at 18 or beyond. On average, each woman had 2.1 children (+ 1.8). The birth spacing was less than 3 years among 61.6% of the women and over half of the women (57.5%) intend to have more children in the future, the majority of them within three years. Eleven percent of the women had child death in which 89% occurred within one year of birth. In addition, 11.1% of the women experienced at least one abortion (Table 3).

Health and health related characteristics of respondents

With regard to HIV testing, 186(62.2%) of the women got tested in VCT center. Fifty one percent of the women didn't have any discussion with their partners whether they needed to get tested for HIV or not. As such, 222(73.6%) of them got tested alone. Pertaining to pregnancy care, 30.4% of the pregnant women attended ANC two times while 26.4% of them didn't visit for pregnancy care at all. Even among the ANC users, the visit was not consistent and the frequently mentioned reason has been illness. As asked about their preference of place of delivery for their future births, 86.3% of them had an intention to delivery at health facility (Table 4).

Information regarding to composite measure of HIV positive married women' knowledge towards PMTCT care and support show that, 100(33.4%), 116(38.8%) and 83(27.8%) had high, moderate and low knowledge about PMTCT care and support, respectively. Moreover, information related to composite measure of attitude, 152 (50.8%) of the respondent had positive attitude towards PMTCT care and support, whereas the remaining had a negative attitude, 147(49.2%).

Partner involvement in PMTCT care and support

Nearly eight out of ten women disclosed their HIV status to their partner (77.3%) in which majority of these (74.5%) disclosed their status before they started ARV drugs in PMTCT service. Their most reason for disclosure was the need of support from their partners. Not only 25.5% hadn't disclosed their HIV status, 81% of them didn't have any intention to, mainly with the fear of divorce. Out of the women who knew their partner's HIV status, 91.1% of them were positive for HIV (Table 5).

Variables	Number	Percent
ART regimen		
D4T (30) -3TC-NVP	15	5.0
TDF-3TC-NVP	15	5.0
D4T-3TC-EFP	101	33.8
TDF-3TC-EFP	23	7.7
AZT-3TC-NVP	111	37.1
AZT-3TC-EFV	34	11.4
WHO stages at admission		
Stage 1	54	18.1
Stage 2	38	12.7
Stage 3	190	63.5
Stage 4	17	5.7
Current WHO stages		
Stage 3	79	26.4
Stage 4	24	8
T1	196	65.6
Current CD4 count		
<200	8	2.7
>200	291	97.3
BMI (kg/m2)		
<18.5	133	44.6
18.5-24.9	97	32.4
≥25	42	14

Table 2: Clinical characteristics of respondents, Tigray, northern Ethiopia, 2013

Regarding to male partner involvement in PMTCT care and support, 139(59.9%) of their partners participated in decision making and 173(74.6%) of them supported their wives in domestic activities. Half of the women discussed on use of condom with their partner. As an indicator to the partners support, 17.3%, 32.2% and 41.4% of them knew the name of the ARV, dosage and types of regime, respectively. In addition, 104(44.8%) of the partners had accompanied their wives to ANC, 133(59.3%) knew the appointment date for ANC and 119(51.3%) used to discuss with their wives on the prophylaxis and advices they received in ANC. Over fifty percent (53.9%) of the women also received financial support from their partner (Figure 1).

The composite measure of male involvement showed that 196 (65.6%) of the respondents had less male involvement, while 28(9.4%) and 75(25 %) had moderate and better male involvement, respectively.

Adherence of respondents towards PMTCT care and support

The composite measure of adherence to PMTCT care and support showed that only 254 (84.9%) of HIV positive women were adherent to PMTCT care and support as gauged based on three attributes-adherence to PMTCT prophylactic drugs, ANC visit and their plan of delivery

Variables	Number	Percent
Age at marriage		
<18 year	192	64.2
≥18 year	107	35.8
History of birth		
Yes	242	80.9
No	57	19.1
Number of children		
Two and less than two	172	71.7
Three and above	68	28.3
Age at delivery		
<18 year	36	14.9
≥18 year	206	85.1
Birth space		
Less than 3 years	106	61.6
3 and above	66	38.4
History of child death		
Yes	27	11.2
No	215	88.8
Number of child deaths		
One	24	88.9
Two	3	11.1
Family size		
4 and less than 4	240	80.8
5 and above	57	19.2
History of unwanted pregnancy		
Yes	25	8.4
No	274	91.6
History of abortion		
Yes	34	11.4
No	265	88.6
Number of abortions		
One	28	82.4
Two	6	17.6
Intend to have more children in the future		
Yes	172	57.5
No	127	42.5
Birth spacing		
Within 3 years	106	61.6
Three and above years	66	38.4

Table 3: Reproductive history of HIV positive pregnant women, Tigray, northern Ethiopia, 2013

Variables	Number	Percent
Place of HIV test		
ANC	100	33.4
Delivery	13	4.3
VCT	186	62.2
Who initiates for HIV test		
Personal	82	27.4
Husband	28	9.4
Family	23	7.7
Friends	9	3.0
Sick	21	7.0
Health professional	132	44.1
Marriage	4	1.3
With whom you had a test		
Alone	220	73.6
Husband	50	16.7
Family	22	7.4
Friends	7	2.3
Discussion with partner before test		
Yes	108	49.1
No	112	50.9
Number of ANC		
One	88	29.4
Two	91	30.4
Three	77	25.8
4 and above	43	14.4
Time of starting ANC		
Within One month	104	34.8
Within Two months	120	40.1
Within Three months	75	25.1
Attended all ANC		
Yes	220	73.6
No	79	26.4
Number of missed ANC		
One	33	41.8
Two	46	58.2
Reason for missing ANC		
Husband not allowed	25	31.6
I was sick	29	36.7
Lack of money for transport	25	31.6
History of hospitalization		
Yes	22	7.4
No	277	92.6

Table 4: Health and health related characteristics of respondents towards PMTCT care and support, Tigray, northern Ethiopia, 2013

Among the adherent women, 81.3%, 93.5% and 82.1% were among the women who disclosed their HIV status and employed and who knew their partners' HIV status, respectively. As partners increased their educational status, they were more likely to support their wives and thus contribute to adherence of ARV in PMTCT. This was supported with evidence that the adherence rate was 20.1% among the women partnered with illiterate husbands as compared to 27.6% in women whose partners completed their secondary school. As adherence is contrasted with the level of male involvement, 51% of the women were adherent to PMTCT care and support among those whose partners had better involvement in care and support. However, only 24% and 25% of the women whose partners' involvement was moderate and less were adherent to PMTCT care and support.

Variables	Number	Percent
HIV disclosure to partner		
Yes	231	77.3
No	68	22.3
Time of disclosure		
Before PMTCT drug starting	172	74.5
After PMTCT drugs starting	59	25.2
Reason for disclosure		
Peer pressure	31	13.4
Mass media	30	13.0
HIV positive person	49	21.2
Husband support	121	52.4
Reason for not disclosing		
Fear of stigma	22	32.4
Fear of divorced	31	45.6
Fear of point out for me	15	22.1
Plan for disclosure among the undisclosed		
Yes	21	30.9
No	47	69.1
HIV status of partners		
Positive	185	91.1
Negative	18	8.9
Received partner support		
Yes	232	77.6
No	67	22.4

Table 5: Partner related factor of HIV positive women towards PMTCT care and support, Tigray, Northern Ethiopia, 2013

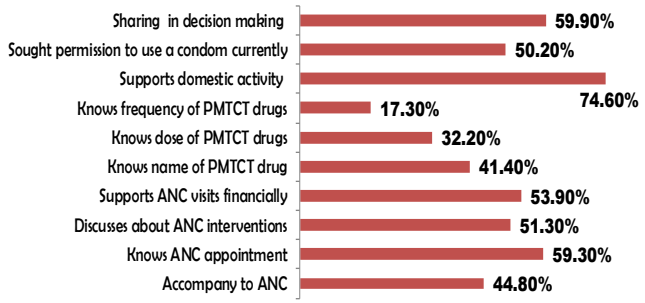

Figure 1: Percentage respondents who had male involvement to adherence of HIV positive pregnant women to PMTCT care and support in Tigray Region, 2013.

Determinants of Adherence to PMTCT care and support

Multivariate logistic regression was done to assess the predictors of adherence towards PMTCT care and support among women attending PMTCT. Accordingly, attitude towards to and knowledge on PMTCT, discussion with husband on HIV test, male partner involvement, access to information through radio and sufficient birth space were significant predictors of adherence to PMTCT.

HIV positive pregnant women with better partner involvement in PMTCT care and support had 8 times more odds to adhere to PMTCT (AOR=8.4; 95% CI:4.2, 12.9). Having better knowledge on PMTCT was associated with better adherence to PMTCT care and support (AOR=6. 2; 95% CI: 3.1, 9.3). Likewise, women with positive attitude were at 8 times higher odds to adhere to PMTCT as compare to their counterparts (AOR=8.2; 95% CI: 4.3, 12.6). The odd of adhering to PMTCT was 8 times higher among women who had 3 years or beyond as compared to women with insufficient birth spacing AOR=8.2; 95% CI: 3.8, 14.1). Women with exposure to radio messages were more likely to adhere to PMTCT (AOR=12.0; 95% CI: 5.8, 15.3). The odds of adhering to PMTCT was 12 times higher among women who had an open discussion with their partner on HIV testing (AOR=12.0, 95% CI: 6.2, 15.3) (Table 6).

Discussion

The adherence rate of mothers towards PMTCT care and support was 84.9%. Attitude towards to and knowledge on PMTCT, discussion with husband prior an HIV test, male partner involvement, access to information through radio and sufficient birth space were significant predictors of adherence to PMTCT care and support.

Adherence to PMTCT is low in the current study, though it is comparatively higher than estimate reported in Zambia [13]. This study and other studies show that the adherence is influenced both by factors related to the health system such as accessibility of VCT services, and by individual factors such as fear of disclosure of HIV results, lack of male partner support, fear of domestic violence, abandonment and stigmatization [8,9].

Education is good intervention to improve health seeking behavior and health status of one's population. As such, women with secondary education were more likely to adhere to PMTCT care and support. This result was consistent with findings in Uganda [11] but different as compared to a study in Zimbabwe [14]. The discrepancy could be accountable for the differences in the nature of the cross sectional which doesn't sample the study participants based on the different characteristics.

Unlike to study in Nigeria [15], male involvement in PMTCT care and support in this study was higher. This could be attribuTable to the integrated community interventions including PMTCT services in Ethiopia through the aid of Health Extension Program. Male partner involvement was predictor for adherence to PMTCT and this was consistent with a study done in Tanzania which indicates that women who disclosed their HIV status were significantly more adherent to prophylaxis in the pre-delivery period than women who did not [16]. This association shows that male partners who get involved in PMTCT care and support could have better understanding and awareness towards the treatment. Hence, women how get psychological and financial support would be more adherent to PMTCT.

In the current study, 65.6% of the women received less male involvement in their PMTCT care and support. Similar findings were also reported in studies done in Tanzania, Nepal, South Africa and Malawi [16-19]. The low level of involvement could be attributable to the less awareness and education, culture and tradition of the society in which males don't care on their partners. Similarly, the reasons mentioned for the less involvement of male partners in the other studies were unawareness to the importance of PMTCT care and support, environmental factors and feeling of shy. Moreover, as the educational level of male partners increases, the level of involvement in PMTCT care and support of their wives increases. However, the educational level of the population in Ethiopia is very low which could affect the male involvement negatively.

Knowledge is powerful to utilize health care service. Women with better knowledge and understanding that PMTCT can prevent HIV transmission to their baby are more likely to adhere to the PMTCT care and support. That's, utilizing and comply with the treatment protocols of PMTCT without the knowledge of its advantages is unlikely. This finding was consistent with other studies, which showed that women with inadequate knowledge were 3.5 times more likely to non-adhered as compared to those with adequate knowledge [20].

Characteristics	Adherence			
	Adhered	Non Adhered		
	n(%)	n(%)	COR (95% CI)	AOR(95% CI)
Male involvement				
Low	59(80.8)	14(19.1)	1	1
Moderate	9(10.3)	78(89.7)	2.4(0.2,4.8)	2.7(0.3,14.13)
High	22(15.9)	116(84.1)	4(2.06,6.06)	8.4(4.2,12.92)*
Attitude				
Positive	133(87.5)	19(12.5)	5.2(2.7,8.4)	8.2(4.3,12.6)*
Negative	811(82.3)	666(17.7)	1	1
Knowledge				
Low	63(75.9)	20(24.1)	1	1
Moderate	97(83.6)	19(16.4)	1.6(0.8,3.27)	1.4(0.29,6.6)
High	94(94)	6(6)	4.9(1.89,13.1)	6.2(3.1, 9.3)*
Exposure to radio				
Yes	176(88.9)	22(11.1)	2.3(1.24,4.48)	11.9(5.8,15.3)*
No	78(77.2)	23(22.8)	1	1
Birth spacing				
Within 3 years	84(79.2)	22(20.8)	1	1
Three and above years	63(95.5)	3 (4.5)	5.5(1.57, 13.9)	7.9(3.8,14.08)*
Discuss with husband before HIV test				
Yes	99(91.7)	9(8.38)	2.6(1.17,6.14)	12(6.2,15.3)*
No	90(80.4)	22(19.6)	1	1
Disclosure of HIV test				
Yes	200(86.6)	31(13.4)	1.6(1.2,2.4)	0.8(0.15,4.4)
No	54(79.4)	14(20.6)	1	1

Table 6: Predictors of adherence to PMTCT care and support among Respondents, Tigray, northern Ethiopia, 2013

Open discussion with partners on the need of HIV testing is associated with good adherence of mothers to PMTCT. Similar result is reported in a study conducted in Tanzania [21]. Discussion creates favorable condition for understanding and supporting each other. If the couples discuss on the need of HIV testing, that means they are ready to accept the test result and they are more likely to adhere to the PMTCT treatment.

Radio is one of the channels that health promotion is broadcasted through. Particularly, radio programs transmit messages through dramas and best experiences which have positive influence on the mothers to seek for the treatment. Thus, women who have exposure to radio messages are more likely to retain messages about the need of HIV testing, PMTCT care to prevent HIV transmission to baby, and adhere to the care.

Conclusions

The adherence rate of mothers towards PMTCT care and support was fair. Attitude towards to and knowledge on PMTCT, discussion with husband on an HIV test, male partner involvement, access to information through radio and sufficient birth space were significant predictors of adherence to PMTCT.

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