

Male Partner Support and Associated Factor on PMTCT Option B⁺ among HIV Positive Pregnant and Lactating Mothers in South Wollo Zone, North East Ethiopia

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Abstract

Option B⁺ is an approach in prevention of mother to child transmission of human immune virus (HIV) which means "test and treat" irrespective of CD4 count or clinical stage. In this approach world health organization recommended male partner involvement is vital for accomplishment of the goal of having HIV free children. Now a days there is no study done on male partner involvement in option B⁺ Prevention of mother to child transmission of HIV in Ethiopia in general and also in our study area of south wollo zone in particular.

Objective: The objective of this study was to assess male partner support and associated factor on option B⁺ prevention of mother to child transmission of HIV among HIV sero positive pregnant and lactating mothers in south wollo zone, north east Ethiopia, 2016.

Method: An institution based cross sectional study design was employed. A total of 172 HIV positive pregnant & lactating mothers were involved in the study. Simple random sampling technique was utilized to recruit the study participants. Data was collected by using interviewer administered structured questionnaire. The data were entered in to EpiData version 3.1 and then exported to statistical package for social science (SPSS) window version 21 for statistical analysis. Entered data were explored for errors & missing values and cleaned before analysis. Bivariate and multivariate logistic regression analyses were employed to identify factors associated with male partner involvement in prevention of mother to child transmission of HIV/AIDS. P-value less than 0.05 with 95% confidence interval were used to declare the association between dependent and independent variables.

Result: A total of 172 HIV positive pregnant and breast feeding mothers were involved in this study. One hundred forty six (88%) of mothers report good male partner support while the rest 20 (12%) of mothers didn't had. Primigravida (pregnant for the first time) had statistically significant association with male partner involvement in prevention of mother to child transmission of HIV/AIDS (AOR 0.19, 95% CI (0.04-0.94)).

Conclusion: Being HIV positive pregnant and breast feeding mothers who were pregnant for the first time (primigravida) had statistically significant association with male partner support in option B⁺ prevention of mother to child transmission of HIV care. Therefore, focusing on those primigravida mothers is essential to improve the support of male sexual partner on prevention of mother to child transmission of HIV.

Keywords: Breastfeeding; Male partner involvement; Option B⁺; Pregnant mother; PMTCT

Abbreviations: AIDS: Acquired Immune Deficiency Syndrome; ART: Antiretroviral Treatment; Dx: Diagnosis; HAART: Highly Active Anti Retroviral Treatment; HIV: Human Immune Virus; MTCT: Mother to Child Transmission; UNAIDS: United Nations programme for HIV and AIDS; PMTCT: Prevention of Mother to Child Transmission; WHO: World Health Organization.

Introduction

Option B⁺ is an approach on prevention of mother to child transmission of HIV which means test and treat with life long antiretroviral drug for all pregnant and breast feeding mothers irrespective of CD4 count or clinical stage [1-4]. The main aim of

option B⁺ is to prevent mother to child transmission of HIV or achieving the goal of HIV free new generation. Despite the invaluable role of male partner support in this programme; it is low in developing countries including Ethiopia [5]. In Africa, male partner involvement in prevention of mother to child transmission of HIV (PMTCT) service is generally low due to different reasons. From those reasons low general utilization of health services, low level of knowledge among male partner on PMTCT as compared with women, male reluctance to know their HIV status, clashes between ANC/PMTCT timings and men's working hours, and women's hesitation to get tested with their partners due to fear of domestic violence if found to be HIV positive are the commonest [6].

A study done in sub Saharan Africa countries revealed that if men participated in PMTCT programmes and supported their wives, uptake could increase. But fear of stigmatization and a belief that men should not participate in female reproductive health are found to be

barriers to male involvement [5]. According to world health organization despite overwhelmingly increasing positive attitudes towards PMTCT programme among men, their engagement remains very low. Perhaps the most significant obstacles are the conceptual and policy barriers that inadvertently support men's exclusion from PMTCT and other reproductive health services [7]. The main objective of this study was to assess the level of male partner support in option B + prevention of mother to child transmission of HIV among HIV positive pregnant and lactating mothers and identify factors associated with it in south wollo zone, north east Ethiopia. There was no study done in this area on the stated topic in south wollo zone, Amhara region, north east Ethiopia.

Methods and Materials

Study setting and period

This institution based cross sectional study was conducted as part of broader study which collected data on levels of adherence and factors associated with adherence to option B+ PMTCT among pregnant and lactating mothers from March to April 2016 in two government hospitals and five health centers found in south Wollo zone, Amhara region, north east Ethiopia [8].

Study population

The study population was all HIV positive pregnant and lactating mothers who came for PMTCT service during the study period.

Sample size determination & sampling technique

The sample size required for this study was 172 HIV positive pregnant and breast feeding mothers who had male sexual partners. The study subjects were recruited by using simple random sampling technique.

Operational definition

Male involvement in PMTCT: The level of male involvement in PMTCT was determined using ten questions. The male involvement score for each respondent could range from 0 which means no involvement up to 10; which means involved in all ten activities. The mean score of this study was 8. So those mothers whose score from 8-10 was considered as "having good male partner involvement in PMTCT" whereas from 0-8 score was considered as "having their partner not involved in PMTCT".

Option B+: Those pregnant and breast feeding women whose HIV sero status was positive and initiate ART at the same day of diagnosis.

Data collection and quality control

Data was collected using standardized interviewer administered questionnaire. The questionnaire was first prepared in English, translated into the local language (Amharic) and then translated back to English by 2 different person to check the consistency & similarity of both languages. Pre-test was done on 5% of the sample size in Tita health center which was not included in this study. Data collectors were seven nurses with qualification of Diploma and one bachelor degree nurse was assigned as supervisor after one day training on data collection tool, data collection procedures and quality assurance

techniques. Data consistency & completeness were checked on a daily base.

Measurement

Male partner involvement was measured using ten questions. The tool was adopted from study done in Tgray region, northern Ethiopia [9].

Data processing & analysis

The collected data were checked manually for its completeness and rechecked again by principal investigator before entry. Data was entered daily into epiData version 3.1 and then exported to Statistical Package for Social Science (SPSS) window versions 21 for analysis. Entered data was explored for errors of data as well as missing values and cleaned before analysis. Descriptive statistics (frequency table and pie chart) were used to summarize the data.

Bivariate analysis was done in order to view the association of individual explanatory variables to outcome variable. Multiple logistic regression analysis was done to control for confounding variables and identify factors significantly associated with the outcome variable. Based on the findings of bivariate analysis, variables which had P-value less than 0.25 were entered to multiple logistic regression model to check association with the dependent variable. P-value less than 0.05 with 95% CI from multiple regression analysis was used to state association between independent and outcome variables.

Ethical consideration

Ethical clearance was obtained from the ethical review board of Addis Ababa University, department of nursing and midwifery. The required permission was secured from the responsible authorities of each health facilities. Detailed explanation on the purpose of the study was given to study participants and data was collected after getting verbal consent from each study participants.

Result

A total of 172 mothers were interviewed making a response rate of 100%. Among study participants (190), 49.5% (94) were pregnant and 50.5% (96) were breastfeeding mothers. This shows almost half of the study participant was HIV positive pregnant mother and the rest half were HIV positive lactating mothers. Of those lactating mothers 93.8% (90) were exclusively feed their child breast milk currently while the remaining did not feed breast milk. The mean age of the women were 29.1 with standard deviation of 4.43 years. Of the total respondents, about 49.5% (94) of them learnt primary education (grade 1-8th).

Of the total respondent, 64.2% (122) were housewife and their works were limited in household area whereas 11.2% (21) of study participant were merchant. The proportion of respondent belonging to Muslim religion was 55.3% (105) and round 78% (149) of respondent were live in the urban area. Fifty five percent (105) of women traveled more than an hour by walking to reach at health facility (Table 1). Among mothers participated in this study, 15% (14) were primigravida (pregnant for the first time) and the rest 85% (80) were pregnant for second time and above.

Variables	Frequency	Percentage (%)
Number of study participants in health facility		

Health centers	122	64.2
Hospitals	68	25.8
Study participants		
Pregnant mother	94	49.5
Breastfeeding mother	96	50.5
Age		
≤ 29	105	55.3
≥ 30	85	44.7
Place of residence		
Rural	41	21.6
Urban	149	78.4
Religion		
Muslim	105	55.3
Orthodox	77	40.5
Others	8	4.2
Marital status		
Cohabitated (single, divorced and widowed)	39	20.5
Married	151	79.5
Respondent's educational level		
No formal education	42	22.1
Grade1-8	94	49.5
Grade 9-12	37	19.5
Technical/vocational and above	17	8.9
Mothers occupation		
Housewife (no job)	122	64.2
Private employee	25	13.2
Merchant	21	11.2
Government employee	16	8.4
Others	6	3
Male partner occupation (N=151)		
Government employee	41	27.2
Merchant	38	25.2
Daily laborer	23	15.2
Private worker	16	10.6
Farmer	22	14.6
Driver	11	7.3
Time taken to reach health facility from home		
Far (≥ 1 h)	105	55.3

Near (<1 h)	85	44.7
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Table 1: Sociodemographic characteristics of participant north east Ethiopia, 2016 (N=190).

Male partner involvement in option B+ PMTCT care & support

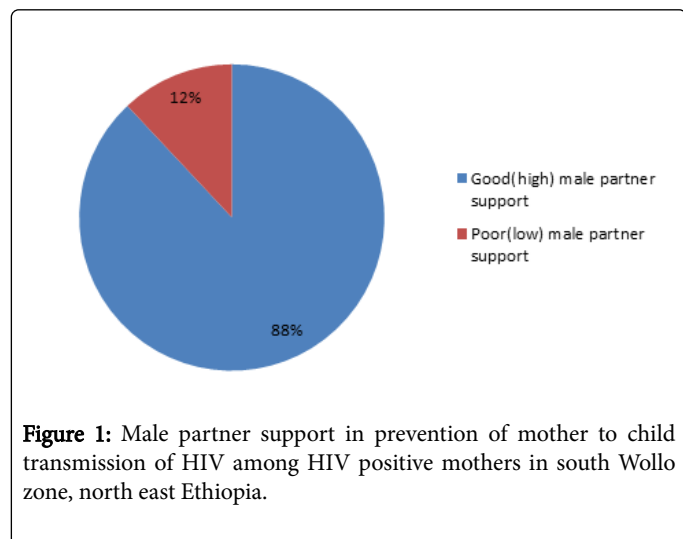
Regarding male partner support; 87.2% of mothers discussed about the advantage of antenatal and post natal care appointment with their male partner (husband) and 93.6% of mothers responded that their partner knew about the frequency of taking PMTCT drugs. Fourty three percent of male partner (husband) did not visits PMTCT clinic with their wife to get the service (Table 2).

Male partner involvement Characteristics		n	Percentage
Shares his wife decisions on household issues	Yes	160	93
	No	12	7
Discusses with his wife on use of condom during sex	Yes	138	80.2
	No	34	19.8
Knows the frequency of taking PMTCT drug	Yes	161	93.6
	No	11	6.4
Visits PMTCT clinic with his wife to bring ARV drugs	Yes	99	57.6
	No	73	42.4
Knows the name of PMTCT drugs	Yes	81	47.1
	No	91	52.9
Knows the doses of PMTCT drugs	Yes	139	80.8
	No	33	19.2
Discusses the advantages of ANC/PNC appointment	Yes	150	87.2
	No	22	12.8
Supports his wife financially to visit ANC/PNC PMTCT	Yes	159	92.4
	No	13	7.6
Attends PMTCT with his wife	Yes	155	90.1
	No	17	9.9
Reminds his wife about ANC/PNC appointment	Yes	152	88.4
	No	20	11.6

Table 2: Male partner support towards option B+ PMTCT in selected government health facilities of south wollo zone, amhara region, north east Ethiopia, 2016 (N=172).

Generally, the composite measure of male partner support in option B+ PMTCT program in this study was 88%. The mean score for male involvement score in PMTCT was 8 out of 10 questions used to measure the outcome variable. The minimum score was 8 while the maximum score was 10. Male partner involvement in PMTCT was categorized as Good & low (poor). Those male partners who support their wife and scored “good male partner support” were 88% (146)

while 12% (20) of male partners didn't help their wife (low male partner support) in PMTCT care & support (Figure 1).



Factors associated with male partner involvement in PMTCT

Bivariate and multivariate logistic regression analysis were done for different variables. Most socio demographic variables were analysed in bivariate logistic regression but most of them were not statistically significant ($P < 0.25$). The result of multiple logistic regression analysis showed that mothers who had only one pregnancy (primigravida mother) were 0.2 (20%) times less likely to get male partner support than those who had two or more pregnancy [AOR 0.19, 95% CI (0.04-0.94)] (Table 3). Variables like attitude of mothers and type of health facility they have visited were statistically significant at bivariate analysis but they failed to have statistically significant association when entered to multiple logistic regression model.

Variables	Male partner support		Crude (95%CI)	OR	Adjusted (95%CI)
	Good n (%)	Poor n (%)			
Health facility (n=166)					
Health center	95 (84.8)	17 (15.2)	0.33 (0.1-1.17)		0 (0.00-0.00)
Hospital	51 (94.4)	3 (5.6)	1		1
Attitude (n=166)					
Poor	12 (70.6)	5 (29.4)	0.27 (0.08-0.86)		0.55 (0.05-6.1)
Good	134 (89.9)	15 (10.1)	1		1
Gravidity (n=84)					
1	7 (63.6)	4 (36.4)	0.21 (0.05-0.9)		0.19 (0.04-0.94)*
>2	65 (89)	8 (11)	1		1

Table 3: Bivariate and multivariate logistic regression analysis for factors associated with male partner support on PMTCT among HIV positive pregnant & breast feeding women in south wollo zone, Amhara region, north east Ethiopia, 2016.

Discussion

In this study the level of male partner involvement in PMTCT among HIV positive pregnant and breastfeeding women was 88%. Different studies were done on male partner involvement in Sub Saharan Africa countries including Ethiopia and the level of male partner involvement in our study was higher than study done in Arba Minch Town and Arba Minch Zuria Woreda, Southern Ethiopia which was 53% [10]. The possible reason for high male partner involvement in our study compared to that of Arbaminch's study could be the difference in study design, study population and sample size we used.

In our study, mothers who were pregnant for once were less likely to be supported by their male partner than those who have history of pregnancy twice or more. Even though no studies support this result, it is evident that primigravida mothers might not get good support from their male partner. This might be explained by low awareness of male partner on the importance of their involvement in PMTCT services and their fear of disclosing their HIV status to their partner if their wives are primigravida. Most studies described that the main reasons of low male partner support were non-disclosure of HIV test results and non-compliance with PMTCT interventions.

According to different studies [11,12], other reasons for low male partner involvement were long waiting times at the antenatal care clinic, the male unfriendliness of PMTCT services, lack of communication among couples, reluctance of men to know their HIV status, misconception by men that their spouse's HIV status was a proxy of theirs, and lack of willingness among women to get their partners involved due to fear of domestic violence, stigmatization or divorce. According to qualitative study done in Blantyre, Malawi [13] to explore the relevance of male involvement in the prevention of mother to child transmission of HIV, male partners involvement in PMTCT were associated with the uptake of interventions along the PMTCT cascade and education strategy.

Many studies showed that different actions must be done to facilitate male involvement in PMTCT services. These were either health system actions or factors directly related to individuals. Inviting men to the hospital for voluntary counselling and HIV testing and offering of PMTCT services to men at service sites other than antenatal care were key health system actions. Prior HIV testing and knowledge on HIV can also facilitate their involvement [12,14,15]. Social desirability and recall biases were possibly limitations of this study.

Conclusion and Recommendations

Male partner involvement in option B+ prevention of mother to child transmission of HIV in this study was sub optimal. Primigravida mothers were found to have poor male partner involvement and support in prevention of mother to child transmission of HIV care and service. Therefore, to enhance engagement of male partner in PMTCT programme the zonal health department of south Wollo zone, health facility administrators and health care providers should design proper strategy and work collaboratively to address those mothers who have been pregnant for the first time. Further study should be carried out with large sample size and mixed study design.

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Authors' Contribution

DT- Participate in all phase of the study process. YG- Participated in developing manuscript. All authors approve the final manuscript for publication.

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