

Men's Role in Prevention of Mother to Child Transmission of HIV: The Case of Fundong Health District, Northwest Region Cameroon

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Abstract

The challenge of incorporating men in HIV prevention from mother to child transmission (PMTCT) activities has remained a major barrier to women's adoption of basic PMTCT activities. Available research that has been done to incorporate men in PMTCT activities used women as the sample. PMTCT was introduced in Cameroon in 2000 and in the Fundong Health District in 2002. This study was aimed at determining factors that influence men's participation and involvement in PMTCT programs. A descriptive cross-sectional correlation design was used with 384 participants ranging in age from 24 to 77 years. Both quantitative and qualitative methods were employed. Structured questionnaires were given to 384 men in six randomly selected health areas. A focus group discussion was held with randomly selected key PMTCT service providers in the district. Stata version 10 was used to do univariable and multivariable analyses on the data. Respondents had a mean age of 42.83 and a standard deviation of 10.41. The level of involvement was above average. There was a positive correlation between the age and level of men's involvement in PMTCT. Knowledge and awareness had an adjusted OR (95%CI) of 5.24(2.78, 9.85) with a P-value of 0.01. Socio-cultural factors had an adjusted OR (95%CI) of 2.98(1.73, 5.11) with a P-value of 0.01. Hospital-based factors had an adjusted OR (95%CI) of 1.53(0.93, 2.53) and a P-value of 0.09. In conclusion, even though socio-cultural factors were seen as deterrents, men's role and participation increased with more knowledge, awareness, and understanding of the PMTCT programme and the manner in which nurses offer PMTCT services.

Keywords: HIV, Male involvement, prevention, transmission.

Introduction

According to [1], men's role in Human immunodeficiency virus (HIV) prevention is very important to changing the course of the epidemic and breaking the chain of transmission. The majority of interventions and services to promote sexual and reproductive health, including care during pregnancy and childbirth, have been exclusively focused on women [2].

According to [3], the importance of involving men in the prevention and treatment of HIV/AIDs programs for women gained increased recognition in literature, especially after the 1994 Cairo and 1995 Beijing

consensus documents which agreed that men are crucial to bringing about change in women's health status. Today, it is believed that when men have access to and participate in Prevention of Mother-to-Child Transmission (PMTCT) programs, their knowledge of HIV eventually increases, they intend to become more supportive, they become more careful, and their readiness to accept HIV counseling and testing increases [4].

Enormous efforts have been put in place in Cameroon that encourages men to accompany their partners for ANC/PMTCT and get counseled and tested for HIV. However, these efforts have seen only 18% of men who have

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participated. Couple HIV counselling and testing can be a breakthrough for PMTCT participation and breaking the chain of transmission [1].

[5] observed that fear of a partner's reaction in the case of a positive test result and subsequent disclosure can greatly deter women from participating and enrolling in PMTCT programmes. [5] found out that there was a significant improvement in uptake and adherence to PMTCT interventions by couples who underwent joint couple counselling and testing even though there has been a major challenge to incorporating men in PMTCT interventions. Men's participation and role in PMTCT has not been in the focus because ANC has always targeted the women folk. Recently men's role and involvement in PMTCT interventions has been in the lamplight for successful implementation of the programme, but unfortunately, only limited research has been carried out in this regard to highlight men's role and subsequent participation in PMTCT interventions. Understanding the barriers, attitudes of men, and factors that influence men from participating in PMTCT interventions can be a major step towards integrating them into this programme [6].

In Cameroon, the Ministry of Health policy advocates for HIV counseling and testing of male partners at ANC settings [7]. In spite of this policy, the proportion of male partners who accompany their partners for ANC and subsequent HIV counseling and testing is low.

In Fundong health district, one of the first health districts to implement the PMTCT program in Cameroon, from May 2002, only 3% of male partners accompanied their partners for ANC/PMTCT and accepted the HIV test. Such low male partner involvement at ANC is thought to contribute to poor PMTCT uptake. Even when free screening campaigns are organized on the first of December every year to commemorate world AIDS Day, men hardly show up with their partners for counseling and screening. They prefer to just sneak and have

the test done and keep the results to themselves [8]. According to [9], for the PMTCT programme to succeed, there is a need to catalyze and mobilize grass root support among men. In spite of the low male involvement, data on the beliefs, needs, priorities, and role of males in the PMTCT program are limited and not fully documented [8]. This paucity of information limits the development of appropriate strategies that may enhance male involvement in PMTCT programs, with the potential to increase the safety of both their female spouses and their unborn babies. This study is very timely as it will fill the knowledge paucity gap and clearly highlight the role of men in PMTCT and improve uptake.

Until now, little success has been recorded about men's role and participation in PMTCT. As cited by [8], in order to improve male involvement in PMTCT in a given community, it is important to understand the perceptions, attitudes, and beliefs towards the involvement of male partners in PMTCT, the cultural norms influencing male involvement in PMTCT, and the culturally acceptable strategies that can be adopted in order to improve male involvement in PMTCT. For this, reasons for low men involvement and participation need to be explored. It is believed that the uptake of PMTCT interventions by women would be improved with the involvement of male partners [1]. This involvement will contribute to the improvement in uptake of PMTCT interventions by women, and this in turn would contribute to the reduction of MTCT rates [2]. This study will therefore provide a basis on which recommendations will be made on how to improve the level of men's involvement in PMTCT programmes.

When literature was reviewed on this topic, it became very evident that most of the existing knowledge presented on men's perceptions has been gained and derived from research conducted among women [10]. There is, therefore a need for research to be conducted in this domain that is male-focused.

The general objective is to establish factors that influence low participation and involvement of men in PMTCT core interventions in Fundong Health District. It also intend to describe the socio-demographic characteristics associated with men's role and involvement in PMTCT in Fundong Health District between January and November 2011. The purpose is to assess knowledge and awareness linked to men's involvement and participation in PMTCT in the District between January and November 2011. It will determine the perceptions about socio-cultural factors linked to male involvement in PMTCT in the District between January and November 2011. The topic aim to assess the influence of hospital-based factors linked to men's involvement and role in PMTCT in the District between January and November 2011.

Materials and Methods

Description of the Site

The study took place in the Fundong Health District, which is one of the 18 Health Districts in the Northwest Region. The district has 11 health areas. It covers a surface area of 1.45 km² which occupies about 4/5th of the land surface area and population of the Boyo Division.

It is bordered by Kumbo-West and Ndop Districts to the East, to the West by Wum, to the North by Nkambe, and to the South by Tubah, Bamenda, and Bafut Health Districts, respectively. The district headquarter, Fundong is about 88km from Bamenda, the Regional headquarter is linked by a tarred road. The district is made up of 4 subdivisions that make up Boyo Division, namely: Fundong, Njinikom, Belo and Bum.

The district is generally hilly, with most of the towns located on hills and valleys like Fundong and Njinikom, except Belo, which is separated by deep valleys. Local efforts at road maintenance are usually not adequate due to the state of the terrain. Most of the Health Areas are relatively inaccessible throughout the year;

one of them (Mbengkas) is totally cut off from the District Headquarters.

The district has typical savannah grassland with eucalyptus grown. Forest of equatorial tropical type is found in parts of Mentang and Mbengkas Health Areas, where most of their rivers reach their middle and old age stages.

There are two distinct climates in Fundong, (Regional Delegation of Mines, Water, and Energy, 2005). The rainy season which begins from late March to October, is characterized by thunderstorms, lightening, hailstones, and torrential rains. The dry season extends from November to early March, characterized by cold chilly winds called 'harmatan'. The district has a population of 123927 inhabitants (Population Census, 2005). The majority of these people are Kom indigenes and a minority, the Bororos. The Kom man practices matrilineal succession and speaks the Kom dialect. The population is mainly rural, with agriculture and cattle rearing as their main economic activity. The farmers produce cash crops like coffee and beans, which constitute about 90% of their economy, and little timber. Crops like maize, Irish potatoes, cocoyam, and many other crops are grown for local consumption. The geographical factors also favor cattle rearing which is practiced by the local inhabitants and the Bororos (Fundong Council, 2001).

Description of the Experiment Done

A descriptive cross-sectional design was used in the study. A qualitative approach employed the use of a focus group discussion guide while a quantitative approach made use of a questionnaire adapted from [3].

The study population included all men who are either husbands or sexual partners of women who access PMTCT services and PMTCT service providers in Fundong Health District during the period February to early September. For health facility personnel, the inclusion criteria were staff trained in PMTCT and who were actively providing PMTCT

services in Fundong Health District. For the participants, it included men whose partners had accessed PMTCT services and were married, showed their willingness to participate in the study and were residents in Boyo Division. Any health facility staff who was not PMTCT service provider was excluded from the study. For the study participants, any man who was not married and whose spouse did not access PMTCT was excluded from the study.

Description of Statistical Methods used

Sampling Technique

Selection of Participants for the Focus Group Discussion

Names of the 72 PMTCT service providers in Fundong Health District were written on small pieces of paper and wrapped. These small pieces of paper were then picked up, and the name of the PMTCT service provider and health facility read. They were then invited for a Focus group discussion at the conference hall of the District Health Service.

Selection of Men for the Questionnaire Survey

Simple random sampling was used to select 6 health areas out of the 11 that makeup Fundong Health District. These health areas were Belo, Fuanantui, Mejang, Mentang, Fundong and Konene. The formula above was used to obtain 384 men for the survey.

In each of the health areas, four communities were selected by writing all the names of the communities on paper and selecting randomly.

In each of the 4 communities in the health area, 18 households were selected using the following method. The headquarters compound was identified in each community, and facing it, the first house on the right was selected, and moving in that direction, every alternate household was selected until the 18 households were covered. When the 18 households were not covered, the data collector turned right until the 18 households were covered for that community.

Results

Introduction

This chapter presents results obtained from the study with respect to the objectives, research questions, and hypotheses. Findings from the focus group discussion are presented before those obtained from the questionnaire.

Findings from Focus Group Discussion

Demographic Characteristics from Focus Group

The 11 Respondents who took part in the FGD ranged between 29 to 56 years, with a mean age of 46 ± 8.3 . Out of the 11 respondents who took part in study 7(70%) were males, and 4(30%) were females. There were 10 nurses and 1 medical laboratory technician. This is shown on the table below. This is shown on the table below.

Table 3. Age, gender, and occupation distribution of Respondents in Focus Group Discussion

Variable	Frequency
Age Category	
29-38	4(36.4%)
39-48	4(36.4%)
49-58	3(27.2%)
Gender	
Male	7(63.6%)
Female	4(36.4%)
Occupation	

Nurse	10(90.9%)
Medical Laboratory Technician	1(9.1%)
Total	11(100%)

Variables on Focus Group Discussion

Knowledge about PMTCT

On this variable, a majority of the people said, “PMTCT meant prevention of mother to child transmission of HIV/AIDs”.

Core activities carried out at PMTCT

A handful of the respondents stated that “the core PMTCT activities carried out were voluntary counseling and testing, provision of ARVs to persons who are eligible, and breastfeeding options for children born to women with HIV”.

Knowledge about the various Periods during which the Virus can be Transmitted from Mother to the Child

A majority of the respondents said, “HIV could be transmitted during pregnancy, labour, and delivery and during breast feeding”.

Accessibility, Acceptability, Affordability, and Availability of PMTCT Services in the Various Health Facilities in the Community

A consensus of opinion was that “PMTCT services are accessible, acceptable, affordable and available, but only a few men come uninvited while others come if invited by the PMTCT service provider”.

Knowledge whether Men Accompany their Partners for ANC/PMTCT

A handful of the respondents said, “Most of the men come to the hospital only when their wives have delivered to know the sex of the baby with their friends, thereafter; they end up in bars drinking and celebrating for the birth of a new baby and if it is a female child, they will rejoice and chant that more bride price money has come”, said some of the PMTCT Providers.

“Men even say that if I go for clinics, where will I have money to celebrate born-house”, said the PMTCT service provider for Kikfuini.

“Others do not come because once their wives are pregnant, they send these women to the village to meet their mothers-in-law and deliver there while they only sit behind and send money and show up only when the woman has delivered”, remarked the man of Konene.

“Men do come for ANC/PMTCT only when they know that they will be given some cubes of Savon”, said the PMTCT service provider for Mbingo.

Reasons why men do not Accompany their Partners for ANC/PMTCT

A majority of the of opinion was that, “Men do report that health campaigns always target only the women and children and vaccines are given to them free of charge and neglecting us the men, the attitude of nurses was a serious problem for the men said because most of the time we are rude, Men who actually know about PMTCT and do not come often say that, if my wife has been tested and she is fine, it, therefore, means that I am in health, why then should I waste my time and go there and some of these men are business men and will hardly come with their wives for clinics while others are so linked to the palace and tradition of the land”.

The lady of Fundong Urban remarked that “Some service providers do not respect the code of nursing ethics as the results of a couple have been revealed to other community members”. “A man who was invited reported to me that his status was revealed by a health worker and everybody in the community now knows my wife and I are infected, and we had to move out of that community because we could not bare it”.

“Some women themselves do not like that their husbands should come along because

during ANC, they use this as an opportunity to extort money from tight fist husbands and when they come, they buy roast fish and other things and eat”, remarked the lady of Belo. “Some men do not come for clinics because of the fear of being seen by their counterparts as inferior to women”, said the man of Konene. The waiting time is sometimes often long, especially when there are so many patients to be attended to and PMTCT service providers have to consult other patients and do counseling at the same time”, Others said remarked.

Ways of Improving Male Involvement in PMTCT

A handful of the respondents said to improve on male involvement, and the following has to be done: Sensitization of the men should be intensified in male gatherings and other social gatherings by the PMTCT service providers.

Letters of invitation should be designed by the programme and given to all service providers so that they can invite men to come through their wives because when a man has been invited, he takes it very serious.

In the community, men who know about PMTCT should be contacted and let them serve as social mobilisers by identifying husbands whose wives are pregnant and encouraging them to accompany their wives for clinic. This approach will work best because men will always understand the language of another better than his own wife at home.

Women who come with the partners for PMTCT will be given priority and attended to before women who do not come with their husbands. Incentives like cubes of Savon should be given for men who come with their pregnant partners.

Findings from Questionnaire

Level of Men's Involvement in PMTCT

Knew that Partner was Counseled and Tested during Last Pregnancy

Findings from this study show that out of the 384 respondents who took part in the study,

81.3% knew that their partners were tested during their last pregnancy, while 18.7% responded no.

Discussion with Partner about HIV Counseling and Testing during Last Pregnancy

It was observed that 68.2% of the respondents had discussed with their partner about HIV counseling and testing during the last pregnancy, while 31.2% did not discuss.

Willingness to Discuss about HIV Testing and Counseling if Wife gets Pregnant

Results from this study revealed that 77.6% of the men were willing to discuss about HIV counseling and testing with their wife while 22.4% of the respondents were not willing.

Accompanied Partner for PMTCT Clinic

It was observed that 57.3% of the respondents accepted that they had accompanied their partners for the PMTCT clinic while 42.7% said they had never.

Willingness to Accompany Partner to the Clinic if she gets Pregnant

Of the total respondents, 69.0% expressed their willingness to accompany their partners for the clinic if pregnant, while 31.0% of the respondents did not express any willingness to accompany their partners for ANC if pregnant.

Counseled and Tested for HIV with Partner before

Of the total respondents, 57.0% indicated that they had once been counseled and tested for HIV with their partners, while 43% of the respondents said they have never been counseled and tested with their wife.

Willingness to go with Wife for HIV Testing and Counseling at Next Pregnancy

68.2% of the respondents expressed their willingness to go for HIV counseling and testing with a partner while 31.8% of the

respondents said they will not go for VCT with their partners.

Readiness to Accept that Wife takes ARVs to Protect the Unborn Baby

79.4% of the respondents expressed their readiness to accept that wife should take ARVs to protect the unborn baby if HIV positive while 20.6% did not accept.

Readiness to Accept that the Wife does not Breast Feed to Protect Baby

78.6% of the respondents acknowledged their wish to accept that their partners should not breastfeed to protect the unborn baby while 21.4% did not.

Willingness to buy Formula Feeding for the Baby if Wife is Positive

It was observed that 78.4% of the respondents accepted to buy formula feeding for the baby if wife was found to be positive, while 21.6 did not express this readiness.

Demographic Profile of Respondents from Questionnaire

Age

The respondents who took part in this study ranged between the ages of 24 to 77 years, with a mean age of 42.83 and a standard deviation of 10.41. The age of the respondents was categorized as shown on the table below.

Table 4. Age of Respondents from Questionnaire

Age Category	Frequency
<34	110(28.65)
35-54	208(54.17)
>55	66(17.19)
Total	384(100%)

The table above depicts that 54.17% (208) of the respondents were within the middle age category, 28.65% (110) were younger men, and 17.19 % (66) were older men.

From the representations below, Christians constituted a majority of 249 (64.84%) of the population, while the number of non-Christians were 135 (35.16%).

Religion

Table 5. Religion of Respondents

Religion	Frequency
Christians	249(64.8%)
Non-Christians	135(35.2%)
Total	384(100.0%)

Number of Years lived with Partner

Figure 3 below it showed that 142(37.0%) of the respondents had lived with their partners for

less than 5 years, 124(32.3%) between 5 to 10years, and 118(30.7%) for more than 10 years.

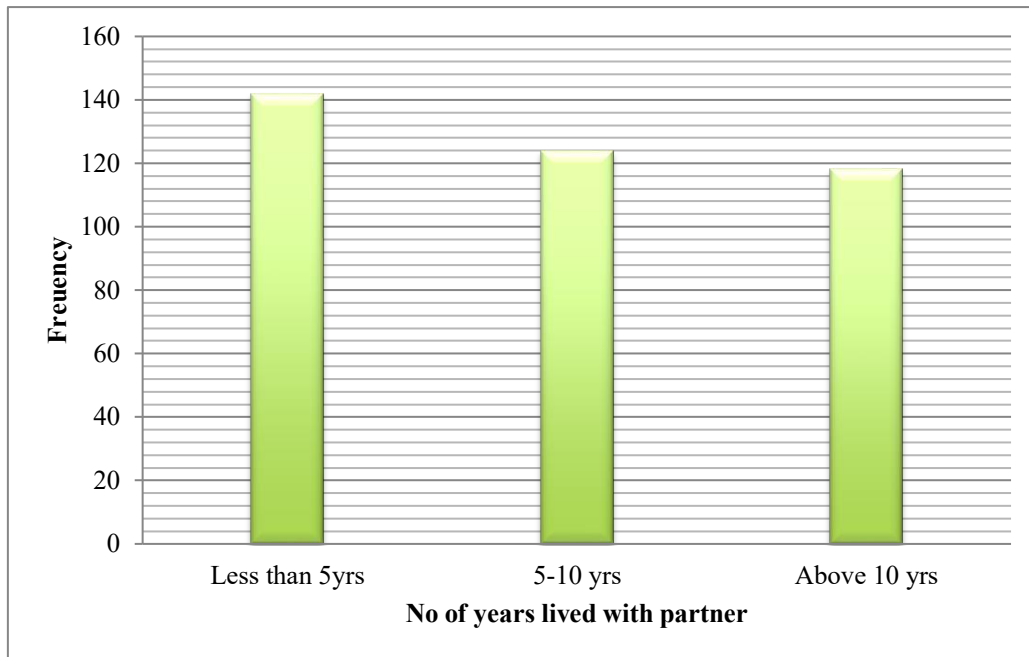


Figure 3. Number of Years Lived with Partner

Level of Education

The level of education of respondents was categorized into two that is the first school and

above the first school. 201(52.3%) of the respondents were below the first school, while 183(47.7%) were above the first school.

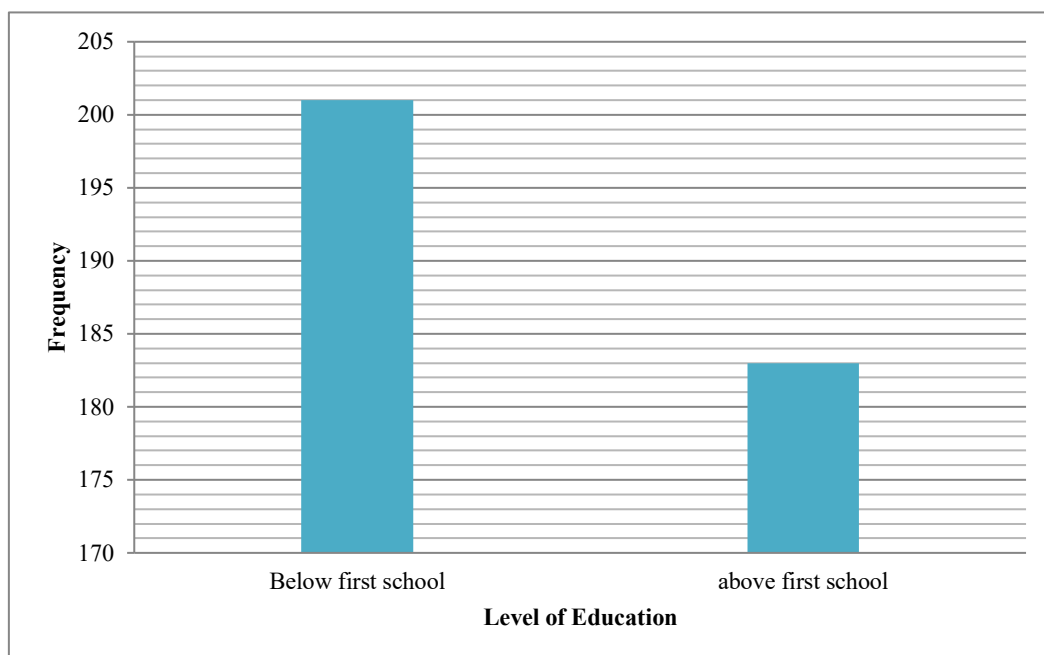


Figure 4. Level of Education of Respondents

Marital Status

Table 6. Marital Status of Respondents

Marital Status	Frequency
Married	316(82.3%)
Separated	43(11.2%)
Divorced	21(5.5%)
Widower	4(1.0%)
Total	384(100%)

Number of children

The number of children of the respondents range from 0-17, with a mean of 4.2 ± 2.8 .

Occupation

As shown on the table below, farmers were 325(84.6%) and non-farmers were 59(16.4%).

Table 7. Occupation of Respondents

Occupation	Frequency
Farmers	325(84.6%)
Non-Farmers	59(16.4%)
Total	384(100.0%)

Description of Demographic Variables Linked to Men's Involvement and Role in PMTCT

As represented in the Table 5 below, age category 35-54 had an unadjusted OR of 0.87(0.6, 1.4; $p < 0.01$) and an adjusted OR 1.23 (0.70, 2.15, $P > 0.47$). The age category 55 and above had an unadjusted OR of 5.20(2.2, 12.4, $P < 0.01$) and an unadjusted OR of 5.67(2.10, 15.3, $P < 0.00$).

Those who had a level of education above FSLC were seen to have an unadjusted OR of 0.92(0.6, 1.4, $P > 0.72$) and an adjusted OR of 0.98(0.60, 1.59, $P > 0.94$).

A crude OR of 0.80(0.49, 1.3, $P > 0.1$) and an adjusted of 0.61(0.35, 1.08, $P > 0.09$) was seen in men who had lived with their partners for 5 to 10 years. It was observed that men who had lived with their partners for more than 10yrs had an unadjusted OR of 1.4 (.85, 2.4, $P > 0.1$) and an adjusted OR of 0.67(0.35, 1.32, $P > 0.25$). Christians were seen to have a crude OR of 0.97(0.62, 1.5, $P > 0.91$) and an adjusted of 1.02 (0.62, 1.7, $P > 0.92$).

Occupation was seen to have an unadjusted odds ratio of 1.55 (.84, 2.9, $P > 0.16$) and an adjusted odd ratio of 1.96 (1.0, 4.0, $P > 0.06$).

Table 7. Demographic Characteristics of Respondents with Crude and Adjusted OR

Variable	Level of involvement		Univariable Analysis		Multivariable Analysis	
	No involvement	Involvement	Crude OR (95% CI)	P-value	OR (95% CI)	P-Value
Age (Years)						
<34	42(38.2%)	68(61.8%)	1	0.01	1	-
35-54	86(41.4%)	122(58.7%)	0 .87(0.6, 1.4)		1.23(0.70, 2.15)	0.47
>55	7(10.6%)	59(89.4%)	5.20(2.2, 12.4)		5.67(2.10, 15.3)	0.00
Level of Education						
Below FSLC	69 (34.3)	132 (65.7)	1	0.72	1	0.94
Above FSLC	66(36.1)	117 (63.9)	0.92(0.6,1.4)		0.98(0.60, 1.59)	

Number of Years lived with partner						
<5years	51 (35.9)	91 (64.1)	1	0.1	1	-
5-10years	51 (41.1)	73 (58.9)	0.80(0.49,1.3)		0.61(0.35,1.08)	0.09
>10years	33 (28.0)	85 (72.0)	1.4.(.85,2.4)		0.67(0.35,1.32)	0.25
Religion						
Non-Christians	47 (34.8)	88 (65.2)	1	0.91	1	0.92
Christians	88 (35.3)	161 (64.7)	0 .97 (0.62,1.5)		1.02 (0.62, 1.7)	
Occupation						
Farmers	119(36.6)	206(63.4)	1	0.16	1	0.06
Non-Farmers	16(27.1)	43(72.9)	1.55 (.84, 2.9)		1.96 (1.0, 4.0)	

Knowledge and Awareness about Prevention of Mother to Child Transmission

Awareness of PMTCT

With respect to knowledge and awareness, out of the 384 respondents who took part in the study, 209 (54.40%) were aware and have heard of the programme PMTCT, while 175(45.60%) were not aware of the programme and have never heard about it.

Awareness that PMTCT Services are offered in Fundong health District

In this study, 180(46.90%) of the respondents were aware and knew that PMTCT services are offered in hospitals and health centres in Fundong health District, while 204 (53.1%) were not aware that these services exist.

Awareness that Women are Counseled and Tested for HIV at ANC/PMTCT Clinics

The study revealed that 189(46.9%) of the men were aware that women undergo counseling and testing for HIV at ANC/PMTCT Clinics in Fundong Health District while 195(51.8%) were not aware.

Awareness that Partner was tested for HIV at Last Pregnancy

Out of the 384 respondents who took part in this study, 183(47.7%) knew that partner was tested for HIV when she was last pregnant while 201(52.3%) did not know.

Knowledge of HIV Transmission during Pregnancy

The study revealed that 153 (39.8%) of the respondents knew that HIV could be transmitted during pregnancy, while 60.2% did not know that this could happen during pregnancy.

Knowledge of HIV Transmission during Delivery

The study showed that 179(46.6%) of the respondents knew that HIV could be transmitted in the course of delivery, while 205 (54.4%) were not aware that this could happen during delivery.

Knowledge of HIV transmission during Breast Feeding

Of the 384 respondents who took part in study 162 (42.2%) knew HIV could be transmitted in the course of breastfeeding whereas 222(57.8) did not.

Knowledge of Reduction of HIV Transmission with the Use of ARVs

The findings showed that 166(43.2%) of the respondents were very certain that the transmission of HIV from mother to child could be reduced with the use of ARVs while 218(56.8%) thought this could possibly not be the case.

Knowledge of Reduction of HIV Transmission through Caesarian-Section

Out of the 384 respondents who took part in the study, 156 (40.6%) knew that a surgical operation (Caesarian Section) for an HIV positive pregnant woman can reduce mother to child transmission of HIV, while 228(59.4%) did not know.

Knowledge of Reduction of HIV Transmission by Avoiding Breastfeeding

In this study, out of the 384 men who participated, 175(45.6%) knew that HIV could

be transmitted during breastfeeding from an infected mother to the child, while 55.4% did not.

Description of the Association between Knowledge and Awareness Linked to Men's Involvement in PMTCT

Knowledge and Awareness about PMTCT

The variable knowledge and awareness had a P-value of 0.01, which is less than 0.05, as shown on the table below.

Table 8. Association between Knowledge and Awareness, Socio-cultural Factors and Hospital-based Factors and Level of Involvement

Variable	Level of involvement		Univariable analysis		Multivariable analysis	
	No involvement	Involvement	Crude OR (95% CI)	P-value	OR (95%CI)	P-Value
Knowledge and awareness						
No influence	114(40.7%)	166(59.3%)	1	0.01	1	0.01
Influence	21(15.6%)	83(79.8%)	2.7(1.6, 4.6)		5.24(2.78,9.85)	
Socio-cultural factors						
No influence	96(43.6%)	124(56.4%)	1	0.01	1	0.01
Influence	39 (23.8%)	125 (76.2%)	2.48(1.59,3.9)		2.98(1.73, 5.11)	
Hospital based factors						
No influence	71(41.0%)	102 (59.0%)	1	0.03	1	0.09
Influence	64(30.3%)	147 (69.7%)	1.6(1.0, 2.4)		1.53(0.93, 2.53)	

Socio- Related Problems to Men's involvement Cultural in PMTCT

The results showed that 294(76.5%) of respondents were of the opinion that their partners could not be tested for HIV without their permission. As to whether men should accompany their pregnant wives for ANC/PMTCT clinics, 68.7% of men were in agreement. 44% of the respondents agreed that men who accompany their spouse for PMTCT clinics were considered weak and bewitched. 51.0% of the men agreed that it was taboo for a man to discuss HIV testing with a pregnant woman.

As to whether men and women should undergo HIV testing at the same time at the

PMTCT clinic, 51.1% of the men were in agreement. 41.4% were undecided whether couples could use a condom to reduce mother-to-child transmission of HIV.

47.1% of the respondents thought that ANC/PMTCT clinics are for women and their children only. 46.6% of the respondents agreed that a positive HIV test for a woman during pregnancy shows that she has been unfaithful to her husband.54.4% of the respondents were of the opinion that if a pregnant woman is found to be HIV positive, she should be beaten and divorced. 37.0% of the respondents agreed that PMTCT information should first be given to men before women. Table 9 gives a summary for socio-cultural factors.

Table 9. Socio-Cultural Factors

Statements	Agreed (%)	Disagreed (%)	Undecided (%)
A pregnant woman should be tested for HIV with the permission of her partner	294(76.5)	24(6.2)	66(17.2)
Men should accompany their pregnant wives for ANC/PMTCT clinics	264(68.7)	63(16.4)	57(14.8)
Men who accompany their spouse for PMTCT clinics are weak and bewitched	169(44.0)	131(34.1)	84(21.9)
It is a taboo for a man to discuss about HIV testing with a pregnant woman	196(51.0)	102(26.6)	86(22.4)
Men and women should undergo HIV testing at the same time at the PMTCT clinic	196(51.1)	87(22.7)	101(26.3)
Couples can use condom to reduce mother to child transmission of HIV	146(38.1)	159(41.4)	79(20.6)
ANC/PMTCT clinics are for women and their children only	181(47.1)	135(35.2)	68(17.7)
A positive HIV test for a woman during pregnancy shows that she has been unfaithful to her husband	179(46.6)	113(29.5)	92 (24.0)
If a pregnant woman is found to be HIV +ve she should be beaten and divorced	209(54.4)	73(19.0)	102(26.6)
PMTCT information should first be given to men before women	142(37.0)	130(33.9)	112(29.2)
Average	140.8(36.7)	158.4(41.2)	84.8(22.1)

Description of Association between Socio-Cultural Factors and Men's Role in PMTCT

This variable had a P-value of 0.01, which was less than the level of significance set at 0.05. When all other variables were adjusted for, we had a P-value of 0.01, which was still less than the level of significance. This is shown on table 6 above.

Hospital based Related Problems

The findings obtained showed that 51% of the men agreed that men should have a separate unit in an MCH/PMTCT clinic where they can be attended to. The findings also showed that 44.9% of the respondents agreed that Men should be attended to by Men only at PMTCT clinics. The findings revealed that 45.1% of the respondents thought that Health workers would like to see men at PMTCT clinics. 41.7% of the

respondents were of the opinion that PMTCT clinics are not meant for women and their children only.

Most of the respondents 48.2%, agreed that during evenings and weekends, MCH/PMTCT clinics should be opened so that men can equally have access. A majority of the respondents, 47.6% were of the opinion that staff at PMTCT clinic do not keep any secret about HIV results for men and women. Most of the respondents 49.0%, were of the opinion that PMTCT programmes have done very little to involve men. 52.28% of the respondents thought that men should attend PMTCT clinics if invited by a health worker to come.

Most of the respondents, 41.1% agreed that PMTCT programmes are conducted very far from home and transport is expensive. Most of the respondents, 55.7%, did not think that ARVs was an incentive for VCT.

Table 10. Hospital based Related Problems

Statement	Agreed (%)	Undecided (%)	Disagreed (%)
Men should have a separate unit in an MCH/PMTCT clinic	174(51.4)	75(19.5)	135(35.2)
Men should be attended to by Men only at PMTCT clinics	152(44.9)	77(20.1)	155(35)
Health workers do not like to see men at PMTCT clinics	95(28.1)	116(30.2)	173(45.1)
MCH/PMTCT clinics are for women and their children only	133(39.3)	91(23.7)	160(41.7)
During evenings and weekends, MCH/PMTCT clinics should also be opened so that men can access	163(48.2)	90(23.4)	131(34.1)
At PMTCT clinics, staff do not keep any secret about HIV results for men and women	161(47.6)	75(19.5)	148(38.5)
PMTCT programmes have done very little to involve men	166(49.0)	100(26.04)	118(30.7)
Men should attend PMTCT clinics if invited by a worker to come	177(52.3)	72(18.8)	135(35.2)
PMTCT programmes are conducted very far from home, and transport is expensive	113(33.4)	113(29.4)	158(41.1)
You can do HIV test with your wife only when you are promised to be given ARVs after	95(28.1)	75 (19.5)	214(55.7)
Average	142.9(37.2)	88.4(23.0)	152.7(39.8)

Description of the Association between Hospital based Factors and the Attitude of PMTCT Service Providers linked to Men's role in PMTCT

Hospital-based factors

This variable had a P-value of 0.03 after it was cross-tabulated with the level of men's involvement.

This P-value was less than the level of significance set at 0.05. When a logistic regression model was run, we had a P-value of 0.09 which was greater than the level of significance. This is represented on table 6 above.

Discussion

This study is very important because we interviewed men and not their partners, as has been done in other studies. The information obtained gives a better opinion of men's views.

The use of both qualitative and quantitative methods during data collection was very important because qualitative findings assisted in explaining the findings from the quantitative part of the study.

This chapter discusses the findings obtained from the study with respect to the hypothesis, objectives, and research questions. Based on the findings, conclusions and recommendations have been made. In this study carried out to establish the factors that influence low men involving in PMTCT core interventions in Fundong Health District, the findings revealed that male participation was above average (59.3%).

These findings are higher than those obtained by [5] carried out in Eastern Uganda to establish determinants of male involvement in the PMTCT programme which found out that 25% of men were involved in PMTCT. This difference can be explained by the fact;

Fundong health District is made up of so many confessional hospitals that are so receptive to men and the fact that all health centers and hospitals are offering PMTCT. Another difference might have arisen from the method used in our study.

Demographic Variables

The findings on demographic variables revealed that men tend to participate more in PMTCT activities with increasing age. This can be explained by the fact that most men tend to get marry at advanced ages and are therefore interested in the welfare of their children. The findings from this study are consistent with those of [1] in their study on the barriers to men's participation in ANC and PMTCT in Cameroon, who found out that men tend to get married at an advanced age. Findings on level of education revealed that men who had less than FSLC were more likely to be involved in PMTCT than men who had higher levels of education.

This can be explained by the fact that ANC/PMTCT was organized mostly on "traditional days" of the week, and men with the level of education less than FSLC who were more engage in farming will not go to the farm on such days, tend to accompany their partners for ANC/PMTCT unlike those who had higher levels of education who were busy with business and office work. The findings revealed that men who were non-farmers were more likely to be involved in PMTCT than farmers. But looking at the P-value of 0.06, it can be interpreted that there was no statistically significant difference.

As concerns the number of years lived with their wife, the findings revealed that men who had lived with their partners for long were less likely to be involved in PMTCT. This can be explained by the fact that, with an increasing number of children, the men see PMTCT as a routine activity and tend not to participate. In this light sensitization has to be reinforced.

Influence of Knowledge and Awareness about PMTCT

This study suggested that men tend to participate more and get involved in PMTCT activities when they have knowledge, awareness, and understanding about PMTCT activities. This can be explained by the fact a lot of sensitization has been done in Fundong health District regarding joint couple counseling and testing for HIV. Merely educating men about the benefits of VCT is not enough to make them take a test. Issues of access, availability, and quality of information and services must be considered and addressed as necessary.

This is very important because, with increasing knowledge and awareness about the programme, men will tend to support their partners more. These findings are similar to those of [5] in the quantitative study in Uganda which found out that men who had heard about the programme PMTCT were more likely to participate in PMTCT activities.

The findings are consistent with those of [10] in their study on Male Involvement in PMTCT Services in the Mbeya Region, Tanzania, who found out that lack of information and knowledge will deter men from participating in PMTCT. In another study by [11] in Uganda, it revealed that men had low knowledge of the value of VCT, and this had a negative implication for the possibility of their wives going for testing and even of staying HIV negative. Our findings from this study confirm the hypothesis that insufficient knowledge and awareness about PMTCT services among men is a barrier to their involvement in these services.

Influence of Socio-cultural Factors on Men's Involvement in PMTCT

This study portrayed that men who were socio-culturally influenced were less likely to participate in PMTCT activities. This can be explained by the fact that most of the participants who took part in the study where

indigens from kom who were so traditionally inclined to the palace. In this regard, sensitization has to be intensive to break these cultural barriers focusing directly on the men. These findings were similar to those of [5] in their quantitative study in Uganda, who found out that cultural factors hindered men from participating in PMTCT. Other studies like that of [12] in Reproductive health and AIDS prevention in sub-Saharan Africa: the case for increased male participation revealed that men have always considered reproductive health as a woman's affair and will not want to accompany their partners for ANC. Findings from Tanzania, by [13] on Willingness and Participation Toward Prevention of Mother to Child Transmission Among Males of Reproductive Age revealed that culture did not support men from participating in PMTCT.

On the other hand, these findings are not similar to those of Tshibumbu (2006) in his study on Factors influencing men's involvement in the prevention of mother-to-child transmission (PMTCT) of HIV programmes in Mambwe district, Zambia who found a negative association between socio-cultural factors and the level of men's involvement in PMTCT.

Our findings, therefore, confirm the hypothesis that social and cultural beliefs influence men negatively from participating in PMTCT activities.

Influence of Hospital based factors

Hospital-based factors and the manner in which PMTCT service providers offered PMTCT intervention were not found to discourage most men from participating in PMTCT activities. This can be explained by the fact that Fundong health District has so many faith-based health facilities, like Mbingo Baptist Hospital and Njinikom Catholic hospital, which are so receptive to patients. Most of the PMTCT sites in the district equally serve invitation letters for women to invite their husbands to come for ANC/PMTCT. This

attitude attracts a lot of patients to these facilities where PMTCT services are equally carried out. The findings from this study are similar to those of [3] in his study on Factors influencing men's involvement in the prevention of mother-to-child transmission (PMTCT) of HIV programmes in Mambwe district, Zambia, who found a weak association between hospital-based factors and the level of men's involvement in PMTCT.

The findings from this study do not confirm the hypothesis that the manner in which PMTCT services are offered discourage men from participating in PMTCT.

Findings from our qualitative study (focus group discussion) revealed that most men do not get involved in PMTCT activities because of socio-cultural beliefs, the attitude of nurses, the misconception that a negative test for their partner equally meant a negative test for them, the attitude of their partners and long waiting time in the hospital.

Conclusion

While socio-cultural factors were seen as deterrents, men's role and participation will increase with more knowledge, awareness, and understanding of the PMTCT programme and the manner in which nurses offer PMTCT services.

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