

Socio-cultural Factors Influencing Utilization of Prevention of Mother to Child Transmission of HIV Among Women Attending Antenatal Care Clinics in Rachuonyo North Sub-County-Homa-Bay County, Kenya

Otieno A.J.W¹ Karanja S.M^{1*} Kagira John²

1.School of Public Health Jomo Kenyatta University of Agriculture and Technology, PO Box 62000-00200 Nairobi, Kenya

2.Department of Animal Sciences – Jomo Kenyatta University of Agriculture and Technology, PO Box 62000-00200 Nairobi, Kenya

Abstract

Background: Utilization of services is an important determinant for prevention of transmission of HIV from mother to child. This strategy is reinforced by good practices and attitudes. The aim of the current study was to determine the socio-cultural factors influencing compliance with Prevention of Mother to Child Transmission (PMTCT) of HIV options and therapies initiated in women attending antenatal clinics in North Rachuonyo Sub-county in Kenya.

Methods: A cross sectional study was conducted among 384 HIV infected pregnant women attending 20 antenatal clinics in North Rachuonyo Sub-County in 2016. A simple random sampling technique was used to select the women and the health facilities. Data were collected through structured pre-tested questionnaires and was analyzed using binary and multiple logistic regression to determine the statistically significant association between the dependable variables and the independent variables.

Results: The mean age of the women interviewed was 25.7 years with 44 % of respondents being between 15-24 years and 39% being between 25-34 years. Health care services were mostly sought in government based dispensaries (50%) and health centers (25%), and faith based health facilities (20%). Majority (60%) of the respondents did not seek permission from their partners to undertake HIV testing while only 50% had disclosed the HIV status to their partners. Lack of disclosures of the status was attributed to single parenthood/non-committal relationship (36%) and fear of being abandoned (25%). The main barriers impeding women participation on HIV/AIDS awareness programs included cultural practices such as wife inheritance (25%), lack support from the men partners in attending PMTCT services (24%), fear of losing property inheritance once HIV status is known by the family (22%) and stigma from the community and close relatives. Most respondents indicated the main feeding options for highly HIV exposed infants were exclusive breast feeding for infants less than 6 months (49%) and more than 6 months (62%). The bivariate and multivariate analyses revealed that age, marital status and occupation of the respondents did not have significant association with utilization of PMTCT services; however, women with secondary education and above (AOR = 1.05) 95% CI (1.20, 2.55) and AOR = 1.4, 95% CI (1.09, 1.92) were more likely to attend ANC for PMTCT services.

Conclusion: The study showed that PMTCT services in North Rachuonyo have the potential of improvement in uptake as only 60% of women understood the importance of the service. The dispensaries and health facilities should be strengthened in offering PMTCT services as they were most preferred by the women. The sociocultural barriers noted in increasing awareness of HIV/ AIDS should be addressed by various players such as religious leaders, political leaders and other community resource persons. Women's empowerment through education, improving antenatal care follow up and male/community involvement can be used to significantly increase utilization, attitude and uptake of the PMTCT services.

Keywords: Mother to Child Transmission of HIV/AIDS, Utilization, and Practice

Introduction:

Mother- to- child transmission (MTCT) of Human immunodeficiency virus (HIV) infection is the transmission of the virus from a HIV – infected mother to her child during pregnancy, labor, delivery or breast feeding [1,2]. More than 90% of children with HIV are infected through MTCT of which nearly 90% of these infections occur in sub Saharan Africa. Approximately half of these children die within two years if no appropriate treatment is taken [3]. The risk of a HIV infected mother passing the virus to her infant is 5-8% during pregnancy, 10-20% during labor and delivery while 10-15% can be infected during breast feeding. Without any prevention of mother to child transmission {PMTCT} intervention 20-40% of infant would be infected with the virus [3, 4].

Prevention of mother to child transmission of HIV provides an opportunity from preventing new paediatric HIV infections and the risk can be reduced to less than 2% [4]. Effective PMTCT services require women and their infants to receive a cascade of interventions including uptake of antenatal care (ANC) services, HIV testing during pregnancy, use of anti-retroviral therapy (ART) by pregnant women living with HIV, safe child birth

practices, appropriate infant feeding, uptake of infant HIV testing and other post-natal health services [5]. These strategies promote comprehensive prevention of new HIV infections among women of child bearing age, prevent unintended pregnancies among women living with HIV, prevent HIV transmission from a woman living with HIV to her baby and provides appropriate treatment, care and support to mother living with HIV, their children and families [5, 6]. The male parent's involvement in PMTCT has been found to reduce the vertical transmission of HIV from pregnant women to their infants [6].

Breast feeding has been shown to be the best way to feed the infants as breast milk provides all nutrients needed during the first few months of life and also contains agents that help to protect against childhood diseases. For HIV infected mothers, breast milk contains HIV but it is worth noting that HIV neutralizing antibodies and Tenascin – C (TNC) protein in breast milk are known to inhibit HIV (NAS, 2013). This explains why mother to child transmission of HIV does not occur more often as predicted [7]. Where antiretroviral drugs are provided to pregnant and breast feeding women living with HIV, exclusive breast feeding is recommended for the first 6 months of life [7, 8, 9].

New infections and high viral loads during pregnancy pose the greatest risk of transmission of HIV from mother to the unborn baby, thus primary prevention, ARVs prophylaxis as well as treatment is highly recommended. According to KDHS 2 (2014), HIV prevalence rate in Kenya among women of reproductive age is 6.9% while that for North Rachuonyo sub-county it is 27.2%. In this sub-county, there are 30 health facilities providing ANC services reaching 88% through HIV testing, 69% receiving maternal ARV prophylaxis and 58% infants receiving infant's prophylaxis (DHS2, 2014). Despite these efforts, 12.5% of infants still acquire HIV through exposure during pregnancy, delivery and breast feeding (KDHS2, 2014). Under-utilization of PMTCT services is thought to play a critical role in high prevalence of HIV in the sub-county. Better knowledge of, good attitude towards and practicing PMTCT is highly effective intervention and has an enormous potential to improve both maternal and child health. The current study investigated existing barriers towards elimination of mother to child transmission of HIV in North Rachuonyo sub-County. Further, the study investigated the knowledge, attitude, practice and factors affecting PMTCT services among HIV infected pregnant women and mothers of highly exposed infants.

Materials and methods

Study area

The study was conducted in health facilities providing ANC services in Rachuonyo North Sub-County, Homa Bay County. The Sub-County has an area of approximately 438 square kilometers, with two divisions (West and East Karachuonyo) each of which borders Lake Victoria. Rachuonyo North Sub-County has a human population of 185,135 people, with women of reproductive estimated to be 23,614 (KDHS, 2014). The Sub-County is one of the highly burdened regions with HIV prevalence (22.1% adult HIV prevalence and 18.7% women of reproductive age HIV prevalence) and approximately 38,000 people living with HIV.

The economy of North Rachuonyo is dominated by fishing, small scale farming and small scale business.

Study design and population

Facility based descriptive cross-sectional study was conducted in 20 randomly selected ANC clinics in North Rachuonyo, Homa Bay County, Kenya. The study participants were drawn from HIV infected pregnant women and mothers of highly exposed infants. PMTCT providers in the sampled health facilities were used as key informants.

Sampling size determination and strategy

The sample size was calculated using the formula described by Mugenda and Mugenda, (2003).

$$n = \frac{z^2 pq}{d^2}$$

n- Represents the sample size (if the target population is more than 10,000).

z- Represents the standard normal deviation at the required confidence level, in this cases its 1.96.

p- Represents the proportion in the target population estimated to have characteristics being measured and when there is no reasonable estimate 50% is used.

q- Represents (1-p) which is equal to 1-0.5=0.5.

d- Represents the degree of accuracy/ level of statistical significance set which is 0.05. 5% sample error

Therefore;

$$n = \frac{(1.96)^2 \times 0.5 \times 0.5}{(0.05)^2}$$
$$= 384$$

The sample frame of respondents was drawn from 3,575 estimated numbers of pregnancies in the sub-county (KDHS, 2014). Significantly, 384 HIV infected pregnant women and HEI mothers attending the ANC

clinic eligible were interviewed.

Sampling Procedure

The inclusion criteria to participate in the study included Pregnant women HIV infected and were on follow up, either tested or known positive, HEI mothers willing to participate and were on follow up, Health care staff who must have been in the department/ section for at least 6 months as key informants.

Those who were excluded were Women who were not pregnant but HIV infected, Women HIV infected, Staff who had not been in the department for 6 months and above and not in administration level.

The sample size was calculated using Mugenda and Mugenda formula; accordingly it was 384

From 20 health care facilities offering PMTCT services with 3,575 women being followed up who were on care, each facility was allocated 19 respondents. ANC and HEI follow up register was used by simple random sampling to select 384 eligible pregnant infected mothers/ mothers of HEI attending the clinics.

Table 1: Prevention of mother to child Transmission sites sampled and number of participants per level of health facility

Health Facility Category	Total Number in Sub county	Number of clinics who Participated	Number of health care providers	Number of clients who participated	Percentage (100%)
Sub County Hospital Level 4	2	1	2	19	5
Health center's: Level 3	7	5	10	95	25
Dispensaries Level 2	15	10	20	194	50
Faith Based Facilities	6	4	8	76	20
TOTAL	30	20	40	384	100%

Data Collection

The data were collected using interviewer administered pre-tested questionnaires. The questionnaires were prepared to address utilization of PMTCT of HIV as a practice, knowledge and attitude of PMTCT services among women attending antenatal care clinics. This was determined using the following variables [17]

1. What are the cultural issues that influence HIV infected women attending ANC clinic?
2. What are the socioeconomic and demographic factors/ issues that influences PMTCT uptake?
3. Which are the feeding practices adopted with women infected with HIV attending ANC clinic?
4. What are the general understanding of PMTCT among women attending ANC clinic?
5. Which are the reasons for non - utilization of PMTCT services after diagnosed with HIV in ANC clinic?

The questionnaires were administered to 384 pregnant women HIV infected and mothers of highly exposed infants who fulfilled the inclusion criteria while they were attending ANC clinic. The women were interviewed by mentor mothers who were trained as data collectors/ research assistants

Data Analysis

Data was entered into MS Excel® (Microsoft, USA) and then exported to SPSS version 17® (IBM- Chicago model) for analysis. Descriptive statistics were used to analyze data which involved presenting results in form of text and tables. Correlations between dependable variables were assessed using Pearson regression correlation where P –values less than 0.05 were considered to be statistically significant in all cases.

Ethical Consideration

Approval and clearance was sought from institutional Ethics Review Committee of Moi University Teaching and Referral Hospital. Further, the North Rachuonyo sub county health management team authorized the study to be undertaken. Informed consent of patients was obtained before participating in the study. Standard care was given to participants regardless of whether they consented or declined to participate in the study and subjects were not exposed to any risk by participating or declining to participate in the study.

The records were coded to eliminate names and other personal identification of respondents throughout the study process to ensure anonymity. No incentives were given to the study subjects.

Results

Socio- demographic and socio – cultural economic characteristics of pregnant women infected with HIV

A total of 384 women responded to the questionnaires with all sorted and coded as complete, resulting in a response complete return rate of 100%. This was achieved through close follow up of all questionnaires distributed and attached to each research assistant. Majority (44%) of women were within the age group 15 – 24

years with a mean age of the women being 25.7 years. Majority (67 %) were married and 65% were house wives, 55% had attained basic level of education as they had completed primary level of education while (19%) and 13% were in formal employment and business respectively.

Table 2: Socio-demographic of HIV positive women attending antenatal care clinics in North Rachuonyo

Variable	Frequency	Percent (%)
Age:		
<15	8	2
15-24	167	44
25-34	149	39
35-44	38	10
≥ 45	4	1
No response	18	5
Marital status:		
Married	258	67
Single	119	31
No response	7	2
Education:		
None	24	6
Completed Primary School	210	55
Completed Secondary School	96	25
Tertiary College	46	12
No response	8	2
Occupation:		
Housewife	249	65
Employed	73	19
Business	50	13
No response	12	3

Source: Field Survey (2016)

Women seeking Permission for HIV test from Spouse / Partner and Disclosure

Majority (60%) of the respondents did not seek permission from their partners to undertake HIV counseling and testing, while 30% sought the permission from the spouses whereas (10%) had no knowledge at all on what was expected of them before and after HIV testing, accordingly 70% of respondents did not need permission to know their status.

50% of the respondents had disclosed the HIV status to their spouses/partners while 40% had not. Only 10% had s disclosed to a member of the extended family.

Table 3: Women who sought permission from their spouse/partner to do HIV Counseling and Testing in North Rachuonyo

Sought permission	Frequency (n=384)	Percent (%)
Yes	116	30
No	230	60
No Response	38	10
Disclosed status to partner		
Yes	193	50
No	154	40
No Response	37	10

Source: Field Survey (2016)

For non-disclosures, (36 %) reported that they were single parents or in non- committal relationship, 25% fear abandonment/ divorced, 12% afraid of physical abuse from spouse/ partner while (12%) fear of stigma and discrimination by partner,11% feared being separated from their children while 4% believed it's the responsibility of the hospital/ staff to disclose their status to their partners

Table 4: Reasons for non-disclosure of HIV result to partner

Reasons	No of respondents n=384	
	Frequency	%
Single parent/ non-committal relationship	127	33
Afraid of been abandoned/ divorced by husband and family	88	23
Afraid of physically abuse by husband	56	15
Afraid of Husband intimidation by telling others	54	14
Afraid of being separated from her children	46	12
Hospital to inform the husband/ partner	13	3

Source: Field Survey (2016)

Table 5: Association between socio-demographic characteristics and knowledge on MTCT of HIV

Variable	ANC for PMTCT	COR (95% CI)	AOR(95% CI)	P = Value
Age				
<15	8	1.00	1.00	0.001
15-24	167	0.51(0.31, 0.85)	0.6 (0.43,0.89)	
25-34	149	0.48 (0.29,0.79)	0.59(0.33,0. 69)	
35-44	38	2.54(1.15, 5.68)	1.10 (0.38, 3.10)	
≥ 45	4	7.620(4.47,8.36)	5.64(1.82,6.68)	
Marital status				
Single	119	1.00	1.00	0.002
Married	258	2.88 (2.05,3.95)	2.08(1.33,3.42)	
No response	7	5.69 (4.98,8.78)	4.49(2.82,6.78)	
Education level				
None	24	1.00	1.00	0.21
Primary school	210	1.65(0.88,0.036)	2.54 (1.28,4.20)	
Secondary school	96	2.55 (1.88,3.50)	2.32 (1.39,3.51)	
Tertiary/ College	46	5.58 (3.46, 7.88)	4.38 (1.92,6.71)	
No response	8	5.21 (3.58, 8,91)	3.49 (1.82,6.68)	
Occupation				
Housewife	249	1.00	1.00	0.002
Employed	73	5.75 (3.64,9.02)	5.64(3.88, 8.95)	
Business	50	7.10(7.70,11.78)	6.07 (7.13, 9.81)	
Infant feeding options				
Exclusive formula feeding	69	1.00	1.00	0.156
Exclusive breast feeding	192	3.32(2.72, 6.07)	2.78 (2.06, 7.68)	
Mixed feeding	123	6.32(0.72,46.07)	2.42(2.06,25.45)	

**Association is significant at the 0.05 level and above

The study assessed the correlation between socio-demographic characteristics and HIV positive women attending antenatal care clinics in North Rachuonyo Sub- County. The bivariate and multivariate analyses revealed that age, marital status and occupation of the respondents did not have significant association with of PMTCT services; however, women with secondary education and above (AOR = 1.05) 95% CI (1.39, 3.51) and AOR = 1.4, 95% CI (1.09, 1.92) were more likely to attend ANC for PMTCT services.

Association between HIV infected mothers and feeding therapies initiated in antenatal care clinics

The study then assessed statistical association between HIV infection on mothers and feeding options of HEI during follow up. The bivariate and multivariate analysis revealed significant association of HIV infection and feeding options. The odds of knowledge of PMTCT regarding infant feeding options was about three times higher in breast feeding among women attending antenatal clinics. AOR = 2.78, 95% CI ((2.06, 7.68).

Cultural Issues associated with ANC Clinic Attendance for PMTCT mothers.

Among the respondents, 27% stated that cultural practices such as women inheritance impeded women participation on HIV/AIDS awareness programs, 25% of respondents indicated men neither involved nor supported for women to attend PMTCT services, 22% of respondents women did not take PMTCT/ HIV disclosure as HIV positive women could not inherit family properties, 17% of the respondents believed that women were ignorant about PMTCT services when diagnosed with HIV while 9% were categorical that use of herbal medicine is a remedy to all problems an expectant mother may in Antenatal clinic.

Table 6: Cultural issues that influence HIV positive women attending antenatal care clinics in North Rachuonyo.

Response	Respondents	Percentage
Cultural practices such as women inheritance impeded women participation on HIV/AIDS awareness programs	102	27
Men not supporting Women to attend antenatal care clinics	95	25
Inheritance of property that discriminate against women HIV positive	86	22
Women ignorant on PMTCT of HIV	66	17
Use of herbal medicine as a remedy to Antenatal care clinic	35	9

Source: Field Survey (2016)

Infant Feeding options and proportions

The respondents indicated the main feeding options for highly exposed infants as exclusive breast feeding for less than 6 months (50%) and more than 6 months (62%), exclusive replacement formula feeding for less than 6 months (18%) and mixed feeding by use of breast milk and other feeds concurrently for more than 6 months (32%).

The reasons given by respondents regarding for adoption of specific infant feeding options included: health status of the mother as in case of HIV (17%), Place where a mother gives birth (14%), customs and peer influence (13%), husband and extended family influence (11%), religious beliefs (10%) and level of income (12%).

Table 7: Knowledge on Infant feeding options practiced and reasons among women of reproductive age in North Rachuonyo

Variable	< 6 months	≥ 6 months
Exclusive breastfeeding	192 (50 %)	238 (62%)
Exclusive Formula feeding	69 (18%)	46 (12%)
Mixed feedings	123 (32%)	100 (26%)

Table 8: Reasons for breastfeeding as an option adopted by women from North Rachuonyo

Reasons for breast feeding option chosen	Frequency n=192	%
Exclusive breastfeeding is healthy to baby	59	31
High cost associated with use of baby formula	51	26
Breast feeding makes a woman feel like a mother	38	20
Breast milk is only option to feed child in our culture	32	17
Breast milk is ready available for the baby	12	6

Source: Field Survey (2016)

On knowledge of breast feeding, the reasons indicated for those who breast fed exclusively, despite their HIV status included factors such as improvement baby's health (31%), breast milk is associated with less cost (26%), creates a feeling of motherhood (20%), cultural dictation (17%), and easily available (6%)

HIV test done for HEI who were on follow up in North Rachuonyo ANC Clinics

From the record of the 192 respondents of HEI who went through PMTCT services, HEI tested at < 6 months were 181 (94%) as response rate to HIV outcome for infants. Cases that were not tracked were 11 (6%), HIV positive rate among the tested was 9 (5%) with PCR tests. There was 100% linkage to PSC for those who tested positive. At 12 months 75 (96%) respondents were tested with Antibody test with positivity rate 4%. All positive infants were transferred to PSC for care.

Table 9: Highly Exposed Infants tested for HIV as per recommended schedules.

Category	HIV test done < 6 months (PCR)		HIV test not done ≥ 12 months (Antibody)	
	No. tested	No +ve	No. tested	No. +ve
Infants tests N = 180	181 (95%)	9 (5%)	75 (96%) N= 78	5 (4%)
No. referred:				
PSC clinic	9		5	
Other clinics	0		0	

Source: Field Survey (2016)

Table 10: Suggested reason for lack of utilization of PMTCT Services by women from North Rachuonyo

Opinion	Frequency	%
Fear of public identification/ discrimination	55	16
Stigma – shame and Abuse from people	53	15
Protracted and high cost of drugs	40	11
Ignorance	36	10
Denial of status	33	9
Health care workers attitude	25	7
All of the above	114	32

Source: Field Survey (2016)

Fear of the public attitude contributes significantly to underutilization of PMTCT services by 16%, 15% of the respondents felt that stigma is still quite rooted and this discourages women to continue with the PMTCT services, protracted and high cost and usage of the drug discouraged utilization of PMTCT, while 7% felt that health care attitude was the reason for non-utilization of PMTCT Services.

DISCUSSION

For the achievement of Sustainable Development Goals (MDGs), creating awareness and enhancing PMTCT practice has important role particularly in the reduction of childhood and maternal morbidity and mortality which in turn has enormous impact on socio-economic development of the country [8]. The current study investigated the existing barriers towards elimination of mother to child transmission of HIV in North Rachuonyo sub-County. This study showed that majority of the antenatal attendees were within the age group of 15-34 years. At national level, the highest HIV prevalence was reported on this age group showing that HIV control strategies should be focused on this age cohort [9].

The present study showed that HIV testing was a personal decision as majority of pregnant mothers could undertake it without seeking permission from their spouse/partners. This is considered as a cultural change because traditionally in Africa, women once married were required to seek permission from their spouses in seeking health services [10,11,12]. Other studies in Ethiopia reported that 64.9% to 66.8% of married women were not seeking permission in determining their HIV status [11,12]. In urban Uganda 80% of mothers had disclosed their HIV status to their partners. All pregnant women are encouraged to know their HIV infection status, as well as that of their sexual partners [12]. Only by knowing one's HIV status can the health workers make appropriate health care management recommendations and the couple make appropriate decisions about maintaining their health and that of their unborn baby. Pre-conception care is encouraged where an opportunity arises and a birth plan is discussed with the pregnant woman [13].

The findings of the present study showed that the fear of physical abuse, stigma and rejection, separation and not committed in a relationship necessitated the respondents' not to disclose their status to their spouses. These findings were similar with the study in Uganda where disclosure was more difficult in HIV-positive women owing to the threat it posed to family stability [14]. In this study, some few women accepted to go for HIV counseling and testing as a couple but shifted the burden of disclosure from them to health workers. This was similar with findings on disclosure in a study done on sexual partners in Ethiopia, [14, 15]. The current study observed that male participation in PMTCT services was low and this is similar to a study in Uganda which showed that male participation in the PMTCT activities was low (16%) [15]. Decisions about whether to disclose HIV-positive status are often hindered with profound fear that disclosure would damage the social relations between women and their partners. This fear would manifest in the form of: women being abandoned, beaten, or being accused of bringing HIV infection into the family [16]. Disclosure to and involvement of a male partner in HIV testing has been associated with higher adherence to PMTCT interventions and improved infant outcomes [17].

The study findings revealed that majority of HEI who were on follow up, categorically benefited from the PMTCT services and the results indicated that with proper management HIV among children can be reduced significantly below 2%. This was similar with the findings on towards elimination of HIV among the new generation, study done in Malawi which showed that proper follow up and linkage is a factor in HIV reduction among children [18]

In this study we have found a number of factors associated with non-utilization of PMTCT program. These included discrimination by the public, stigmatization, protracted high cost and usage of drugs, Ignorance on status and HIV, denial, having weak perception in PMTCT among mothers attending antenatal clinics and health care workers attitude in providing PMTCT services. This was similar with findings on towards universal access, scaling up in the health sector report, Kenya [18, 19]. The above findings are similar to those done in in Nigeria which showed that elimination of mother to child transmission of HIV can be done through addressing the socio-economic, cultural and health factors that compel HIV positive pregnant women to stay away from health facilities when they are due to give birth [20].

The study findings revealed that most infants who were highly exposed were those below the age of twelve months. Early infant diagnosis of HIV provides critical opportunity to strengthen follow up of HIV exposed children, early identification of HIV exposed and infected infants, early linkage to prevention for the exposed and care and treatment, provide reassuring information to families of uninfected children and aid an evaluation of PMTCT interventions [21]. This was also supported by study in Malawi which showed that early exclusive breast feeding reduces the risk of post natal HIV transmission and increases HIV free survival [21].

The findings of the present study showed that most respondents preferred exclusive breastfeeding and most mothers viewed processed baby food as expensive. Breast feeding is the best way to feed the infants as breast milk provides all nutrients needed during the first few months of life and also contains agents that help to protect against childhood diseases [21, 22]. If the infant is breast feeding, there is increased risk of acquiring HIV throughout the entire breastfeeding period [23]. However, it is recommended that if the infant is diagnosed at 6-12 months, a confirmatory test must be done after 18 months of age and infant should have stopped breast feeding for more than 6 weeks [21]. This was a positive remark from respondents that indicated that with all good practices in ANC services and HEI follow ups the baby is likely to be born free of HIV and stay healthy.

Conclusion

PMTCT services in North Rachuonyo has the potential of improvement as more than 60% of women understands the importance of the service and a substantial proportion did not need permission to know their status and disclosure was also done by half of the women respondents. Further, more than half of women understood the importance of infant feeding options once diagnosed with HIV. Participation in PMTCT services should be encouraged as they can help in decreasing new pediatric HIV infections with a move towards elimination of mother to child transmission of HIV.

Women's empowerment through education, improving ANC follow up status and male involvement were significantly associated with PMTCT utilization knowledge, attitude and uptake of the services. Fear of stigma, discrimination, high cost of health services and socio – cultural practices were noted to discourage women from utilizing PMTCT services efficiently and more so effectively.

Therefore, Community mobilization through community conversation to demystify the perceived impact is more likely to have a potential to influence, improve and promote PMTCT services with a goal towards free HIV generation.

Competing Interests

The authors declare that they have no any competing interests.

Acknowledgements

I am are grateful to Jomo Kenyatta University of Agriculture and Technology, College of Health Sciences, all data collectors, supervisors and research participants who took part in the study.

References

- Adeneye, A.K, Mafe, M.A, Adeneye, A.A., Salami, K.K., Brieger, W.R, Titiloye, M.A., Adelowe, T.A and Agomo, P.U. (2006): Knowledge and perception of HIV/AIDS among pregnant women attending antenatal clinics in Ogun state, Nigeria. *African Journal of AIDS Research* 5(3): 275-279
- Allan, K., Mwai, D., Annie C., Nicole, J., Onoko, T. (2014): Analysis of social feasibility of HIV and AIDS in Kenya: Socio- cultural barriers and facilitators. *Health Policy Project Article*, 4(3): 25-54
- Andersen, R. (1995): Revisiting the behavioural model and access to medical care: does it matter? *Health and Social Behaviour*, 36(1): 1-10
- A.Medley, C.Garcia-Moreno, S.McGill, and S. Maman, "Rates, barriers and outcomes of HIV sero-status

- disclosure among women in developing countries: implications for prevention of mother-to-child transmission programmes,” *Bulletin of the World Health Organization*, 82(4):299–307
- Bajunirwe, F. and Muzoora, M., (2005): Barriers to the implementation of programs for prevention of mother to child transmission of HIV in Uganda: *AIDS Research and Therapy*10 (2): 1-10
- Biribonwoha, H., Mayon .R. T., Okong P. (2007): Challenges faced by the health workers in implementing the prevention of mother to child transmission (PMTCT) of HIV program in Uganda: *African Public Health Journal* 29(3): 269-274
- Burke,J. (2004) Infant HIV infection: Acceptability of preventive strategies in central Tanzania. *AIDS Education and Prevention*16 (5), 415 – 425
- EGPAF, CDC, KEMRI-HISS, FACES, ICAP, KNAP (2013): Situation analysis on prevention of mother- to – child transmission services in Nyanza province, Kenya. *Preliminary Report, TWG-PMTCT Unit 2(3) 1-26*
- F.Bajunirwe and M.Muzoora, “Barriers to the implementation of programs for the prevention of mother-to-child transmission of HIV: a cross-sectional survey in rural and urban Uganda,” *AIDS Research and Therapy*, 2005 (2)10
- KAIS, KDHS (2012): Knowledge, attitude, behaviour among persons infected with HIV. National Aids indicators for Kenya population, *Final Report 2014*2(3) 227-243
- Kulzer, J.L., Nyabiage, L., Penner, J.A., Marima, R., Oyaro, P., Mwachari, C. W., Mutai, H.C., Bukusi, E.A., and Cohen, C. R.(2012): Family model of HIV care and Treatment: a retrospective study in Kenya. *International AIDS Society, Biomed* 15(8).1758 -1786
- Miotti, P.G., TahaTaha, E.T., Kamwenda, N. I., Mtimavalye, L. A.R., Van de H, L., Chipahangwi, J.D., Liomba, G. B., Robert. J. (2000): HIV transmission through breast feeding: A study in Malawi. *Obstetrical and Gynaecological Survey, Jama Pubmed* 55(3): 141-142.
- Penguin, Haddis, M and Jerene, D. (2006): Brief communication: Awareness of ANC Mother- to- child transmission of HIV infection in Arba Minch, Ethiopia. *African Health Development Article* 20(1): 55-58
- Rogers, A., Antoinette,Y., Carolyn, C. M. (2006): HIV related knowledge, attitudes, perceived benefits and risks of HIV testing among pregnant women in rural Southern India. *NationalAIDS Patient Care and STDS Guidelines*, 20 (11): 803-811
- UNAIDS, UNICEF, UNFPA, WHO. (2010): Towards an AIDS free generation: African countries galvanized to virtually eliminate mother-to-child transmission of HIV. *Press release from: <http://www.unicef.org/media/media5375>*.
- WHO, UNAIDS, UNICEF (2010): Towards universal access: Scaling up priority HIV/AIDS intervention in the health sector. *Progress Report 2010*70(3): 86-100
- WHO, UNAIDS, UNICEF (2011).Global HIV/AIDS response. Epidemic update and health sector progress towards universal access. *Progress Report 2012*, 87(10):72- 110.