

Feeding Practices of Infants Born of HIV Positive Sex Worker Mothers in Kenya

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Abstract: *This study assessed the feeding practices of infants born to HIV positive sex worker mother at SWOP (sex worker outreach programme) clinic. To achieve the objective of the study, a descriptive cross-sectional design was used. The target population included 512 mothers from SWOP clinic. The primary data was collected by a semi-structured questionnaire. Data was analysed using descriptive statistics and chi-square. Selection was purposive whereby the research nurse got all eligible HIV positive sex worker mothers who know their HIV status prior to obtaining consent of the study. The study included known HIV positive sex workers mothers who are clients at SWOP clinic, and have infants. The Statistical Package for the Social Sciences (SPSS) Chi-square test was used. The study therefore recommends that the Ministry of Health develop a policy to support HIV positive sex worker mother access the infant formula, as they are likely to practice mixed feeding, which could compromise the health of their infants. Further research to establish the nutrition status of infant born of HIV positive sex worker mother should be done.*

Keywords: infant, HIV positive sex workers

1. Introduction

Breastfeeding has been encouraged as the best method of feeding a new-born. Unfortunately, it has also been recognised as a major route for mother to child transmission of HIV [1] (Temmerman, et al, 2005), on 30th November 2009, WHO released new recommendations on infant feeding by HIV-positive mothers, based on this new evidence. For the first time, WHO is recommending that HIV-positive mothers or their infants take antiretroviral drugs throughout the period of breastfeeding and until the Little is known regarding nutritional risks associated with early weaning and formula feeding among HIV positive sex worker infants. Most of them tend to leave their infants at home as they go out for work. Many of these mothers do not see the importance of exclusive breastfeeding, hence starting complementary feeding too early. The nutrition status of their infants is not clear it is because of this reason that the researcher investigated the nutritional status and feeding practices of infants born to HIV positive sex worker mothers.

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Female sex workers in sub-Saharan Africa are most likely to have the highest risk of maternal morbidity and mortality because of their high rates of HIV, unintended pregnancies, and abortions, along with the region's high maternal mortality rate. In other regions, female sex workers are likely to be at higher risk of maternal morbidity and mortality than other women, resulting in substantial health

disparities. Female sex workers also reported stillbirths and serious health problems among their children, including: neonatal deaths, low birth weight, prematurity, neonatal abstinence syndrome, behavioral and emotional problems, and discrimination at school. Additionally, many daughters of these sex workers are trafficked while other children are stolen and sold [2] (Baral & Beyrer, 2012). It is on this basis that this study sought to find out the nutritional status of infants who are born of HIV positive sex workers mothers and their feeding practices.

2. Literature Review

2.1 The Social demographic characteristics of HIV positive sex workers who are mothers to infants.

In sub-Saharan Africa, sex work is seen to highly contribute to the transmission of HIV. Despite this knowledge, little is known to justify it socially and behaviourally. This limits the initiatives on the impact of preventing HIV. According to a study by Scorgie, Chersich, Ntaganira, Gerbase, Lule & Lo (2012) on socio-demographics of female sex workers in sub-Saharan Africa, an inextricable link was found between their work and vulnerability to HIV. This is characterized by their highly mobile nature, poverty, alcohol abuse, criminal nature and continuous violence. The named factors can therefore be used to predict other behaviours such as engaging in anal sex, lack of or low use of condom and co-infection of STI's. In Africa, it is not easy to view sex work and isolate it from HIV risky behaviours. This is because behaviours such as having multiple sex partners tend to overlap between sexual networks. According to [3] Chersich & Luchter (2014), there is needed to address the burden of HIV which is disproportionate carried by female sex workers in Africa. This can be achieved by taking into account the social and behavioural vulnerabilities discussed in this study and sufficiently targeting service coverage.

2.2 The difference between Feeding practices of HIV positive mothers versus the recommendation in the Kenya national guidelines

An updated guideline on HIV and infant feeding has been released by WHO and UNICEF. This comes six years after their first guideline which recommended antiretroviral treatment (ART) to prevent postnatal transmission of the HIV virus through breastfeeding. All government authorities were directed in 2010 by the guidelines on HIV and infant feeding to promote and support one feeding practice for all HIV-positive women receiving care in health facilities [4] (WHO, 2016).

The guidelines were revised in 2013 and in 2016. WHO now recommends that any adult (including pregnant or breastfeeding mothers) or child diagnosed with HIV should begin a lifelong ART regimen. Changes in drug guidelines, increased evidence from research conducted on HIV/AIDS, and a need to clarify specific issues led to the revision of the guidelines.

According to the guidelines, Mothers living with HIV should breastfeed for at least 12 months and may continue breastfeeding for up to 24. It recommends that the health authorities at both the local and national level should take the active role of coordinating and service implementation in health facilities and workplace activities, in homes and communities for purposes of protecting, promoting and supporting HIV breastfeeding mothers.

2.3 The association between sex work and infant feeding practices

[5] Kuhn and Aldrovandi (2009) argue that within a given culture the practice of breastfeeding represent the ways which women negotiate and incorporate dominant ideologies and institutional support culture norms with the realities of their embodied experiences, personal circumstance and social support system.

The available social and cultural norm dictates how practices of feeding infants occur in a particular society. In sex work, infant feeding practice particularly breastfeeding has had impact on business because it reduces the number of clients [6] (Majid & Bollen, 2010). In a study done on sex workers in Malaysia, it was found that breastfeeding slows them down and hence reduce the number of clients. Being a problem to them many opt not to breastfeeding at all. In a normal Malaysian culture breastfeeding practice has rich symbolic content and is shaped by local understanding of breastfeeding [7] (Majid, 2010).

2.4 Feeding options of HIV positive sex worker mother to their infant

As part of prevention of HIV mother-to-child transmission (PMTCT) strategies, mothers who are HIV-positive are presented with two options concerning feeding their infants: replacement feeding or exclusive breastfeeding, Health services must offer women counselling, guidance, and support to enable them to make an informed choice.

Breastfeeding of children reduces the chances illness and death from common illnesses such as diarrhoea and pneumonia. In poverty stricken settings where families are exposed to disease, poor sanitation and contaminated drinking water, the risk of infection from HIV is greatly outweighed by the benefits of breastfeeding. Breast milk contains a unique combination of antibodies and nutrients which protects the baby from disease and death. This makes it the food for babies. Combining ARVs with breast milk greatly reduces the risk of HIV transmission [8] (WHO, 2012).

The World Health Organization and UNICEF recommend that HIV positive mothers take ART's, exclusively breastfeed for the first six months of life, introduce complementary foods thereafter and breastfeed for at least 12 month and may continue for up to 24 months or longer. [9] (Ministry of Health & CDC, 2013).

3. Methodologies

Research design

The study design was a descriptive cross sectional study; it was used to collect both qualitative and quantitative data. The study was carried out at three SWOP clinics i.e. SWOP Majengo, SWOP City and SWOP Thika Road Located in Nairobi. SWOP started as a research clinic for sexual transmitted infections and HIV by the University of Nairobi and University of Manitoba.

Clients that enrolled at SWOP had to have ID/Passport, above 18yrs and screening was done by staff. The clinic offer different services including the provision of antiretroviral drugs, condoms, HIV testing and counseling, Health Education, nutritional counseling, cervical cancer screening and treatment of sexual transmitted infections.

Inclusion criteria

- 1) HIV positive sex workers mothers who are clients at SWOP clinic are at reproductive age.
- 2) Have infants who are 0-12 months old.
- 3) Have consent to participate in the study.

Exclusion criteria

- 1) This includes HIV positive sex worker mothers who had declined the consent of the research.
- 2) Those sex worker mothers who are too sick to participate in the research.

4. Results

4.1 Delivery Responses

Table 1: Delivery Responses

According to Table 1, majority delivered at public hospitals [141, 66.2%] compared to a third who delivered at private clinics [62, 29.1%] and this results were significant [p value <0.05]. Majority of the respondents had delivered naturally i.e. SVD [157, 73.7%] compared those who underwent CS [42, 19.7%] [p value <0.05]. Most of the respondents had started their ANC clinic during their first trimesters [121, 58.5%] compared to those started at their second trimester [72, 34.8%] [p value <0.05].

4.2 Feeding Practices

Table 2: Feeding Practices

As presented in Table 2, majority (84, 41.6%) said they use EBF, 36.1% of the respondents indicated alternative feeding and 22.3% indicated mixed feeding. The result implied that most (58.4%) of the HIV positive sex worker mothers use alternative feeding and mixed feeding practices.

4.3 Knowledge on Infant Feeding and HIV Status

Table 3: Knowledge on Infant Feeding and HIV Status

Approximately 45.1% of the respondents had disclosed their HIV statuses compared to 54.5% who had not while 0.5% had not known their HIV status [p value<0.05]. Assessing the respondents best description of PMTCT knowledge, 44.1% indicated they had enough information compared to 55.9% who had no information and refused to answer and thus they had no information on PMTCT. On their attitudes towards infant feeding, 44.6% had positive attitude compared to 30% with negative attitude on infant feeding.

More than half [137, 64.3%] had information on infant feeding compared to 8.9% with no knowledge on infant feeding. The study also assessed the time taken to breastfeed the infant after delivery and from the responses, 44.1% indicated immediately compared to 36.3% who did so within less than one hour. Assessing their knowledge on the advantages of colostrum, the study affirmed that 40.1% said it was good compare to mere 6.8% who said it wasn't.

Most of the respondents were still breastfeeding [103, 65.3%] and among those who were not breastfeeding, 40.2% said it was due to breast infections or problems, 31.6% cited lack of milk while 20.5% said they had to go back to work.

4.4 Association between variables

Table 4: Association between the feeding habits of HIV positive sex workers and their practices

Table 4 the association between the feeding habits of HIV positive sex workers and their practices. There was no association between the respondents HIV status and the nutritional status of their infants as $p > 0.05$ was obtained and further it was established that most of the respondents had enough/good knowledge on infant feeding as well as positive attitudes towards the same.

From Table 5, it is clear that there was no association between the feeding practices and the recommendation in the national guidelines as the p value obtained was > 0.05 and thus the respondents may not have good knowledge on PMTCT verses the recommendation in the national guidelines.

According to Table 6, there was a significant of association between the feeding practices and Infant feeding awareness [p value 0.015]. The following Table presents the association between the bio data characteristics of the respondents and the feeding practices to show which variable explain the type of the feeding practice adopted.

As presented in Table 7, only two variables that were significant i.e. they determined or explained the feeding practices the respondents adopted and these were marital status [$\chi^2=58.705$, p value < 0.05] and the level of education [$\chi^2=44.76$, p value < 0.05]

5. Discussion of the findings

Majority delivered at public hospitals [141, 66.2%] compared to a third who delivered at private clinics and this results were significant [p value < 0.05]. Majority of the respondents had delivered naturally i.e. SVD compared those who underwent CS [p value < 0.05].

Most of the respondents had started their ANC clinic during their first trimesters compared to those started at their second trimester [p value < 0.05]. Majority said they use EBF, 36.1% of the respondents indicated alternative feeding and 22.3% indicated mixed feeding. The result implied that most of the HIV positive sex worker mothers use alternative feeding and mixed feeding practices.

45.1% of the respondents had disclosed their HIV statuses compared to 54.5% who had not while 0.5% had not known their HIV status [p value<0.05]. Assessing the respondents best description of PMTCT knowledge, 44.1% indicated they had enough information compared to 55.9% who had no information and refused to answer and thus they had no information on PMTCT. On their attitudes towards infant feeding, 44.6% had positive attitude compared to 30% with negative attitude on infant feeding.

More than half had information on infant feeding compared to 8.9% with no knowledge on infant feeding. The study also assessed the time taken to breastfeed the infant after delivery and from the responses, 44.1% indicated immediately compared to 36.3% who did so within less than one hour. Assessing their knowledge on the advantages of colostrum, the study affirmed that 40.1% said it was good compare to mere 6.8% who said it wasn't.

There was no association between the respondents HIV status and the nutritional status of their infants as the Chi Square value of 13.23, $p > 0.05$ was obtained and further it was established that most of the respondents had enough/good knowledge on infant feeding as well as positive attitudes towards the same. There was no association between the feeding practices and the recommendation in the national guidelines as the p value obtained was > 0.05 and thus the respondents may not have good knowledge on PMTCT verses the recommendation in the national guidelines. According to UNICEF and [10] WHO (2013) stated that anything that interferes with the mothers' confidence can lead to interference with breastfeeding. This study established that there is an association between the feeding habits of HIV positive sex workers and the nutritional status of their infant. The study further establishes that there exist an association between sex workers and infant feeding practices this concurs with [11] (Majid & Bollen, 2010) that in sex work, infant feeding practice particularly breastfeeding.

There was no association between the feeding practices and the recommendation in the national guidelines as the p value obtained was >0.05 and thus the respondents may not have good knowledge on PMTCT verses the recommendation in the national guidelines. This finding was in line with [12] (Chersich & Luchter, 2014) who noticed that women in sex work tend to be young and are much expected to contribute to their family income. The study further revealed that most HIV positive sex worker mothers are not highly educated as by 91.7% of the respondents having attained only secondary education. This finding concurs with [13] (Chersich & Luchter, 2014) who established that Female sex workers commonly have low education.

Most of HIV positive sex workers have their delivery in government hospital and they mostly use alternative feeding and mixed feeding practices. This finding was in line with [14] Ivers *et al.*, (2009) who stated that a woman who has inadequate food intake before and during pregnancy is at increased risk during labor and delivery and more likely to have a baby with low birth weight. The study also established that on average most HIV positive sex worker mothers feed their infants after every 3 hours. From the responses, the study noted that majority of HIV positive sex worker mothers were aware of Prevention of Mother to Children transmissions (PMTCT) and they have a positive attitude towards the infant feeding. Most sex workers have knowledge on infant feeding awareness and most sex worker mother's breastfeed their infants within the first 30 minutes after delivery as shown by 54.1%. The study also revealed that most sex worker mother's stop breastfeed their infants due to the following reasons; most sex workers go back to work (53.3%), Milk reduction (16.7%), Breast infections or problems (16.7%) and some Infant refuses to breastfeed (13.3%).

The study further established that there is a significant positive association between the feeding practices of infants born of HIV positive sex worker mother verses the recommendation in the national guidelines. Further the study revealed a strong positive significant association between feeding options of infants and HIV positive sex worker mother. This finding concurs to that of [15] (Doherty, 2011) that breastfeeding reduces the chances that a child will fall ill and die from common illnesses such as diarrhoea and pneumonia.

6. Conclusion

Majority delivered at public hospitals compared to a third who delivered at private clinics. Majority of the respondents had delivered naturally i.e. SVD compared those who

underwent CS. Most of the respondents had started their ANC clinic during their first trimesters compared to those started at their second trimester

More than a third of the respondents had disclosed their HIV statuses compared to a third who had not while 21.2% had not known their HIV status. Assessing the respondents Best description of PMTCT knowledge, 36.1% indicated they had enough information compared to 64% who had no information and refused to answer and they had no information on PMTCT. On their attitudes towards infant feeding, majority had positive attitude compared to 31.3% with negative attitude on infant feeding.

More than half had information on infant feeding compared to 12.9% with no knowledge on infant feeding. The study also assessed the time taken to breastfeed the infant after delivery and from the responses, slightly less than half indicated immediate compared to a third who did so within less than one hour. Assessing their knowledge on the advantages of colostrum, the study affirmed that 34% said it was good compare to mere 7.5% who said it wasn't.

Table 4: Delivery Responses

Characteristic	Indicator	Frequency (n=213)	Percent		
Place of delivery	Government hospital	141	66.2	163.592	.000
	Private clinic	62	29.1		
	Home midwives	10	4.7		
Mode of delivery	SVD	157	73.7	45.714	.000
	C/S	42	19.7		
	No response	14	6.6		
First ANC clinic	First trimesters	121	58.5	128.135	.000
	Second trimester	72	34.8		
	Third trimester	12	5.8		
	Never attended	2	1.0		

Table 5: Feeding Practices

Characteristic	Indicator	Frequency (n=213)	Percent	Chi-Square	Asymp. Sig.
Type of feeding practices	Exclusive breastfeeding	84	41.6	63.833	.000
	Alternative feeding	73	36.1		
	Mixed feeding	45	22.3		
	No response	9	4.2		
Frequency of infant feeding	Once	16	9.1	54.439	.000
	Twice	48	27.3		
	Thrice	73	41.5		
	More than four times	39	23.2		
	No response	37	17.4		

Table 6: Knowledge on Infant Feeding and HIV Status

Characteristic	Indicator	Frequency (n=213)	Percent	Chi-Square	Asymp. Sig.
Disclosure of HIV status	No	117	55.0	68.949	.000
	Yes	96	45.1		
Best description of PMTCT knowledge	No idea at all	42	19.7	3.796	.150
	Refused to answer	77	36.2		
	Enough information	94	44.1		
Attitude towards infant feeding	Positive	95	44.6	1.510	.470
	Negative	64	30.0		
	Not sure	54	25.4		
Infant feeding awareness	Has knowledge	137	64.3	49.143	.000
	No knowledge	19	8.9		
	Not sure	57	26.8		
Time take to breastfeed the infant after delivery	Immediately	86	44.1	111.630	.000
	After 30 minute	18	9.2		
	After an hour	53	27.2		
	After few days	37	19.0		
	No response/DNK	21	9.9		
Advantages of colostrum	Good	83	40.1	28.730	.000
	Not good	14	6.8		
	expose infant	37	17.9		
	don't know	73	35.3		
Have ever expressed breast milk	Yes	43	20.2	63.585	.000
	No	129	60.6		
	Sometimes	41	19.2		
still breastfeeding	No	74	34.7	23.680	.000
	Yes	139	65.3		
Reasons for stopping breastfeeding	Milk reduction	37	31.6	29.973	.001
	Breast infections or problems	47	40.2		
	Had to go back to work	24	20.5		
	Infant refusing to breastfeed	9	7.7		
	No response	96	45.1		

Table 7: Association between the feeding habits of HIV positive sex workers and the nutritional status of their infant

		Disclosure of HIV status		Total	Chi-Square	P value
		No	Yes			
Type of feeding practices	Exclusive breastfeeding	42	42	84	13.259 ^a	.053
	Alternative feeding	45	27	72		
	Mixed feeding	26	19	45		
Total		113	88	213		

Table 8: Association between the feeding practices and the recommendation in the national guidelines

		Best description of PMTCT knowledge			Total	Chi-Square	Asymptotic Significance
		No idea at all	Refused to answer	Enough information			
Type of feeding practices	Exclusive breastfeeding	18	28	38	84	8.418 ^a	.209
	Alternative feeding	13	35	25	73		
	Mixed feeding	11	14	20	45		
Total		42	77	83	213		

Table 9: Association between the feeding practices and Infant feeding awareness

		Infant feeding awareness			Total	Chi-Square	Asymptotic Significance
		Has knowledge	No knowledge	Not sure			
Type of feeding practices	Exclusive breastfeeding	51	15	18	84	15.745 ^a	.015
	Alternative feeding	46	3	24	73		
	Mixed feeding	30	1	14	45		
Total		126	19	57	213		

Table 10: Feeding Practices and Socio demographic characteristics

		Type of feeding practices				Total	Chi-Square Value	Asymptotic Significance
		EBF	Alternative feeding	Mixed feeding	Wet nursing			
Marital status	Married	38	11	4	0	53	58.705 ^a	.000
	Single	18	52	30	0	100		
	Divorced	15	3	7	1	26		
	Widowed	13	7	3	0	23		
Total		84	73	44	1	213		
Age	Between 22-26 years	10	19	10	0	39	11.318 ^a	.255
	Between 27-31 years	31	16	15	0	62		
	Between 32-37 years	27	26	10	1	64		
	Between 38-43 years	16	12	9	0	37		
Total		84	73	44	1	213		
Level of Education	No formal education	7	7	2	1	17	44.767 ^a	.000
	Primary	60	29	22	0	111		
	Secondary	13	22	20	0	55		
	Tertiary	4	15	0	0	19		
Total		84	73	44	1	213		
Religion	Muslim	25	20	13	0	58	5.805 ^a	
	Christian	59	50	30	1	140		.445
	Other	0	3	0	0	3		
Total		84	73	43	1	213		

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