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FACTORS INFLUENCING NON-COMPLIANCE TO EXCLUSIVE BREASTFEEDING AMONG HIV POSITIVE MOTHERS ATTENDING SELECTED GOVERNMENT OWNED HOSPITALS IN LAGOS STATE, NIGERIA

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ABSTRACT: *The objective of this study was to evaluate the factors influencing non-compliance to exclusive breastfeeding among HIV positive mothers attending selected government owned hospitals in Lagos state. This study is a descriptive study carried out among 297 HIV positive mothers selected using multi stage sampling technique. Structured questionnaires were used for data collection with reliability index of 0.95. Data obtained was analyzed using descriptive and inferential statistic and data were presented in tables and figures. The outcome of the study shows that 35.7% of respondent only breastfed their babies while 64.3% practiced mixed feeding. The factors identified to influence compliance include: Fear of transmitting HIV infection through breast milk, Cultural factor (df=1, P<0.001), level of education (df=3, P<0.001), social stigmatization and discrimination (df=1, P<0.001), spousal and family support (df=1, P<0.001), and maternal knowledge about HIV transmission (df=1, P=0.029). it is therefore important to work on those factors identified in this study by individual, organization and government towards the improvement of practice of exclusive breastfeeding among HIV positive women.*

KEYWORDS: HIV/AIDS, HIV positive**,** mothers, noncompliance and exclusive breast feeding

INTRODUCTION

HIV/AIDS perhaps is one of the prevalent problem facing the health care system internationally today and one of the way identified to contain its spread is prevention-of-mother-to-child (PMTCT) program and it has been documented to be helpful Mukhtar Yola et al., (2009). As part of the prevention of Mother-to-child transmission, World health Organization (WHO) recommends exclusive breastfeeding Nyoni et al., (2019). Exclusive breastfeeding (EBF) is defined as feeding infants only breast milk for the first six months of life without adding any other

fluid such as water, it can be directly from or expressed, except drops or syrups consisting of vitamins, mineral supplements or medicine. Exclusive breastfeeding is one of the essential actions for infant development and survival Hunegnaw et al., (2017) though EBF is not mostly embraced by women especially among women with low socio-economis satatus of Sub-saharan Africa Hazemba et al., (2016) as the practice of EBF is low and mixed feeding is majorly practiced among HIV positive mothers that are breastfeeding (Nyoni et al., 2019).

Breast milk is the clean, perfect food for infant that contains the right antibodies to fight against infections that can cause common childhood illness and always in the right temperature. It provides the nutrients needed for growth and energy needed for activities of daily living for the child. WHO, recommend that all infant must initiate breastfeeding within the first hour of birth and must be given on demand for the first six months of life without adding water or any fluid. There after a nutritious complementary feed may be introduce. When this is done, it improve child health and survival (WHO, 2011; WHO & UNICEF 2018).

Gejo et al., (2019) reported that globally, only about 34.8% are breastfed exclusively. While EBF practiced among HIV positive women was noticed to improve in 2016 as compared to what happened in the 90's in most regions, for instance, there was an increase from 22% in 1996 to 30% in 2016 in Sub-Saharan Africa, from 27% to 32% in East Asia/ Pacific China not inclusive. In Nigeria, the practice of EBF is Suboptimal (Jama et al., 2020) it was documented to be 23.33% in 2017.(*Nigeria - Exclusive Breastfeeding (% Of Children Under 6 Months) - 1990-2017 Data | 2020 Forecast*, n.d.)

The most appropriate and economic way of feeding infant globally is through exclusive breastfeeding(Belay & Wubneh, (2019) & Haile et al., 2015). About 1.4 million mortality occurs as a result of failure to exclusively breastfed the children. According to Rutto et al., (2019) breastfeeding a baby exclusively for the first six months of life help to reduce infant morbidity and mortality. Conditions that can cause mortality such as childhood obesity, hypertension and gastroenteritis can be prevented if infants are well breastfed (Motee & Jeewon, 2014) .

ln the era of HIV infection, mothers sees practicing EBF as a challenge (Belay & Wubneh, 2019). Initially, global strategies to contain PMTCT was that mothers that are HIV positive must not breastfeed their babies to prevent transmitting the infection to the infant but the impact of breast milk in optimal growth and development of a child cannot be overemphasized. Thus the strategy of avoiding breastfeeding of HIV - exposed infants sparked off a wide range of socio-cultural nutritional and medical arguments. It was also observed that HIV - exposed infants tends to experience frequent growth faltering which suggested the need for vigilance in recognizing infant growth stunting in PMTCT programs Nwaozuzu & Dozie, (2014). This growth faltering is worse for the non-breastfed infant. Babies that are not breastfed are being exposed to risk of morbidity and mortality Umeobieri et al., (2018) while babies that are well breastfed will have an optimal growth and development Jama et al., (2020). Studies have also documented that there is significant relationship between infant feeding and mortality Ware et al., (2019) as children who were not

exclusively breastfed were about 8 times more likely to die (Biks et al., 2015). This shows that the pattern of feeding of infants affects MTCT of HIV infections.

World Health Organization (2011; 2018) identified the importance of exclusive breastfeeding and make recommendations that infants delivered by HIV positive women should be breastfed too in combination of intake of antiretroviral drugs (Al-Mujtaba et al., 2016). In the last decades, evidences have shown that if the WHO recommendations for EBF can be followed even in HIV positive mother, a large percentage of infant mortality can be curbed. Nigeria also recognizes the important of EBF and since August 2011, the policy of infant feeding was updated and health workers were mandated to encourage HIV positive women to breastfed their babies in combination with taking their antiretroviral drugs(Paul & Alex-Hart, 2019). Despite all the benefit of EBF, its practice is still low. Some factors should be responsible for the non-compliance to EBF, hence the need to investigate the factors influencing non-compliance to exclusive breastfeeding among HIV positive mothers attending selected government owned hospitals in Lagos state.

Objectives of the study

The objective of this study was to assess the factors influencing non-compliance to exclusive breastfeeding among HIV positive mothers attending selected state hospitals in Lagos state.

Research Questions

What are the factors influencing non-compliance to exclusive breastfeeding among HIV positive mothers attending selected Government owned hospitals in Lagos state?

Research Hypothesis

There is no significant relationship between cultural practices and noncompliance to exclusive breastfeeding among HIV positive mothers attending selected state hospitals in Lagos state.

There is no significant relationship between level of education and noncompliance with exclusive breastfeeding among HIV positive mothers attending selected state hospitals in Lagos state.

There is no significant relationship between social stigmatization/discrimination and noncompliance to exclusive breastfeeding among HIV positive mothers attending selected state hospitals in Lagos state.

There is no significant relationship between spousal and family support and noncompliance to exclusive breastfeeding practice among HIV positive mothers attending selected state hospitals in Lagos state.

There is no significant relationship between maternal knowledge about HIV transmission and noncompliance to exclusive breastfeeding among HIV positive mothers attending selected state hospitals in Lagos state?

RESEARCH METHODOLOGY

Research Design

The study was a descriptive non-experimental research design.

Research Setting

The study setting was Lagos state Nigeria. It has many primary, secondary and tertiary health facilities. This makes it an ideal setting for this study. Some of the relevant hospitals to this study are General hospital Alimosho, General hospital Ifako-Ijaye, General hospital Gbagada and General hospital somolu. In setting and characteristics, these hospitals are similar although located in different areas of the state and established at different times; they are all controlled by the Lagos state health service commission. They offer secondary health care services to the people of Lagos state and are well staffed by doctors, nurses, pharmacists and the likes. Each has and accident and emergency unit, pediatric/neonatal unit, maternity unit, male and female units, outpatient department, Operating theatres etc. All four hospitals have a special unit called heart-to-heart where HIV services are provided including counselling, testing, treatment etc. are carried out. Considering the large population of people in Lagos state, the antenatal services provided by these hospitals covers a large number of pregnant women and among them are unavoidably large numbers of HIV positive mothers at General hospital Alimosho, General hospital Ifako-Ijaye, General hospital Gbagada and General hospital somolu are 119, 100, 103, 74 respectively and total of 396

Population of the Study

The study population comprised of mothers living with HIV/AIDS attending infant welfare clinic in selected state hospitals across Lagos state.

Sample size Determination

The sample size for this study was calculated using the Cochran's formula, a total number of 297 respondents was used for the study

Sample Technique

A multi stage sampling technique was used for this study. The state was divided into divisions as follows; Ikeja division, Lagos division, Ikorodu division and Epe division. From these two were randomly selected; Ikeja division and Ikorodu division. This were further broken down based on the hospital in the setting and the following were randomly selected; in Ikeja division, General hospital Alimosho and General hospital Ifako-Ijaye; in Ikorodu division, General hospital Gbagada and General hospital Somolu. A convinient sampling technique was used to select the study samples as earlier determined.

Instrumentation

Questionaire was used for data collection in the study.

Psychometric Properties of the Instrument

Validity of instrument

The instrument was carefully constructed after reading relevant literature and putting into consideration the objective of the study. It was then given to expert in the field for face and contents validity. All corrections were effected before administration to the research respondents.

Reliability of the Instrument

These questionnaires were administered among HIV positive mothers in another government hospital with same characteristics of where the main study was carried out. Reliability index of the instrument was determined using Pearson's product moment correlation and the reliability index was 0.95.

Method of Data Collection

A letter on introduction was taken to the health institution involved. The head of the institutions were met and was told about the objective of the study. The participants were also met and they were informed about the study too. Informed consents were filled and signed by participants. The respondents were met on clinic days, questionnaires were distributed and same was retrieved after filling it.

Method of Data Analysis

Data collected from the respondents were organized and analyzed using SPSS version 20. Inferential and descriptive statistics were used in testing the hypotheses and answering the research questions and results were presented in tables and figures

Ethical Consideration

Permission to carry out research was sought from the ethical committees of the participating health facilities. The respondents were clearly informed about the study in order to gain their informed consent. They were also informed about the confidentiality and anonymity of their responses and their right to withdraw from the study at any time without it having any negative consequences on them

RESULTS

Table 1: Socio demographic characteristics of Respondents

Variables	Frequency	Percentage (%)
Age (years)		
20-24	16	5.4
25-29	152	51.2
30-34	54	18.2
35-39	48	16.2
40-44	27	9.0
Total	**297**	**100.0**
Religion		
Christianity	217	73.1
Islam	80	26.9
Total	**297**	**100.0**
Ethnicity		
Yoruba	188	63.3
Igbo	61	20.5
Hausa	31	10.4
Others	17	5.8
Total	**297**	**100.0**
Marital status		
Single	32	10.8
Married	225	75.8
Separated	40	13.4
Total	**297**	**100.0**

Level of Education		
No formal education	14	4.7
Primary	91	30.6
Secondary	138	46.5
Tertiary	54	18.2
Total	**297**	**100.0**
Occupation		
Housewife	46	15.5
Farming	22	7.4
Trading	155	52.2
Artisan	26	8.6
Civil Servant	49	16.5
Total	**297**	**100.0**
When did you get to know your HIV status:		
Before pregnancy	152	51.2
During pregnancy	109	36.7
After pregnancy	36	12.1
Total	**297**	**100.0**

Table 1 shows the socio-demograhic characteristics of respondents and it shows that majority of respondents were of ages 25-29years (51.2%) and 30-34years (18.2%) while 5.4% are of ages 20-24years. 73.1% of respondents are Christians while 26.9% are Muslims, 63.3% are Yorubas while 5.8% are from other ethnicities, 75.8% are married while 10.8% are single and 13.4% are separated. Also, 46.5% have attained secondary level of education, 18.2% have attained tertiary education while 4.7% have no formal education and 52.2% of respondents are into trading while 7.4% are farmers. Majority of respondents got to know about their HIV status before pregnancy, 36.7% during pregnancy and 12.1% after pregnancy.

Figure 1: Level of Practice of EBF among Respondents

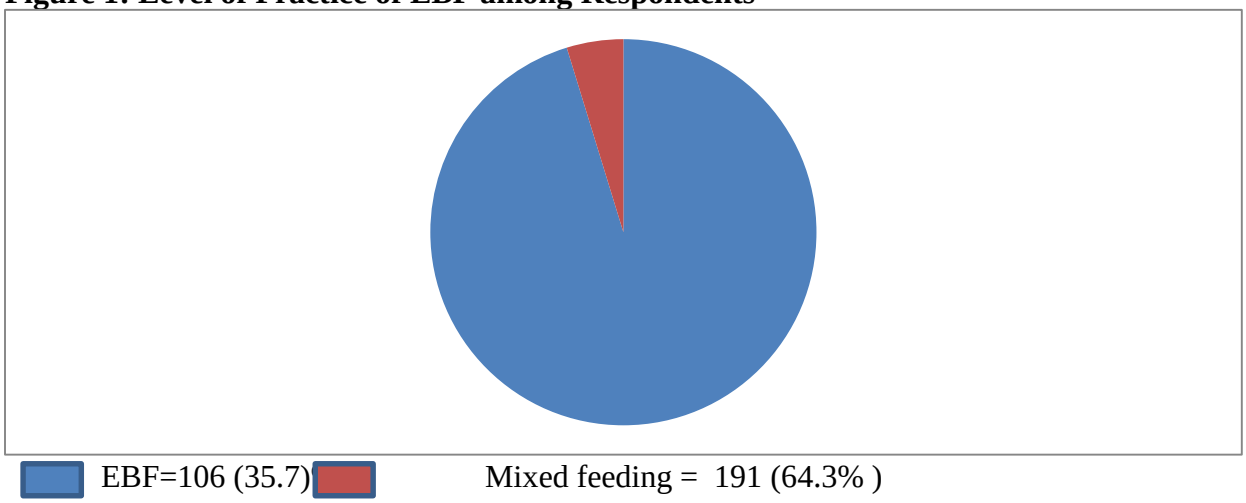

Figure 1 shows that 106(35.7%) of respondents in the study are currently practicing/complying with or practiced EBF of their babies while 191(64.3%) didn't practice/comply with EBF.

Table 2: Respondents' responses of factors influencing non-compliance to exclusive breastfeeding among HIV positive mothers attending selected state hospitals in Lagos state

Cultural restrictions prevented me from practicing EBF?	**Frequency**	**Percentage**
Yes	157	52.9
No	140	47.1
Total	**297**	**100.0**
My lack of education prevented me from practicing EBF?		
Yes	105	35.4
No	192	64.6
Total	**297**	**100.0**
I suffered social stigmatization from my friends and this prevented me from exclusively breastfeeding my child?		
Yes	56	18.9
No	241	81.1
Total	**297**	**100.0**
I didn't exclusively breastfeed my child because I hardly get support from my partner or relatives?		
Yes	176	59.3
No	121	40.7
Total	**297**	**100.0**
I didn't know that HIV positive mothers can breastfeed exclusively?		
Yes	77	25.9
No	220	74.1
Total	**297**	**100.0**
I was afraid of infecting my baby that is why I didn't breastfeed exclusively?		
Yes	72	24.2
No	225	75.8
Total	**297**	**100.0**

From table 2, 157 (52.9%) of respondents said their culture prevented them from practicing, 105 (35.4%) of respondents said that their lack of education prevented them from exclusively breastfeeding their babies, 56 (18.9%) of respondents said that they suffered social stigmatization from their friends and this prevented them from exclusively breastfeeding their child., 176 (59.3%) of respondents didn't breastfeed exclusively because they didn't get support from their relatives/partners and 77 (25.9%) of respondents said they didn't know HIV positive mothers can breastfeed exclusively while 72 (24.2%) reported fear of infecting the baby with HIV virus through breastfeeding as a factor that influence the practice of EBF.

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Table 3: Relationship between different variables and non-compliance to exclusive breastfeeding practice among HIV positive mothers attending selected state hospitals in Lagos state tested using Chi-Square test

Variables		**Compliance with EBF practice**			**Chi-square**	**Df**	**P-Value**
		Compliant	**Not compliant**	**Total**			
Level Of Education	No formal education	4	10	**14**	1.071	3	0.000
	Primary	10	81	**91**			
	Secondary	40	98	**138**			
	Tertiary	52	2	**54**			
	Total	**106**	**191**	**297**			
I suffered social stigmatization from my friends and this prevented me from exclusively breastfeeding my child?							
Yes		7	49	**56**	1.966	1	0.000
No		99	142	**241**			
Total		**106**	**191**	**297**			
I didn't exclusively breastfeed my child because I hardly get support from my partner or relatives?							
Yes		17	159	**176**	2.003	1	0.000
No		89	32	**121**			
Total		**106**	**191**	**297**			
I didn't know that HIV positive mothers can breastfeed exclusively?							
Yes		16	61	**77**	4.738	1	0.029
No		90	130	**220**			
Total		**106**	**191**	**297**			

From table 3, it can be observed that there was a significant relationship between cultural practices and noncompliance to exclusive breastfeeding among HIV positive mothers attending selected state hospitals in Lagos state (df=1, P<0.001); there was a significant relationship between level of education and noncompliance to exclusive breastfeeding among HIV positive mothers attending selected state hospitals in Lagos state (df=3, P<0.001); there is a significant relationship between social stigmatization and discrimination and noncompliance to exclusive breastfeeding among HIV positive mothers attending selected state hospitals in Lagos state (df=1, P<0.001); there was a significant relationship between spousal and family support and noncompliance to exclusive breastfeeding among HIV positive mothers attending selected state hospitals in Lagos state (df=1, P<0.001); there was a significant relationship between maternal knowledge about HIV transmission and noncompliance to exclusive breastfeeding among HIV positive mothers attending selected state hospitals in Lagos state (df=1, P=0.029).

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DISCUSSION OF FINDINGS

From Table 1, majority of respondents are of ages 25-29years (51.2%) and 30-34years (18.2%) while 5.4% are of ages 20-24years This was expected considering the fact that the respondents in this study are nursing mothers/women of reproductive age. 73.1% of respondents are Christians while 26.9% are Muslims. This is a pointer that Christianity is widely been accepted in this region was thus reflected in the study. Also, it could be attributed to the fact that Christianity is the dominant religion in the southwestern part of the country as opposed to that seen in the northern region of the country. 63.3% are Yorubas while 5.8% are from other ethnicities. This was expected because Lagos state is a Yoruba dominated settlement in Nigeria. 75.8% are married while 10.8% are single and 13.4% are separated. This is an expected finding as most if not all nursing mothers are expected to be married as the act of bearing children is a key function of marriage. Also, 46.5% have attained secondary level of education, 18.2% have attained tertiary education while 4.7% have no formal education. This is alarming but was expected considering the poor attention given to female education in most rural settings in Nigeria and the high level of child marriages and early marriages which often interfere with education of the female child leading to high level of illiteracy among women when compared to their male counter parts. 52.2% of respondents are into trading while 7.4% are farmers. This was expected because Lagos state is the heart of commercial activities in Nigeria and as such trading and business generally is expected to be the dominant means of livelihood in this setting.

In the current study, figure 1 shows that. 35.7% of respondent only breastfed their babies while 64.3% practiced mixed feeding. This is an unacceptable level of practice/compliance as it is still low. The outcome of this study however goes against the findings of Aishat et al., (2015) and Gejo et al., (2019) that recorded high percentage of HIV mothers complying with EBF. With this findings, there is therefore need to address the factors that might have influenced the compliance and develop strategies to address them in other to improve compliance in the future. A lower level of compliance was observed in the study by Onubogu et al., (2015) where it was observed that the actual practice of EBF was 21% at six months. A contrasting finding was however observed in the study by Aishat et al., (2015) on factors influencing infant feeding choices of HIV positive mothers in southwestern, Nigeria where the practice of Exclusive Breast Feeding (EBF) was observed to be 61.0%.

Table 2 shows the respondents opinion on factors influencing non-compliance with exclusive breastfeeding among HIV positive mothers. In the current study, 157 (52.9%) of respondents said their culture prevented them from practicing EBF. This goes in line with the study of Nyoni et al., (2019) that reported that HIV positive women tends to comply with EBF if there is no conflicting culture against it. The findings also shows that 105 (35.4%) of respondents reported that their lack of education prevented them from exclusively breastfeeding their babies while 192 (64.6%) said otherwise. A similar observation was seen in the study by Onubogu et al., (2015) that reported that mothers who didn't breastfeed exclusively ascribed it to their lack of education This also comply with the findings of Rutto et al., (2019) that identified mothers level of education as part of

predictors to exclusive breastfeeding among HIV positive mothers. This means the importance of education cannot be overstretched.

Futhermore, in the current study, 56 (18.9%) of respondents agreed that they suffered social stigmatization from friends and this prevented them from exclusively breastfeeding their child. This goes in tandem with the findings of Odeny et al., (2016) and Nyoni et al., (2019) that documented stigma as a determinant to practice of exclusive breastfeeding. Also, 176 (59.3%) of respondents didn't breastfeed exclusively because they didn't get support from their relatives/partners while 121 (40.7%) said otherwise. Also, findings from Aishat et al., (2015) reveals support from spouses and relative as a key factor that serve as barrier against the practice of EBF. It is difficult to practice exclusive breastfeeding in situations where family members do not understand its value. Especially when this lack of support is from the spouse,

In addition, the outcome of this study shows that 77 (25.9%) of respondents reported they didn't know HIV positive mothers can breastfeed exclusively and 72 (24.2%) said they are afraid of infecting their baby. A similar finding was seen in a study carried out by Al-Mujtaba et al., (2016) where fear of transmitting HIV infection to babies during breastfeeding was documented as a barrier to EBF. Hazemba et al., (2016) documented that information women gets about safety of taking anti-retroviral drugs with breastfeeding their babies influence their decisions whether they will comply with EBF. They face challenges of inadequate information related to HIV and safe infant feeding. The choices can be easily made when the right knowledge is present or have been acquired.

The findings of this study shows there was a significant relationship between cultural practices and noncompliance to exclusive breastfeeding among HIV positive mothers attending selected state hospitals in Lagos state ($df=1$, $P<0.001$). This finding calls for a firm approach to addressing the dangers of such cultural rituals. A similar finding was observed in the study by Nyoni et al., (2019) that reported that EBF can be promoted if there is no cultural obstacles.There was also a significant relationship between level of education and noncompliance to exclusive breastfeeding among HIV positive mothers ($df=3$, $P<0.001$). In line with this finding was the findings of Onubogu et al., (2015) that identified that mother's educational status has a statiscal influence with EBF among HIV positive mothers.

This current study also shows that there was a significant relationship between social stigmatization and discrimination and noncompliance to exclusive breastfeeding among HIV positive mothers attending selected state hospitals in Lagos state ($df=1$, $P<0.001$). A similar finding was observed Aishat et al., (2015) & Paul & Alex-Hart, (2019) that identified fear of stigmatization as a factor that influence the choice of EBF.

There was a significant relationship between spousal and family support and noncompliance to exclusive breastfeeding among HIV positive mothers ($df=1$, $P<0.001$) This corroborate with the findings of Rutto, (2019) that identified husbands support as one of the predictor of EBF because,

it is the husband that will take final decision at home.Outcome of this study also shows there was a significant relationship between maternal knowledge about HIV transmission and noncompliance to exclusive breastfeeding among HIV positive mothers attending selected state hospitals in Lagos state (df=1, P=0.029). Al-Mujtaba et al., (2016) in a systematic review done reported maternal guideline knowledge as part of barrier to choice of EBF. Rutto, (2019) & Gejo et al., 2019) also identified knowledge as a predictor to EBF among HIV positive mothers

CONCLUSION

The outcome of the study shows that 35.7% of respondent only breastfed their babies while 64.3% practiced mixed feeding. Fear of transmitting HIV infection, Cultural factor, level of education, social stigmatization and discrimination, spousal and family support and maternal knowledge about HIV transmission are factors identified to influence non-compliance to EBF among HIV positive mothers. It is therefore germane to work on all those factors identified by individuals, policy makers, organizations and government to work towards curbing the factors identified in this study.

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