

CENTRE FOR INTERNATIONAL CHILD HEALTH

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Early and Abrupt Cessation of Breastfeeding

In The Nigerian Context:

Is This An Option For HIV Positive Women?

A

**DISSERTATION SUBMITTED IN PARTIAL FULFILMENT
FOR THE DEGREE OF MASTER OF SCIENCE IN MOTHER
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Dedication

This work is dedicated to HIV infected women and children in Nigeria
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ABSTRACT

PROJECT TITLE

Early And Abrupt Cessation Of Breastfeeding In The Nigerian Context: Is This An Option For HIV Positive Women?

RESEARCH QUESTION:

Is early and abrupt cessation of breastfeeding a feasible option for the reduction of mother-to-child-transmission (MTCT) of HIV in Nigeria?

OVERALL AIM:

To explore the process and feasibility of abrupt and early cessation of breastfeeding in the Nigerian context with aim of using the information gathered to improve the effectiveness and acceptability of messages and services for mother-to-child-transmission (MTCT) reduction in Nigeria.

OBJECTIVES:

To define abrupt and early cessation of breastfeeding (early weaning) in the Nigerian context, explore the process of abrupt and early cessation of breastfeeding in Nigeria and to find out how HIV infected mothers can be supported by health workers in this practice.

DESIGN AND METHODS:

60 interviewer directed structured questionnaires administered to women, 2 focus group discussions with women and 18 in depth key informant interviews with health workers.

SETTING:

Ahmadu Bello University Teaching Hospital, Kaduna state of Nigeria. Kaduna state is situated in the geopolitical north western zone of Nigeria, has a population of 5,001,258. Official language spoken is English.

SUBJECTS:

Women who have at least 2 children and health workers who have been involved in the care and support of HIV infected women and infants.

RESULTS:

Breastfeeding and weaning practices in Nigeria can be easily adapted to suit early and abrupt cessation of breastfeeding requirements. Women are willing to accept the practice if health workers tell them it is a good option for reducing MTCT of HIV by breastfeeding. Health workers expressed in strong terms that early and abrupt cessation is medically unacceptable and unethical in Nigeria and would prefer to explore other methods of reduction of MTCT that entail exclusion of breastfeeding in spite of all the problems exclusion of breastfeeding might pose in a developing country

CONCLUSIONS:

With a little support early and abrupt cessation is feasible culturally acceptable to Nigerian women but it is unacceptable health workers who strongly advocate the use of other preferred options.

RECOMMENDATIONS:

Health workers together with the community to urgently develop feasible and acceptable methods of reduction of MTCT of HIV through breastfeeding.

To train more health workers in HIV/AIDS counseling with particular emphasis on infant feeding and lactation management

Increase accessibility and affordability of voluntary counseling and confidential testing of HIV.

KEY MESSAGES

What is already known on this topic?

MTCT of HIV by breastfeeding accounts for the high rates of late postnatal transmission of HIV in children in developing countries.

Not many options are available for the reduction of MTCT by breastfeeding in developing countries.

Mathematical models suggest that early and abrupt cessation of breastfeeding may be a valuable method for the reduction of MTCT for women who cannot afford replacement feeding in developing countries.

This practice is largely untested, is it feasible and culturally acceptable to women in these counties?

What this study adds:

Women in Nigeria are ready to accept any practice that can reduce MTCT of HIV in their children – including early and abrupt cessation of breastfeeding. The decisions women make concerning such difficult health problems are largely health worker dependent.

Health workers in Nigeria expressed in strong terms that early and abrupt cessation of breastfeeding is unacceptable to the medical community and therefore prefer to explore other options.

Various modifications of surrogacy and where not available cow/goat milk as preferred options of replacement feeding.

GLOSSARY OF ACRONYMS

AIDS – Acquired immunodeficiency syndrome.

ANC – Antenatal clinic

AZT – Azidothymidine (Zidovudine)

FGD – Focus group discussion

FMOH -Federal Ministry of Health

HIV – Human immunodeficiency virus

FGDS – Focus group discussions

MCH – Maternal child health

MTCT – Mother to child transmission.

PMTCT – Parent to child transmission.

VCCT – Voluntary counselling and confidential testing.

NASCP - National AIDS/STD Control Programme.

Chapter 1: Introduction and Literature Review

1.1 Introduction:

In 1985, Ziegler et al., reported evidence supporting; "postnatal transmission of AIDS-associated retrovirus from mother to infant". This was demonstrated in an infant born to a breastfeeding mother who got HIV-infected postnatally through blood transfusion (Ziegler et al., 1985). Subsequently evidence of breast milk transmission was also reported in breastfeeding mothers who got infected postnatally through heterosexual sex, an infant breastfed by a HIV infected wet nurse or infants fed from pooled milk banks (Coleburns et al., 1988; Hira et al., 1990; Stiehm and Vink 1991; Van de Perre et al., 1991; Palasanthiran et al., 1993; Nduati et al., 1994).

This development has a devastating implication for international public health advances and policies because in the last 3 decades there has been remarkable improvement in child health survival and welfare due to the promotion of breastfeeding (Victora et al., 1987; Habicht et al., 1988; Goldman 1993) The HIV pandemic has the potential of reversing child health gains world-wide (especially in Africa) since children are at risk of acquiring HIV infection through an infected mother (UNICEF/UNAIDS, 1998a). The public health impact of this, especially in Africa where HIV prevalence and fertility rates are high and infectious diseases and malnutrition are the major cause of infant mortality is very grave (UNICEF/UNAIDS 1998a).

Since then, governments, policy makers and international health organisations have been saddled with the task of providing clear guidelines on how HIV transmission through

breastfeeding can be reduced on one hand and on the other how exclusive breastfeeding for infants of HIV negative mothers and mothers of unknown sero-status can be promoted, protected and supported (UNICEF/UNAIDS, 1998a). Another issue that needs to be addressed or considered is the risk and fear of mortality, morbidity and stigmatisation that can result from exclusion of breastfeeding (Piwoz and Preble, 2000).

1.1.1 Research Question:

With the above in mind, the research question for this study is:

Is early and abrupt cessation of breastfeeding a feasible option for the reduction of mother-to-child-transmission (MTCT) of HIV in Nigeria?

1.1.2 Overall Aim:

To explore the process of abrupt and early cessation of breastfeeding in the Nigerian context with the aim of using the information gathered to improve the effectiveness and acceptability of messages and services for mother-to-child-transmission (MTCT) reduction in Nigeria.

1.1.3 Specific Aims:

To define early and abrupt cessation of breastfeeding in the Nigerian context.

To explore the process of abrupt and early cessation of breastfeeding in Nigeria.

To find out how HIV infected mothers can be supported by health workers in this practice.

To use the information gathered to improve the effectiveness and acceptability of messages and services for mother-to-child-transmission (MTCT) prevention in Nigeria.

1.2 Background:

The WHO, UNICEF and UNAIDS issued a joint policy statement concerning HIV and infant feeding in 1997. The statement took account of available scientific evidence of transmission through breast milk, which promoted fully informed choice of infant feeding methods by HIV positive mothers. Following the statement, a set of guidelines were further released in 1998 to help decision makers and health care managers and supervisors define what action to take in the diverse circumstances they will frequently find themselves in their countries (UNICEF/UNAIDS, 1998b). The guideline recommended - for the first time - that HIV positive mothers who decide not to breastfeed should be provided the option of replacement feeding. Replacement feeding includes the use of infant formula (commercial or home-prepared); modified full cream powdered formula; heat treatment of expressed breast milk, wet-nursing by women who are tested HIV negative or modified breastfeeding practices such as exclusive breastfeeding followed by early cessation of breastfeeding . Early cessation of breastfeeding, while affording the infant the benefits of breastfeeding also reduces the duration of exposure to and hence the risk of breast milk transmission of HIV.

It is an important strategy in itself to explore the feasibility of early and abrupt cessation as an option for reduction of postnatal HIV transmission. Is it feasible, culturally acceptable, locally and individually adaptable and resulting in reduced MTCT transmission of HIV in Nigeria? Without careful testing, modelling and adaptation of this new guideline to the local circumstances prevailing in Nigeria, the likelihood is that mothers will abandon the whole exercise (Piwoz et al., 2001).

1.3 Magnitude of the Problem:

Approximately 600,000 children are infected with HIV worldwide every year. 90% of these children get infected through their mothers - mother to child transmission (MTCT). The remaining 10% of children get infected through transfusion with contaminated blood and blood products, contaminated sharp instruments and sexual contact (UNAIDS/WHO, 1998a). MTCT of HIV -now also referred to as parent to child transmission (PMTCT), to stress the role of men in HIV transmission to children- is the most important cause of HIV in children below the age of 10 years. It is responsible for about 10% of all new HIV infections worldwide (UNAIDS, 1998). By the year 2000, AIDS had caused the death of more than 3 million children worldwide and one million more are currently infected (UNAIDS, 2000).

Women and children in Africa bear the greatest burden of the HIV pandemic worldwide. Out of every 10 HIV infected women worldwide, 8 are African women while 9 out of every 10 newly infected children are African children (UNAID/WHO, 1998a). In the region, West and Central African countries have the lowest HIV prevalence rates at 10-15% in urban areas and 1-5% in rural areas. Prevalence rates of 15-25% are found in urban areas and 5-10% in rural areas in East African counties. By far the highest prevalence rates are found in South African countries where prevalence rates are as high as 40% in some areas (UNAIDS/WHO, 1998a). In contrast, in Caribbean, Latin American and Asian women, prevalence rates range between 0.5-5%. However Asia might be the next continent to experience an exponential increase in the prevalence rates of HIV in the near future (UNAIDS/WHO, 1998a).

In Nigeria, HIV prevalence rates in women attending antenatal clinics are less than 10% as compared to 40% in South Africa; however, due to the large population of the country (100-120 million compared to about 40-50 million in South Africa), an increasingly large number of HIV infected women are likely to turn up at antenatal clinics.

MTCT occurs in-utero (during pregnancy), intrapartum (during labour and delivery), and postnatally (during breastfeeding). It is important to note that not all HIV-infected women who breastfeed pass on the virus to their babies. The highest rates of MTCT in the absence of interventions like antiretroviral (ARV) drugs are found in women in developing countries (25-45%), while relatively lower rates are found in industrialised countries (15-25%) (Msellati et al., 1995; European Collaborative Study, 1992). This means that even in the presence of exposure during breastfeeding, 55-75% of infants born to HIV infected mothers will escape getting infected with the virus (Piwoz, 2000). It is likely that the much higher rates of HIV seen in African women may be associated with the high rate of 'non exclusive' and prolonged breastfeeding predominantly practiced in Africa (The Working Group on MTCT in Africa, 1995; Dabis et al., 1993).

1.4 Timing of Transmission:

Studies have been carried out to determine the timing of HIV transmission but to date timing of HIV transmission cannot be determined with certainty. According to Bryson et al., (1992), a child may be classified to have been infected in-utero if HIV-1 genome is detected within 48 hours of delivery by polymerase chain-reaction test (DNA-PCR) or viral culture. Intrapartum MTCT of HIV can be assumed to have taken place if HIV-1 genome is not detected within the first 48 hours of delivery but infants became positive in

subsequent blood samples taken within 1 week to 3 months of delivery. Postnatal MTCT may have taken place in breastfed infants if HIV-1 genome is not detected in the first 3 months of delivery but became positive in samples taken after 3 months (Bryson et al., 1992). Recently the convention among researchers is to use 2 months (60 days) instead of 3 months as the cut of point for intrapartum and postnatal transmission (Piwoz, 2000). Timing HIV transmission therefore requires performance of at least 2 carefully timed PCR tests. This classification has limitations in that it is very difficult as well as expensive to determine the optimal periods for collecting infants' blood for testing (Piwoz, 2000). Using this classification, authors have attempted to estimate the relative contributions of the different modes of transmission. It is estimated that of the 15-25% of women who pass on HIV to their babies in industrialised countries (where exclusion of breastfeeding is the practice), about 35% of their infants get infected in-utero while 65% get infected in late pregnancy and or during delivery (Rouzioux et al., 1995). According to Piwoz's calculations and analyses of various African studies, of the 25-45% of women who pass on HIV to their babies in developing countries, 5-10% of MTCT occur in-utero in the absence of ARV drugs; 10-20% during the intrapartum period and 10-20% postnatal (Piwoz, 2000).

Figure 1.4 RELATIVE CONTRIBUTIONS OF THE DIFFERENT MODES OF TRANSMISSION IN BREASTFED AND NON-BREASTFED INFANTS.

	Partially breastfed/breastfed infants (developing countries)	Non-breastfed infants (industrialised countries)
Total transmission	25-45%	15-25%
During pregnancy	5-10%	5-8%
During delivery/Late	10-20%	10-15%
Postpartum, by	10-20%	0

Factors which may account for this difference in modes of transmission include maternal health, delivery practices and most important of all breastfeeding (UNICEF/UNAIDS, 1998b). There is a greater risk of breastfeeding transmission in first 6 months of life compared to the remaining period of breastfeeding (John GC et al., 2001), reasons for this may be a combination of factors such like immaturity of infant gut and immune system, higher volume of breast milk ingested, higher frequency of breast inflammation and viral characteristics (The Working Group on Mother-Child Transmission, 1995; Ryder and Behets, 1994).

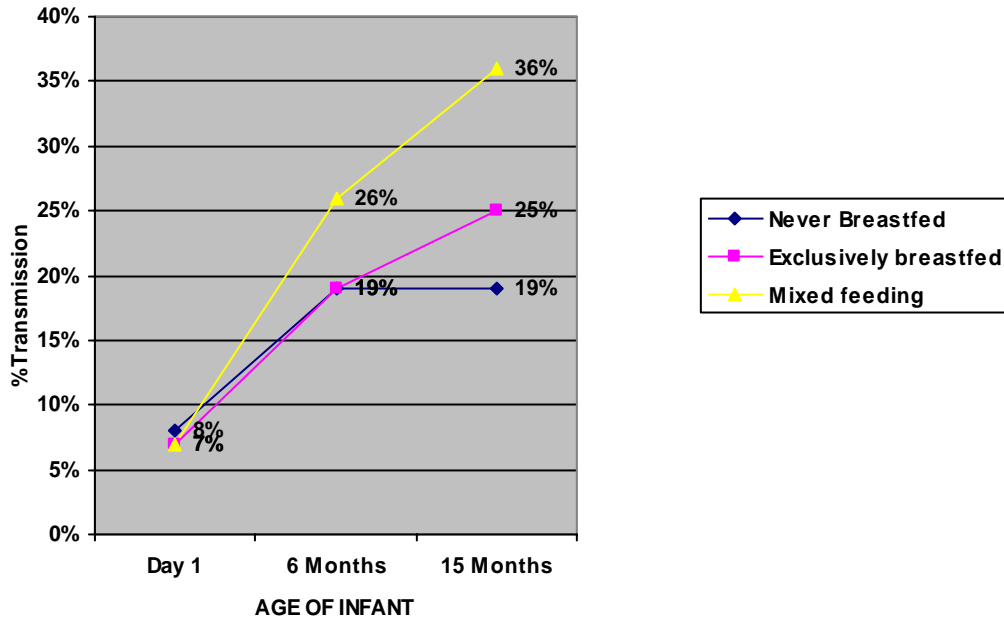
1.5 Evidence for Breast-Milk Transmission:

Almost all MTCT occurs with the HIV-1 strain and MTCT with HIV-2 is very rare (Dunn et al., 1992). In a study in Cote d'Ivoire, no late postnatal transmissions occurred in infants born to 122 HIV-2 infected mothers as opposed to HIV-1 or HIV-1 and 2 infected mothers. The risk of postnatal (transmission) is almost twice higher in recently infected mothers when compared with mothers with established HIV infection (Dunn et al., 1992). This is probably due to the high levels of virus found in recently infected mothers (Senturia, 1987). Dunn et al., (1992) in a meta-analysis, showed that the additional risk of MTCT posed by breastfeeding amongst mothers with established HIV was approximately 14% (a range of 7-22%); this figure may however be much higher in women who breastfeed for longer periods since it will result in longer exposure to HIV infection.

Exclusion of breastfeeding in industrialised countries has drastically reduced MTCT (Nduati et al., 2000). In a randomised controlled trial in Kenya, which looked at the effect of breastfeeding and formula feeding on the transmission of HIV-1 in infants born to HIV-positive mothers, the estimated rate of transmission of HIV through breastfeeding was 16.2% while exclusion of breastfeeding prevented 44% of infant infection (Nduati et al., 2000). A study in Durban showed that infants who were exclusively breastfed for at least 3 months had no excess risk of HIV at 6 months of age when compared to infants who were not breastfed (Coutsoudis, 1999). In fact, a significantly lower rate of HIV transmission was reported in exclusively breastfed infants compared to infant who were partially breastfed (mixed fed) in early infancy (Coutsoudis et al., 2001).

According to John et al., (2001), although 75% of transmission through breastfeeding occurs during the first six months of life, transmission continues throughout the period of breastfeeding. Prolonged breastfeeding is therefore likely to increase the risk of breastfeeding. The additional risk of infection after 3 months of age (late postnatal transmission) ranges from 4-12% in several African studies (Simonon et al., 1994 Ekpini et al., 1997; UNAIDS/UNICEF, 1998b) - This may possibly account for about 50% of breastfeeding transmission (UNAIDS/UNICEF, 1998a).

FIGURE 1.5 METHOD OF FEEDING AND HIV TRANSMISSION IN INFANTS OF HIV INFECTED MOTHERS.



This finding if proved elsewhere can substantiate the practice of early and abrupt cessation of breastfeeding as an infant feeding option available for HIV-infected mothers in developing countries.

1.6 Mechanism of Breast-Milk Transmission of HIV-1:

The mechanism of breast-milk transmission of HIV is yet to be fully understood. Speculations are that infants get infected by consuming cell free HIV (HIV RNA) and cell associated HIV (HIV DNA) found in HIV-infected breast milk. An earlier theory explaining the mechanism of transmission was the 'all mucosal' hypothesis (Van de Perre, 1999), which hypothesises that the portal of entry for the virus seems to be any breach in the integrity of the epithelium of the oral tonsillar or intestinal mucosa (this

may be caused by trauma due to the introduction of food pathogens during mixed feeding); small defects in the junctions between epithelial cells caused by nutritional deficiencies or other pathogens (Van de Perre, 1999). Recent studies have proposed that inflammatory cytokines, involved in sub-clinical mastitis (Filteau et al., 1999), increases intestinal permeability, allowing HIV to enter the infant circulation. Intestinal permeability is not significantly increased by the practice of mixed feeding (Willumsen, 2001). In the Coutsooudis et al. study in South Africa, it was also reported that intestinal permeability in infants on mixed feeding never increased in comparison to that of exclusively breastfed infants (Rollins et al., 2001). Thus changes in intestinal permeability due to mode of feeding did not explain the possible protective effect of exclusive breastfeeding on mother-to-child transmission of HIV.

Factors that may increase the risk of breastfeeding transmission of HIV include: a high viral load, low CD4 count, viral characteristics (Nduati et al., 1995) and fissured nipples (Nduati et al., 1997). Poor breastfeeding practices such as poor attachment of infant's mouth to mother's nipples, breastfeeding in the presence of mastitis or cracked nipple may also facilitate the breast milk transmission of HIV (Van de Perre, 1992; Ekpini et al., 1997).

1.7 Beneficial Properties of Breast-Milk:

Postnatal MTCT is complex and emotional because breast milk is one of the most important child survival and early childhood development interventions (Preble and Piwoz, 1998). Breast milk contains immunoglobulins and other immune compounds which confer anti-infective properties to breast milk, thus protecting against diarrhoeal diseases, pneumonia, otitis media and other potentially fatal infections (Victoria, 1987;

Huffman, 1990; Goldman, 1993). It is assumed that the breast milk of HIV-infected mothers also confers protection against these child diseases (UNICEF/UNAIDS, 1998a). Though secretory IgA antibodies are the main component of humoral immunity in breast-milk (Welsh, 1979), HIV-1 specific IgA was rarely detected in the breast-milk samples of HIV infected women in a Rwandan study (Van de Perre, 1993). IgG is the most frequently detected HIV-specific antibody in breast milk followed by IgM. The study in Rwanda (Van de Perre, 1993) suggests that the increased production of non-specific IgM (which is involved in the lysis of HIV-1 infected cells) in the mammary gland of HIV infected women, may confer some element of protection against breast milk HIV transmission. Human lactoferrin has also been shown to have inhibitory activity against HIV in-vitro (Harmsen et al., 1995). Besides anti-infective and nutritive value, breast milk also has substantial psychological benefits to both mother and infant, family planning benefits and protects against breast and ovarian cancer.

1.8 Current Infant Feeding and Weaning Patterns Versus The Concept Of Early And Abrupt Cessation Of Breastfeeding: Is It Feasible?

To practice early and abrupt cessation of breastfeeding, the WHO/Inter Agency Task Team (IATT), 2001 recommends that the transition between exclusive breastfeeding and early cessation of breastfeeding should be kept as short as possible, -"early and abrupt cessation (Piwoz and Preble 2001) - bearing in mind that mixed feeding during this period carries a 70% greater risk of MTCT (Coutsoudis et al., 2001). On the other hand, the potentially negative nutritional, psychological and medical consequences of abrupt cessation of breastfeeding on the mother and infant (for example, refusal to eat, malnutrition, excessive crying, psychological trauma etc in infants and breast

engorgement, depression and even increased risk of unwanted pregnancy in mothers) need to be taken into consideration. This modified pattern of breastfeeding seems to be promising. Mathematical models and analysis suggest that it may reduce breastfeeding transmission by about 50% (Piwoz, 2000). But it is untested and presents a great challenge especially in Africa because it conflicts with the normal breastfeeding pattern. Though African women seldom practice exclusive breastfeeding (Haggerty and Rutstein, 1999), most infants are breastfed well into their second year of life. Almost 3 quarters of infants would have been offered water, porridge or other native drinks by the time they are 3 months old (Haggerty and Rutstein, 1999). While the idea of abrupt cessation of breastfeeding is not alien to African women, literature suggests that it is commonly practiced in the second year of life (Haggerty and Rutstein, 1999) when the child would have become accustomed to other semi-solid and solid foods (Millard and Graham, 1985).

The current infant feeding patterns predominantly practiced in Africa may pose a great challenge to the implementation of early and abrupt cessation of breastfeeding. One of these infant feeding practices is high frequencies of breastfeeding. Infants are fed on demand; frequency of feeding in 24 hours may be as high as 21 times/day in Ghana (Lartey et al., 1999). Another feeding practice that might pose a challenge is frequent night feeds since most infants sleeping in the same bed with mother breastfeeding (DHS Kenya, 1993).

Breast milk is the major source of adequate nourishment for African children from birth to early childhood; the implementation of early cessation of breast-feeding may therefore worsen the already high prevalence of malnutrition (WHO, 1998). Lack of access to

clean drinking water and prevailing poor hygienic conditions (UNICEF, 2000) for safe replacement feeding and the cost of breast milk substitutes further complicate the feasibility of early and abrupt cessation of breastfeeding in Africa.

The process of cessation of breastfeeding (weaning) begins with the gradual introduction of liquids and other foods, and ends with the last breastfeed (Piwoz and Huffman, 2001).

Riordan and Auerbach, (1993), defined 3 types of cessation of breastfeeding namely:

gradual, deliberate and abrupt cessation of breastfeeding. As the name implies, gradual cessation of breastfeeding is prolonged and takes place over several weeks to months.

This is common practice in Africa and is the least psychologically and physiologically traumatic both for mother and infant since it affords a gradual reduction in the number of feeds. For various reasons ranging from desire to resume work, desire for another child, cultural norms etc mothers may ‘deliberately’ decide to stop breastfeeding at a specified targeted time. This can be done either rapidly or gradually. In Africa the impact of the abrupt cessation on both mother and infant is reduced since it often occurs in the second year of life (Millard and Graham, 1985). Abrupt cessation of breastfeeding is frequently practiced in Africa in unavoidable circumstances forced on mother and infant e.g. when a breastfeeding mother becomes pregnant or when a child attains a certain culturally unacceptable age to breastfeed (Keith, 1991; Gray, 1996).

Frequently practised techniques for abrupt cessation of breastfeeding are: application of bad tasting substances such as aloe or turmeric to the breast (Thompson, 1967); separation of mothers and infant –infant may be sent to a female relative usually a grandmother, who may sometimes offer her breast to pacify the infant (Thompson, 1967); provision of special foods or prevention of access to the breast by wearing a tight or one

piece dress (Keith, 1991). The success rates of abrupt cessation techniques practiced in Africa are low (Almedom and de Waal, 1990). Most mothers sooner or later relactate when faced with the pressure of a crying baby. Relactation is a potentially dangerous practice in the context of breast milk transmission of HIV; it increases the risk of transmission since the infant is already at this time on replacement feeding, thus resulting in mixed feeding which is associated with increased rates of MTCT (Coutsoudis et al., 2001). Locally available methods to prevent this practice need to be determined if early and abrupt cessation of breastfeeding is to work. Other than the fact that feasibility seems bleak, early and abrupt cessation also has health and psychological risks such as dehydration, refusal to eat, malnutrition, loss of attachment and sucking, increased risk of neglect in infants and engorgement, mastitis, increased risk of unwanted pregnancy, depression and stigma in mothers (Millard and Graham, 1985).

In spite of the challenges and difficulties posed by early and a cessation of breastfeeding, it is worth exploring since a review of various mathematical models show that the risk of infant mortality from unsafe feeding practices in developing countries far outweigh the risk of breastfeeding exclusion (Piwoz and Preble, 1998). Proponents of early and abrupt cessation of breastfeeding argue that, though exclusive breastfeeding should be encouraged even in infants of HIV-infected mothers, there is an optimal point during lactation when the increased risk of HIV transmission from prolonged breastfeeding may outweigh the protective benefits of breast-milk (Nagelkerke et al., 1995; Kuhn and Stein, 1997). Kuhn and Steins suggested optimal period of breastfeeding is 3 months while Nagelkerke suggests 3-7 months. The WHO pooled analysis concludes that infants who are not breastfed have a 6 fold greater risk of dying from infectious diseases in the first 2

months of life than those who are breastfed, but that protection declines steadily after 2 months suggesting that the optimal age for cessation of breastfeeding in HIV-infected women could be about 2 to 3.

FIGURE 1.8: INFANT MORTALITY ASSOCIATED WITH NOT BREASTFEEDING IN THE FIRST YEAR OF LIFE: A POOLED WHO ANALYSIS.

	<i>Death cases</i>	<i>Pooled odds Ratio (95% CI)</i>
0-1	125	4.2(2.8-6.3)
2-3	144	3.6(2.4-5.5)
4-5	119	2.5(1.6-4.0)
6-8	149	1.7(1.1-2.5)
9-11	68	1.4(0.8-2.4)

ADAPTED FROM WHO COLLABORATIVE STUDY TEAM, 2000.

1.9 Strategies for Early and Abrupt Cessation of Breastfeeding:

The UNICEF/UNAIDS, (1998) recommended strategies for the implementation of early and abrupt cessation of breastfeeding are: exclusive breastfeeding for about 6 months; a short period of transition when the infant gets accustomed to new infant feeding patterns and finally exclusive replacement feeding with adequate breast milk substitute. Studies are currently going in Zambia to test this strategy (Piwoz and Huffman, 2001). The suggested process of making the transition between exclusive breastfeeding and exclusive replacement feeding is:

Starting the transition period at about 5 months of age.

Expressing breast milk and the use of a cup and spoon to feed infant with expressed breast milk.

Finding alternative means of comforting infant e.g. sucking infants or mothers finger or a clean toy, skin-to-skin contact and massage, avoiding night time feeds by feeding infant well before he/she goes to sleep.

Monitoring infants' urine output to ensure that infant is not dehydrated.

Commence exclusive replacement feeding and stop exclusive breastfeeding on the same day, do not practice mixed feeding at any time.

Provide mother with support to avoid breast engorgement, unwanted pregnancy and provide infant feeding counselling.

It cannot be overemphasized that for early and abrupt cessation of breastfeeding to succeed there is a dire need to empower health workers and counsellors to provide continuous information, guidelines, and support for families and mothers who choose to practice this option.

Chapter 2: Research Design and Methods

The study was a cross sectional study using both qualitative and quantitative methods of data collection. Qualitative methods are useful for exploration of behaviour or culture for the purpose of discovering the way people reason. Understanding the context of people's experiences helps the researcher to gain insight into their pattern of behaviour (Denscombe M, 1998).

All data was collected by the principal investigator to reduce bias. Qualitative data was collected using focus group discussions (FGDS) and semi structured in depth key informant interviews, while quantitative data was collected using structured interviewer directed questionnaires.

The specific site for data collection was the paediatric department of the Ahmadu Bello University Teaching Hospital (ABUTH) Kaduna state. Data was also collected by key informant interviews from health workers in the obstetrics and gynaecology (O and G) department. The study was conducted over a period of six weeks.

2.1 Study Site:

With a population of 100-120 million people Nigeria is the largest country in sub Saharan Africa. It had a GDP of 41.3 billion dollars and a GNP/capita (\$) of 300 in 1998 (World Bank, 2000). The results of the 2000 seroprevalence survey indicate that the overall national prevalence rate of HIV in Nigeria is 5.8% (NASCP-FMOH, 2000). About 3 million Nigerians were infected by HIV in 2001 (NASCP-FMOH, 2001).

Kaduna state carved out of the defunct North Central State in 1976 is situated in the geo-political northwestern zone of Nigeria. It has the second highest prevalence rate of HIV (8.1%) in the country (WHO, 2000). The 1991 census places the population of the state at 5,001,258 (National Population Commission Programme, 1991). This together with the presence of 17 tertiary institutions, mining activities of mineral deposits, location of the popular annual Kaduna International trade fair has attracted a lot of administrative, commercial and investment activities from within and outside Nigeria. The state capital also called Kaduna was the capital and administrative headquarters of the former northern Nigeria. The state is made up of 23 Local Government Areas (see fig 2.1) and about a third of the State's population are located in the major centres of Kaduna and Zaria. The state is relatively well served with health facilities. It has a total of 601 primary health care facilities, 6 general hospitals and a children's specialist hospital and a large 2 unit teaching hospital (ABUTH) Kaduna state. At the time of the study, ABUTH had just been designated as one of the 3 sites for the proposed sites for the PMTCT pilot project in Nigeria.

FIGURE 2.1c BUSY ENTRANCE TO THE ABUTH KADUNA: STUDY SITE.



2.2 Study Population:

The study population for this study included:

- € Health workers who - besides being HIV/AIDS counsellors/lactation managers are - particularly interested in the care and support of HIV positive women. They included:- 5 paediatricians, 4 obstetricians/gynaecologists, 2 nutritionists, 2 senior midwives, 2 paediatric nurses, 1 research/ community nurse, 2 community health workers. One paediatrician and one obstetrician/gynaecologist interviewed were also breastfeeding mothers. The project manager of the proposed PMTCT pilot study was one of the paediatricians interviewed.
- € Women bringing their children to the paediatric out patient department (POPD) of the ABUTH

2.3 Sample Size and Sampling:

The sample size for the questionnaire was proposed to be 40. This figure was arrived at taking into consideration the time limit for the study and the fact that only that the principal investigator was going to be administering the questionnaires (to limit interviewer bias). However I was able to administer up to 60 questionnaires by the end of the study. The sampling method of incidence density (where you wait in the clinic and administer as many questionnaires that you can in any given day) was used to obtain the sample size.

The standard sample size of 8 was used for each focus group discussion while the sample size for the key informant interviews was determined by the method of sampling to redundancy. In this sampling method you ask the same questions to different individuals until no new opinions or suggestions are elicited. The sample for key informants was obtained from a pool of health workers involved the care and support of HIV positive women.

These sampling methods have the potential of introducing bias into a study, but considering time constraints these were the most suitable methods for the study.



**FIGURE 2.3:
WOMEN
ATTENDING POPD
CLINIC WITH
THEIR INFANTS.**

2.4 Research Tools Development and Data Collection:

Development of research tools started while in CICH and continued on site. It was evident the study had to be 2 phased (qualitative and quantitative) since I had set out to measure practices and explore experiences and culture.

2.4.1 Quantitative Aspect:

2.4.1a Development of Questionnaires:

A lot of ideas about the line of questions to develop came from my extensive literature review, discussions with my supervisor and Dr Carol Williams (Course director breastfeeding policy and practice module CICH).The questionnaire was meant to gather information on prevalence and types of weaning and breastfeeding practices so I needed to speak to women who were currently breastfeeding or had recently weaned so that they can give first hand information. Questions on breastfeeding/weaning practices were asked for 2 children in each woman. This is because, it was anticipated that the child that was brought to the POPD might not have been weaned yet in which case I could still get information on what the woman did in the previous child. It also afforded the opportunity to find what was happening to breastfeeding /weaning practices over time. So questions were asked on ‘this infant’ (meaning the infant brought to the POPD) and ‘previous infant’ (meaning the immediate older sibling). Questions on HIV were left to the very end so as not to bias responses Two questions regarding HIV were asked, one on the knowledge of transmission of HIV and the other on whether the women were aware of their HIV status (here they were only required to answer- yes, no or I don’t want to answer, not

to actually reveal their HIV status). Many of the questions were multiple response questions. The questionnaire was finalised after piloting among women in the community. The final version is shown in appendix C.

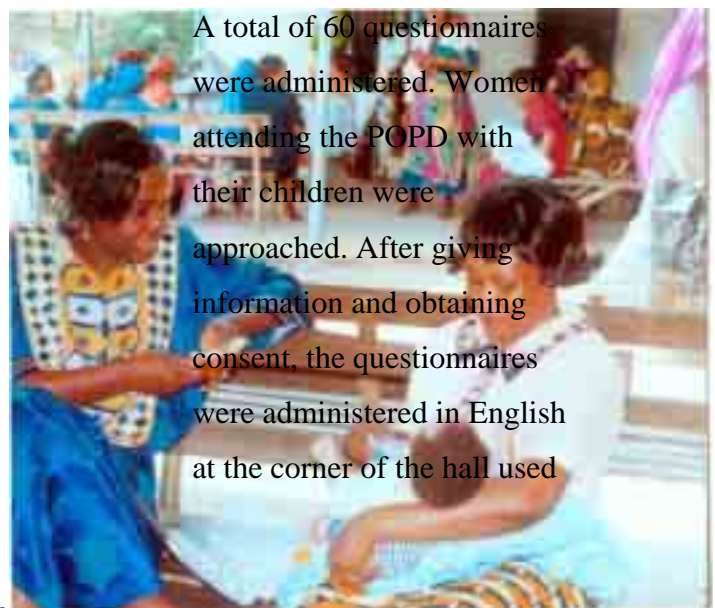
2.4.1b Data Collection:

Questionnaires were administered over a period of 3 weeks. The clinics which were usually very rowdy held twice a week, women were usually at the clinic by 8.00am and may not start leaving till about 2.00pm by which time they would be tired and irritable

2.4.1c Inclusion/Exclusion Criteria:

The proposed inclusion/exclusion criteria was - women bringing a child who is one year or less and have one or more other children whom they have breastfed. This had to be changed - to women bringing a child and have one or more other children whom they have breastfed. This modification became necessary so as to be able to reach the required target sample size of at least 40 women for the questionnaires.

2.4.1d Administering a Questionnaire:



A total of 60 questionnaires were administered. Women attending the POPD with their children were approached. After giving information and obtaining consent, the questionnaires were administered in English at the corner of the hall used

for the clinic. Here we were able to get enough privacy and the women were at the same time able to keep an eye on their position on the queue while waiting for their turns to see health workers.

It took about 20 to 25 minutes to administer each questionnaire. Photographs were taken with 2 respondents after getting their consent.

2.4.2 Qualitative Aspect:

2.4.2a Development Of Focus Group Discussion And Key Informant Interview Question Guide:

A set of questions were developed to explore the current breastfeeding and weaning practices in the community with particular emphasis on the prevalence and methods of early and abrupt weaning, opinion on exclusive breastfeeding, HIV and breastfeeding, feasibility and acceptability of early and abrupt cessation of breastfeeding in the context of HIV and possible strategies for the implementation of the practice. Key informant interview question guides were developed to find out (from their experiences and knowledge) what breastfeeding and weaning practices were and their opinion on the feasibility and support available from health workers for the implementation of this practice. Themes that kept arising during interviews were further explored at next sessions of data collection.

2.4.2b Focus Group Discussions (FGDS):

FGDS were held in the third week of the study.

It was impossible to hold FGDS during clinic days due to the rowdy nature of the clinic day; therefore, after enlisting the women into respective focus groups a convenient date

and venue was fixed for each FGD. FGD I was conducted in English, one of the women enlisted into FGD II indicated that she was not very fluent in the English language so it was decided with consent of other members of the group that FGD II would be conducted in Hausa language (the principal investigator is fluent in Hausa language).

The FGDS were moderated/facilitated by the principal investigator. There was a FGD assistant who helped with operating the tape recorder, a person to record and observe all the proceedings of the FGDS (including non verbal communications), and a child minder to help take care of children if the need arose.

2.4.2c Conducting a FGD:

On the day of a FGD, the FGD team arrived the venue about 30 minutes before time to



arrange the seating, test all equipment and arrange the snacks for the participants.

Many of the women came with their infants. Each FGD discussion started with a welcome, explanation of the

FIGURE 2.4.2c: WOMEN DURING FGD.II

purpose of the FGD

and introduction of all persons at the FGD. Open ended questions were asked to encourage wide ranging discussions; however topic list guides and question prompts were used (see appendix D) to minimise researcher imposed structure but maximise researcher involvement. The women were relaxed and were happy to express themselves

freely. At the end of each FGD, questions were entertained and snacks distributed. Each FGD lasted about 50 to 60 minutes. About 3 to 4 women stayed back for more discussions after each FGD.

2.4.2d Key Informant Interviews:

Key informants were contacted and dates fixed for interviews at the onset of the study.. All key informant interviews were held in private offices within ABUTH in the 4th to 5th week of the study. Interviews were in-depth and semi structured using topic list guides and question prompts (see appendix E). Each interview lasted about 30-45 minutes.

2.5 Data Recording and Analysis

2.5.1 Quantitative Data

All the question data was feed into SPSS version 11 by the principal investigator. First variable names, value, labels were entered in the data view. Questions that required responses on 'this' and previous infants, and multiple response questions were all entered as separate variables so as to facilitate good analysis. There were 106 variables in all. Cleaning of data was done manually by carefully checking case processing summary and frequency tables. Tables were generated to display frequencies, percentages, cumulative percentages, means, and standard deviations and cross tabulations. The results were compiled and interpreted with the help of tables bar and pie charts. Some variables were compared between 'this' and 'previous' infants.

2.5.2 Qualitative Data

All FGDS and interviews were tape-recorded (with a back up copy for the FGDS). All transcriptions were done by the principal investigator except for FGD II, which was

translated and transcribed by the FGD ‘recorder’. FGD II was translated to English and back translated and compared by the FGD ‘recorder’ and the principal investigator.

Analysis started during the period of data collection and was on going. A log book was kept for making brief notes of emerging themes through out the period of data collection. Each tape was listened to and reflected upon soon after a session. This together with entries into the logbook informed development/refinement of questions, categories and themes that were further investigated in subsequent sessions. Following this on going preliminary analysis, a manual search of themes and coding of transcribed data was done. A table was made to categorise statements that illustrated themes and sub themes that I had developed. This was followed by reduction and interpretation of themes and categories.

2.6 Risks and Benefits of the Study:

The study had no physical risks; there was a potential psychological risks associated with discussing the issue of HIV and breastfeeding in this community where there is still a lot of stigma and fear associated with the disease. This was minimised by being cautious during discussions and giving women the option of declining to answer questions they were not comfortable with and by leaving the questions associated with HIV till the very end.

Benefits of this study among many others included the opportunity of obtaining background data, which will be useful for planning and implementing MTCT programmes. It also offered an opportunity for women to break the silence about MTCT of HIV and to start seeking community solutions to the problem. The women were

enthusiastic and might have gotten the psychological satisfaction of being considered useful in sharing their experiences on the very emotional issue of breastfeeding. Many of the women stayed back to ask more questions on HIV and MTCT. Therefore the study was an intervention in a way since knowledge was transferred and many women were sensitized on the issue of HIV and infant feeding.

Health workers engaged in open discussions and a lot of emotions were expressed. The fact that I was an insider helped to enhance the emotional valence between the respondents (especially the health workers) and myself. This relates to the trust that exists between a researcher and research participants (Sines D, 2000).

This study has demonstrated how a community can benefit from the research process by gaining knowledge, expressing emotions and confronting and attempting to solve difficult issues.

2.7 Limitations:

It would have been useful to use some of the themes that emerged from FGDS and interviews to finalise the development of questionnaire. Given the short period of time available to conduct the study and the time it took to organise women for FGDS, the questionnaires had to be administered before the FGDS and key informant interviews. However this enabled me to collect information that the questionnaires lacked.

Key informant interviews were conducted with nurses instead of a FGD discussion as planned due to time constraints- due to shortage of staff it was impossible to get 8 nurses together at any point in time during the 6 weeks period of data collection. While the in-

depth one to one interviews enabled a relaxed atmosphere that encouraged openness, a
FGD may have inspired a wider range of discussions and sharing of experiences.

2.8 Ethical Approval:

Prior to arrival on the study site, ethical approval was granted for this study by both the ethics committee of the CICH, University College London and ethics the committee of the ABUTH, Kaduna. On arrival on site I reported to the head of paediatrics department (whom I had been in communication with) to finalise discussions on my proposed methods. After this he gave me the go ahead to commence the study.

2.9 Consent Throughout The Study:

Verbal consent was obtained from all subjects in this study with the help of an information and consent form (see appendix A and B). The purpose of the study was explained to every subject. A copy of the information sheet that contained the contact address of the principal investigator was made available to each subject. A woman or health worker agreeing to come along for a FGD or an interview was interpreted as giving consent. It was explained to all respondents that they reserve the right to decline being included into a focus group, an interview, answering any individual answer, or to stop the interview at any time, and that their refusal to participate in this project shall not in any way affect them or their infant's treatment in the clinic. The respondents were assured of confidentiality before and after every session by explaining to them that no information obtained in the study shall be divulged, names of respondents were not required on questionnaires and by using quiet or private areas for sessions. Permission was also taken to audio tape/take photographs at interviews and focus group discussions.

Chapter 3: Results

This section is divided into two parts- the findings from the qualitative data and quantitative data. The findings from the qualitative data are further divided into two parts that is, information gathered from focus group discussions and information gathered during key informant interviews .The results are categorised into headings or themes.

3.1 *Quantitative Data Results:*

3.1.1 Descriptive Statistics:

The age range of the women that responded to the 60 questionnaires was 18 to 42 years with 52% of them between the ages of 24 to 30 years; the mean age of the women was 31 years (SD 5). 85 % of the women have had 4 to 19 years of education, with mean years of education at 10 years (SD 5). 42% of the women had 12 to 19 years of education or more (post secondary and above) while 15 % had no education at all. All the major regions and religions in Nigeria (north, south, east and west, Islam and Christianity respectively) were represented in the respondents.

Figure 3.1.1: TABLE SHOWING DESCRIPTIVE STATISTICS OF AGE OF WOMEN, YEARS OF SCHOOLING AND AGE OF WEANING.

	RANGE	MEAN	STANDARD DEVIATION
WOMANS AGE IN YEARS	18-42	30	5
YEARS OF SCHOOLING	0-19	10	5
AGE OF WEANING INFANT 1 (MONTHS)	5-19	15	4
AGE OF WEANING INFANT 2(MONTHS)	3-24	16	4

The ages of the current child ‘this infant’ ranged from 2 weeks to 2 years 7 months, with a mean age of 9.1 months (SD 7.3), while the age of the previous infant range from 1 year 9 months to 10 years with a mean age of 4 years. There were no obvious differences in the results of practice in ‘this infants’ and ‘previous infants’ so the results for all the variables were grouped together in subsequent analyses.

3.1.2 Breastfeeding Practices:

The most common type of breastfeeding practiced predominant breastfeeding where breast milk is the main source of nutrition for an infant in the first 4-6 months of life but water and other liquids like gripe water, traditional herbal remedies and juices are also offered the infant usually within the first month of life. 48% of infants were fed in this way. 33% of infants were breastfed exclusively that is giving an infant no other food or drink, not even water, apart from milk (including expressed breast milk) with the exception of prescribed medicines in the first 4-6 months of life. Mixed feeding was practiced in 19% of the infants. This means partial breastfeeding and giving some other milk or cereals in the first 4-6 months of life. 56% of infants were given some form of liquid (usually water) in the first month of life while 99% of infants got introduced to liquids by the time they were 6 months. The decision to breastfeed exclusively was significantly affected by the level of education attained by the mother. Of the 42% women who had 12 or more years of education, 40% of them practiced exclusive breastfeeding while none of the women who had no education practiced exclusive breastfeeding ($p=0.04$).

3.1.3 Weaning Practices:

3.1.3a Age at Weaning:

81 % of children were weaned between the ages of 12 months to 18 months. The mean age for weaning was 16 months (SD 4). Early weaning defined as weaning an infant before the age of 10 months was not common.

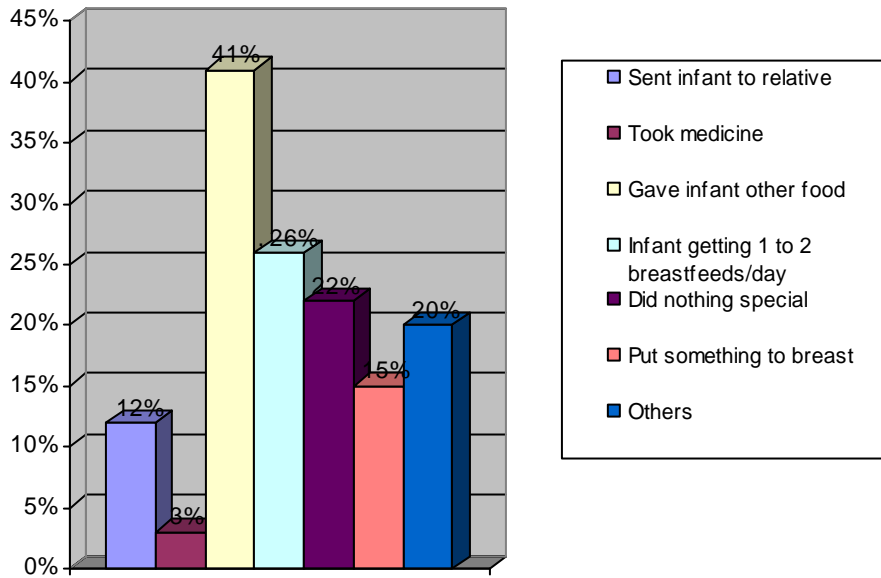
3.1.3b Type of Weaning:

38% of infants were weaned abruptly within a day, 20% of infants were weaned within 2-3 days, while 26% of infants were weaned gradually over 7 to 14 days.

3.1.3c The Process of Weaning:

There were six main processes used to completely wean a child namely: putting something to the breast, sending the child to a relative, giving infant other food or milk, giving the child only 1 or 2 breastfeeds per day and doing nothing special. The commonest method used - giving infant other food or milk accounted for 41 % of weaning methods. 22% of women did nothing special to help wean a child, suggesting that women are quite relaxed and confident about the process of weaning.

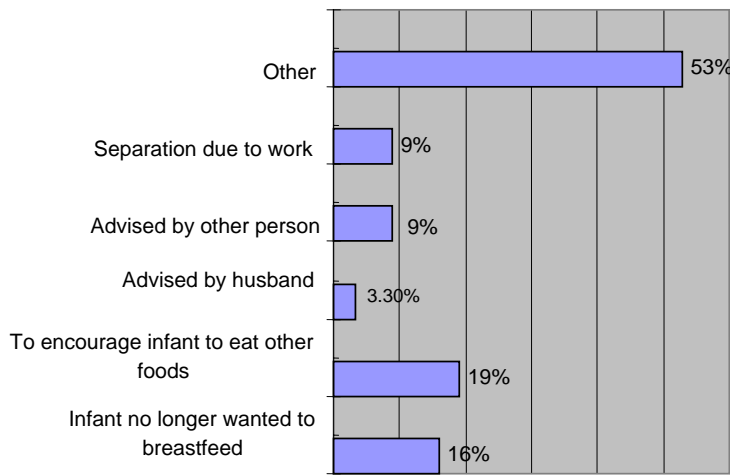
FIGURE 3.1.3c: BAR CHART SHOWING PROCESS OF WEANING:



3.1.3d Reasons for Weaning:

Women usually had more than one reason for weaning a child. 51% of women weaned their infants because they thought they were old enough. In addition to the age of the child they would usually have another reason for weaning like to encourage infant to eat, infant refusing breast milk, to encourage infant to eat other foods, separation from infant due to work or advice from people. 53% of women had other ‘uncommon’ reasons for weaning for example an unplanned trip or to partake in the Moslem Ramadan fast. No woman mentioned fear of transmitting HIV as a reason for weaning.

FIGURE 3.1.3d: BAR CHART SHOWING REASONS FOR WEANING



3.1.3e. Relactation:

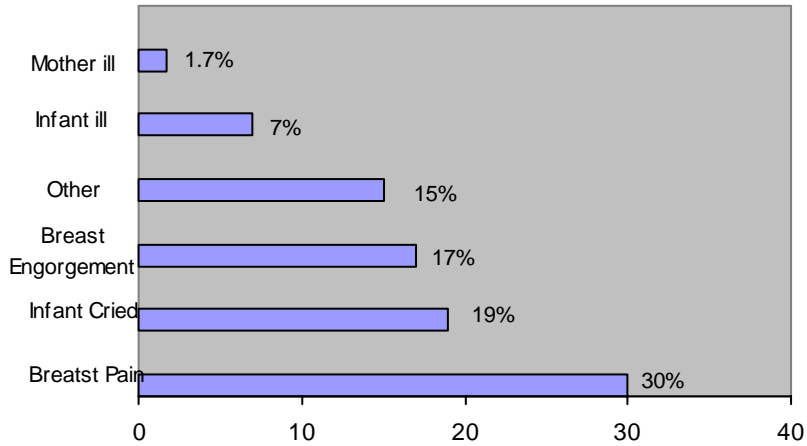
Relactation was virtually non-existent. 97% of women did not relactate, only 3% of women relactated. The practice of non-relactation seems to be a firmly rooted practice, which has not changed over the years

3.1.3f: Problems of Weaning:

56% of women did not experience any problem while weaning even though many of them (58%) weaned abruptly.

The common problems encountered by some of the women were breast pain (30%), breast engorgement (17%) and excessive crying by infant (19%). 15% of women mentioned other problems like body pains that they did not consider an illness.

FIGURE 3.1.3f: BAR CHART SHOWING PROBLEMS OF WEANING



3.1.4 Transmission of HIV:

The knowledge of MTCT of HIV was very low amongst women. Only 14% of women knew MTCT of HIV could occur. Very few women (5%) knew about MTCT through breastfeeding. 91% knew transmission could occur through sexual intercourse. Their knowledge of MTCT was not affected by their level of education. This might be an indication of the extent of denial of HIV or the culture of silence.

3.1.5 Knowledge of HIV Status:

Not only did women not know about the way HIV is transmitted, many were also not aware of their HIV status. Again the culture of silence and denial might be responsible for this. When asked why they were not interested in knowing their status the women said they were 'sure' of themselves, and the test is not free anyway. The need to be aware of their HIV status was also not affected by their level of education.

3.2 Qualitative Data Results:

There were 16 women in 2 FGDS, 8 in each group. The women's ages fell within the range of 19-38 years. All of them had some level of education, ranging from 6-16 years of schooling with a mean number of years schooling of 10.6 years. 18 health workers were interviewed as key informants (see study population for profile). The qualitative result is discussed under the recurrent themes that emerged thus:

3.2.1 BREASTFEEDING PRACTICES:

In Nigeria, breastfeeding was found to be a universal practice; it is the culturally accepted normal food for an infant from birth up to an average age of one to one and a half years. Women in both FGDS conducted considered breastfeeding to be a very normal practice which is important and nutritionally adequate for an infant. Comments made were:

'It is very good we should not play with it...It makes the child intelligent and healthy'
'Their bodies are usually better.....their skins are usually fine'
'Ever woman should be able to breastfeed her child except if that has another kind of sickness apart from the normal'
'Truly it is good....your breasts gets full to you it is time to breastfeed you baby' (even if you are a busy woman).
'It prevents some illness from attacking the child'-Women in FGD I AND II

3.2.1a Type:

The most common type of breastfeeding found in communities in Nigeria in the first 3-5 months of life was predominant breastfeeding where the child's main source of nourishment is breast milk on demand but women also offer water, traditional/herbal fluids, gripe water, teething powder, fruit juices, vitamin preparations to infants.

These fluids were given for a variety of reasons ranging from thirst, cleaning out the gut of a neonate after birth, abdominal pain, eczema, dermatitis and other allergic skin conditions. In the words of a paediatrician key informant,

'a lot of Hausa women believe breast milk is hot and contains a lot of oils, so they say after a fatty meal they need to take water to wash it down'
'the Hausas have a popular saying when a woman delivers and people go to visit her they say, Allah ya raya (meaning may God help him to survive or live), the infant even though he can't talk is believed to answer, in kishi ya barni ba! (Meaning, if thirst allows me!'

People believe exclusive breastfeeding exposed a child to thirst. Another fluid commonly given to infants especially by women from the south western part of Nigeria is 'agbo' a traditional/herbal fluid.

'I give agbo for the first 3 days after birth to wash the dirty in the child's belly before giving breast milk'
'My child had illa (allergic dermatitis) when she was 6 weeks, I gave her agbo and it cleared up, hospital medicine does not clear illa' -women in FGD II.

In the 1970s-1980s the breastfeeding pattern was predominantly mixed especially amongst urban, working class women and the elites, but according to an obstetrician/gynaecologist key informant,

'breastfeeding practices shifted from mixed to predominant since we started this talk of exclusive breastfeeding for about 10 years now'

Exclusive breastfeeding popularly called 'baby friendly' by Nigerian women has been widely promoted and accepted by some women. While its usefulness was repeatedly acknowledged by women in FGDS, many insist it is very difficult and stressful on the woman to practice it. According to some key informants -paediatricians /lactation managers /master trainers on exclusive breastfeeding-the exclusive breastfeeding rate

seems to vary from community to community even in the same town depending on the presence and proximity of a baby friendly hospital initiative (BFHI) designated centre. The paediatricians suggested that the exclusive breastfeeding rate amongst women regularly attending teaching hospitals could be as high as 80-90% while in communities far away from teaching hospitals it could be as low as 10-20%. Some women feel the 6-month period of exclusive breastfeeding should be reduced to 3 months to make it more practical and acceptable to women. Some of their opinions were:

'He is very healthy, smart and wise, since I gave birth to him he has never fallen sick, I have never taken him to the hospital apart from for immunisations'
'I did baby friendly for 6 months but it was very difficult'
'...it made my baby become too attached to me'
'The bad thing about baby friendly is when you want to introduce other foods to the child he refuses, he wants only breast milk'
'When a woman is doing baby friendly she dries up and looks very lean while the baby gets fat'
'...baby friendly is good but it is not good to do it for too long'
'If it were possible baby friendly should be left at 3 months , I tried it for 3 months and I didn't see any difference....some women that are not doing it will be encouraged to do it if it is reduced to 3 months' -Women in FGDS I

Grandmothers, mothers and mothers-in-law are the main deterrents to the practice of exclusive breastfeeding in the community. In spite of the perceived difficulty, some women are committed to the practice of exclusive breastfeeding and would go out of their way to resist cultural/family pressures to do otherwise, for example a breastfeeding mothers in FGD II said:

'My mother said that baby friendly is not good ...in their days they give just water and glucose, then after 3 days they give breast milk, so I did it for only 2 months'
'I wanted to do baby friendly, so when my child was suffering from illa (allergic dermatitis I gave the agbo (traditional fluid) that was suggested by my mother -in-law through the anus'. Women in FGD II

A community health worker key informant added:

'Left on their own may be more women will do EBF but because they are guided by older women, they are hindered by mothers-in-law'

3.2.1b Duration:

The total duration of breastfeeding varied from 1 year to 1 year 8 months, while the length of exclusive breastfeeding (in those that attempt it) ranges from 3 -6 months. The total period for which women breastfeed seemed to be influenced mostly by the physical milestone of walking and eating well, a woman's comments on the duration breastfeeding during FGDS was:

'I stopped breastfeeding my baby at 1 year 2 months because he was eating any type of food walking and playing around so there was no need to continue to breastfeed'

According to a paediatrician key informant:

'...for most children that are breastfed for up to 2 years nowadays it is probably because the child is ill, malnourished or had an attack of measles which sometimes retards the age at which they walk, so they will say the child has not walked yet so I will not wean him'

However other socio-cultural factors related to the sex of the child and pregnancy has over time determined the length of breastfeeding or the age of weaning. Some reasons suggested are explained thus:

'My mother said if I breastfeed my son exclusively and for more than 1 year, it will affect him bearing children in the future!'

'Certain traditions believe that male children should be weaned at 1 and a half years while female children should be weaned at 1 year 9 months, they believe that if you breastfeed a male for more than 1 and a half years he will be dull'.-Women in FGD II

Other reasons given for weaning or breastfeeding to a particular age were family planning purposes, to encourage child to eat other foods, woman's career/job demands and pregnancy or the desire to get pregnant.

'When I am breastfeeding I don't get pregnant, so I use breastfeeding to prevent getting pregnant' Woman in FGD I

'...the working class women especially women that work in banks will tell you that they had to stop breastfeeding because they spend long hours at work, so after 1 year they wean to encourage the child to eat other food' –Nutritionist Key informant

3.2.1c Early Weaning:

Early weaning does occur but was considered an unusual practise or an exception. Health workers discouraged it. Any woman who stopped breastfeeding by 10 months was considered to have weaned her child early in Nigeria. Such women were often looked upon with contempt, suspicion or compassion depending on the perceived reason for weaning. This seemed to suggest that there was an accepted and an unaccepted reason for early weaning. Accepted reasons mentioned were pregnancy, child refusing breast milk during a bout of illness for instance, ill health in mother (cancer of the breast, hepatitis B, severe cardiac disease), while unaccepted reasons are career demands and fashion consciousness. Women's opinions on the reasons and repercussions of early weaning all pointing to the fact that it is not acceptable thus:

'One of the reasons why infants stop breastfeeding early by themselves is mixed feeding, my baby stopped breastfeeding at 4 months ...we were mixing breast milk with SMA (artificial formula)... I think he preferred the SMA'
'I can't suffer my child by stopping breastfeeding at 6 months and I can't advise any mother to do it'
'...they say stopping breastfeeding at 6 months causes cancer it is not advisable'
'... People will say what am I doing with the breast? Is it for fashion?'-Women in FGD I

However a community health worker/paediatrician key informant concluded that:

'It is the grandmothers who prescribe that breast milk gets sour if for any reason it is not suckled for 2-3 days, they are also the ones who prescribe not to breastfeed when pregnant (that the milk becomes poisonous), so generally the grandmothers don't see anything wrong with it-(if it is done for the right reason).

3.2.2 Weaning Practices:

'Weaning is something which even the father is notified about before hand in some cultures. It is announced in the compound... it is like a land mark. Within that period the child is given highly proteinous food. The father makes an effort to buy beverages, eggs, main shanu (local cheese). For those who take the child to a grandmother these things are taken along and people usually go visiting and take food items for the child' – Paediatrician key informant.

3.2.2a The Process

After breastfeeding for a total period of one to one and a half years, many women in Nigeria will stop breastfeeding abruptly within 1-3 days, more commonly within a day, others will stop gradually over a period of one to two weeks.

Abrupt weaning was repeatedly mentioned to be the preferred and commonest way of complete weaning especially amongst the Hausa speaking people of northern Nigeria. The infant is sent off to a grandmother or an aunt for about a week or two. Some women felt that it would be too traumatic for the child - that is, changing his environment, separating him from his mother and depriving him of the breast milk he is so used to all at the same time. So they would prefer to wean abruptly at home. They either made themselves unavailable to the child all day by going out and coming back late at night when the child would have fallen asleep or they could just refuse to offer the breast no matter how hard the child cried just like a woman in FGD I did:

'I stop in just one day, when he cries today, the next day he sleeps and that is all, I have never had any problem with weaning a child'

To cope with the persistent crying especially at night most women mentioned that they gave snacks, beverages, and eggs, exclusively a woman in FGD II took the drastic measure of giving drugs without a prescription:

'...she cries too much at midnight, she will not want to take the pap, at times I used to give her sleeping tablets'

What many other women said they did was to cover the breast with a piece of plaster or cotton wool to *'frighten the child'*. Another variant of this was to cover the breast with bitter or peppery substances; however, this method was not always successful.

'...Mine is usually very difficult...no matter what I put on the breast he sucks it, it took almost two months'-Woman in FGD I.

When asked how they coped with the envisaged problem of full, painful and or engorged breast associated with abrupt cessation, the solutions proffered by the women included- just waiting out the period of pain which usually lasted two to three days (suggesting that they do not consider it a great problem), wearing a firm brassiere, reducing fluid intake, expressing the breast milk, taking analgaesics, rubbing in 'robb'(a menthol balm) or a herbal preparation and in severe cases seek medical attention in hospitals. A woman in FGD I said how 'robb' worked to relieve pain from a full breast:

'My breast gets very full, I rub in robb, and it makes the breast milk to drain off gradually by itself until it dries up, if I press my breast, it gets more filled up... I only rub robb'

Though acknowledged to be a difficult practice, abrupt cessation of breastfeeding was a culturally acceptable and feasible practice even amongst those who practiced gradual weaning. A woman in FGD I who practiced gradual weaning said:

'It is possible it only takes a strong will'

However its success in Nigeria may be age dependant as suggested by this comment made by a woman in FGD I:

'...if he is old enough to be weaned (one year and above) it is possible...no matter how much he cries since I have made up my mind I won't give him'

Gradual weaning was the second method of weaning prevalent in Nigeria. Here the child is gradually taken off the breast over a period of one to two weeks, this was the method recommended by health workers. Some mothers started with stopping the night feeds while some others stopped the night feeds last.

3.2.2b Relactation:

This is the process of re-introducing breast milk to a child who has previously been weaned. This practice was virtually non-existent. Women believe that when a woman stops breastfeeding for more than 2-3 days the breast milk is no longer fresh. It is believed to have gone sour and therefore was not fit for consumption. Over and over again women in FGDS said such breast milk caused diarrhoea and vomiting.

3.2.2c Weaning Foods:

Introduction of weaning foods generally started from about 4 months (the earliest being 3 months). Pap or 'akamu' which is porridge made from guinea corn, millet or maize was the basic weaning food in Nigeria. The pap may be enriched - with soya beans, groundnut, palm oil, crayfish, banana or eggs – or it may be plain. It may or may not be sweetened with sugar. Many women believed that too much sugar causes 'jedi jedi' (dysentery) in children, so they were reluctant to add sugar to weaning foods. Other weaning foods used by women included commercially prepared cereals like *cerelac*, and *nutrend* (made of maize, soya beans and wheat). Soya beans milk and pap seemed to be very popular amongst both women and health workers. According to a nutritionist key informant, soya bean milk is made from soya beans alone while soya beans pap is a mixture of the soya beans milk and maize guinea corn or millet. By 6 months adult diet like softly boiled rice, beans, potatoes and yams were usually introduced. Many women

claimed they made efforts to enrich adult feeds by adding crayfish and eggs. A milk-based food was not available as a common weaning food in Nigeria. Exclusively, goat or cow milk was given to infants who lose their mothers at birth or in cultures where colostrum is not given to an infant. The infant is fed with ‘*nonon awaki*’ (goat milk) in the first 3-5 days. A community health worker key informant explained that the animal milk offered to such children depends on the animal that is predominantly reared in that community.

3.2.3 Breastfeeding and Weaning Problems:

Most Nigerian women were able to breastfeed successfully, according to an obstetrician/gynaecologist key informant,

‘.In the general population the number of lactating women that present to us with breastfeeding or weaning problems are in the minority, only a few primips come with problems associated with initiation of breastfeeding like sore nipples, cracked nipples, engorgement and sometimes breast abscess’.

Health workers interviewed disclosed that during weaning few women present to them asking for injections that can stop the flow of or dry up breast milk. The major complaints women present with during weaning were infants refusing weaning foods- especially those who were breastfed exclusively.

3.2.4 HIV and Breastfeeding:

Many women were shocked at the suggestion that HIV can be transmitted through breast milk. So far breastfeeding practices in the community had not been affected by HIV but health workers thought that by the time the awareness level rises, all the work that had been done on the benefits of breastfeeding might be lost overnight.

Lactation managers interviewed insisted that their views of the BFHI exclusive breastfeeding had not been affected by HIV because they were trained to treat and manage HIV positive mothers as individuals, but a gynaecologist thought that the zeal with which exclusive breastfeeding was being promoted had dwindled a bit in the last 2 to 3 years and this she thought might not be unrelated to the problem of MTCT of HIV through breastfeeding.

3.2.5 Early and Abrupt Cessation of Breastfeeding in the Context of HIV in Nigeria:

There were diverse opinions in reaction to this modified infant feeding pattern - ranging from strong views against it, to nonchalance and a ray of acceptance.

3.2.5a Mothers On Early And Abrupt Cessation Of Breastfeeding:

Many women expressed that this is a very difficult and delicate situation and found it difficult to take a firm stance concerning acceptability of the practice. Their comments seemed to suggest that their decisions will be health worker dependant. Some said:

It is only the hospital workers that can help us and advise us on what to do' 'Since it is for the baby's sake and the hospital workers are saying it is the best thing...they know better... the woman and her husband have to look for money to buy tin milk and try to prepare it in a clean way' -women in FGD I

Exclusively a paediatrician/HIV counsellor felt that women will accept it better (the option of early and abrupt cessation of breastfeeding) than not to be seen to be breastfeeding at all because of the stigma that might be attached to not breastfeeding. Interestingly no woman in the FGDS mentioned stigma as an issue to consider when choosing an infant feeding option, they were more concerned about financial worries and just interested in what will lead to the best outcome for the child. The general feeling of

despondency in women was summed up by the following comment made by a woman in

FGD I:

'Honestly it is tough; it is the same like a child whose mother dies at birth, so the way you treat will be similar'

3.2.5b Health Workers on Early and Abrupt Cessation of Breastfeeding:

All health workers agreed that early and abrupt cessation of breastfeeding should not be promoted as the preferred or available infant feeding option for infants born to HIV infected mothers in Nigeria. Many health workers expressed in strong terms that though early and abrupt cessation of breastfeeding is feasible in Nigeria, it is:

'Unethical and unacceptable to the medical community in Nigeria'. Obstetrician Key informant.

When asked to recommend ways of implementing or sustaining the practice, some of the health workers thought it was unnecessary because according to them:

'It is an absolute waste of time and resources'. Gynaecologist Key informant.

Some of the views expressed by health workers when asked their opinion about early and abrupt cessation of breastfeeding included:

'I am amongst those who believe that breastfeeding should not even be attempted by a HIV positive mother'

'...we know the draw backs of artificial feeding... what you are telling the (HIV positive) woman is almost like if you breast feed, your child will surely die compared to if you don't breast feed and your child catches a diarrhoeal disease your child will surely die'

'...there is no cure for HIV but there is a cure for diarrhoea.... What are paediatricians trained for, we are ready to treat the diarrhoea'

'Every child has a right to survive and if breastfeeding a child for the first 3 to 6 months of life is going to increase the risk of him developing HIV, then he should not be allowed to breastfeed'

'Since the problem is poverty, why can't we explore ways of getting these infants replacement feeds....should all these children die because there parents cannot afford infant formula for a few months'.

'A risk is a risk... One more is too much'.-Key informants.

When asked to comment on the cultural acceptability of early and abrupt cessation of breastfeeding, a paediatrician key informant had this to say:

'When we talk about HIV and breastfeeding, culture is by the way because when cultures were established HIV was not there...so it is better to say what we should make the women accept not what is culturally acceptable. If we look at culture in so many things we'll not move forward. There are cultures that discard colostrum which is very good for a new born....but because of the importance of colostrum we discourage such a culture and the changes have been impressive'

Some health workers pointed out that for practical reasons some women might still choose to practice early and abrupt cessation of breastfeeding, for the sake of such women it is worthwhile exploring the feasibility and process of early and abrupt cessation of breastfeeding in their words:

'It will be difficult, but I think Nigerian women are determined enough to do anything, you just have to prepare her mind'. Key informants.

3.2.6 The Process of Early and Abrupt Cessation of Breastfeeding:

Many health workers insisted were not interested in suggesting a process for early and abrupt cessation of breastfeeding since it is not a preferred option. Some other health workers said since it really has not been practiced it will be difficult to suggest a process. However some health workers (both those in support and those against early and abrupt cessation of breastfeeding) went ahead and gave some useful suggestions. Many women in FGDS seemed to suggest that they would go with what ever '*instructions*' they were given by health workers to help reduce MTCT of HIV in their children. There were some women in the minority however who gave their opinion on how the process could be like. From a thematic analysis of the responses of women and health workers, 3 main steps evolved as the process for the implementation of early and abrupt cessation of breastfeeding in Nigeria namely:

- I. Preparatory phase:-preparation for the practice consisting of manpower/institutional preparation and preparation with the HIV positive woman and any member of her family she wanted to be involved.
- II. Phase of on-going support during the period of exclusive breastfeeding.
- III. Support during the transition from exclusive breastfeeding to replacement feeding.

I. PREPARATORY PHASE:

- a. Institutional Preparation: Health workers thought that the process of early and abrupt cessation of breastfeeding is not only difficult and emotional but it is also going to be time consuming and demanding on all cadres of health workers. Suggestions were that there will be need for training in the skills of HIV/AIDS counselling with particular emphasis on infant feeding counselling and lactation management.

'we need to train intermediate cadre health workers ...to help support these women within the community and in the hospital....mothers and mothers-in-law should also be educated and involved because they influence their daughters directly or indirectly' 'Only a few people are trained in counselling to give psychological support, we are too few... the work is too much we can hardly create time to attend to them'. Key informants

Another issue that was repeatedly mentioned was the need for team work within the health system, particularly amongst paediatricians, obstetricians/gynaecologists and nutritionists. At the moment there was a communication gap and there were no '*HIV infected mothers' friendly services*'. Services that were recommended for HIV infected mothers were: free or highly subsidized routine voluntary counselling and confidential testing (VCCT) for all women attending antenatal clinics (ANC), support group for

HIV positive mothers, specialised infant feeding and lactation management clinics for HIV infected mothers.

b. Preparation With Woman:

Health workers were of the opinion that women who choose to do early and abrupt cessation of breastfeeding must be properly counselled so that they would understand the full implications and ramifications of what they are going in for. This should preferably commence during the early period of pregnancy so as to have enough time to explore all the support and resources at her disposal. They suggested that during this period all the various types of counselling available (infant feeding, lactation management and psychological support) should be provided to prepare the woman physically and psychologically. During this phase she should get information on the issues that determine the success of early and abrupt cessation of breastfeeding, like:-

- i) Correct breastfeeding practices (attachment and positioning) to prevent sore nipples and cracks
- ii) How to express breast milk, and the importance of emptying a breast when breastfeeding before changing to the other breast
- iii) Timing breastfeeding
- iv) The need to stop breastfeeding from a breast if any breast pathology occurs
- v) The fact that the breastfeeding must be exclusive, that is no mixed feeding
- vii) Deciding on type of and get replacement feeds ready
- vii) Deciding on the length of time for which she wants to breastfeed and
- viii) The need to join a HIV positive mother's support group.

'HIV positive mothers' support group will be very useful, She might think it is difficult and impossible but by the time she sees and hears from those who have done it she will be encouraged- suggestion made by midwife/HIV counsellor key informant

II. PHASE OF ON-GOING SUPPORT DURING THE PERIOD OF EXCLUSIVE



FIGURE 3.2..6: LACTATION MANAGERS HELPING TO INITIATE BREASTFEEDING.

BREASTFEEDING:

This period starts from the time of delivery and ends at the time the woman ceases breastfeeding abruptly. Some of the health workers interviewed were of the opinion that a lactation manager must always be around to

ensure proper initiation of breastfeeding at birth. Thereafter she should have appointments scheduled to see counsellors/nutritionists/lactation managers in the hospital regularly. Arrangements may also be made for home visits by health workers if the woman desires or consents to it. During this phase the woman should be encouraged to time breastfeeding as opposed to breastfeeding on demand (to reduce the stress of feeding frequently at night during the period of abrupt cessation). The infant should also be allowed to breastfeed for long periods of time on one breast. This will ensure that he gets the hind milk, which contains high amounts of calories, thus the infant is likely to be satisfied and sleep for long periods of time especially at night. The time interval between feeds can be gradually increased over time as the infant gets used to sucking for longer periods of time at a seating.

A woman in FGD II suggested that breast milk could be expressed into cup so that the infant could be offered breast milk from a cup and spoon interchangeably with suckling directly from the breast. This will help to reduce the psychological trauma to mother and baby at the time of abrupt cessation. The woman should be encouraged to use methods of pacifying the infant other than offering the breast like skin to skin contact, massaging the baby or rocking to sleep and talking to the baby. Health workers should continually check the woman's records to ensure that she is keeping her appointments for monitoring breast health, infant growth monitoring and is motivated to see other HIV positive mothers in support group. As the period for cessation of breast approaches, the health worker should ensure that the woman has made a firm commitment to a particular method of family planning and has the replacement feed ready.

The health workers that were sceptical about early and abrupt cessation of breastfeeding thought that the period of exclusive breastfeeding should be kept as short as possible (2-3 months) to reduce exposure to HIV through breast milk while others thought it should be kept at 6months to maximise the benefits of breast milk.

III. SUPPORT DURING THE TRANSITION FROM EXCLUSIVE BREASTFEEDING TO REPLACEMENT FEEDING:

Women in FGDS and health workers all agreed that this is going to be the most difficult and emotionally trying period. The woman should therefore get all the support available. One of the strategies recommended for this period was to get a '*surrogate mother*' not to breastfeed, but to help take care of the infant especially at night. The aim of this modified pattern of surrogacy is to separate the infant from the mother during this period of transition. Another option was for the mother to commence the process of abrupt

cessation and introduction of replacement feed herself but to show up at the hospital if she is unable to cope. She could be kept in the hospital for a day or two so that the health workers would help her with carrying, feeding and pacifying the baby while she gets some rest especially at night.

For women who would cease breastfeeding at three months the infant feeding option may be either goat milk, soya beans milk and or infant formula (depending on the family's economic situation). Subsequently, the normal weaning foods of pap enriched with soya beans, groundnut, crayfish or eggs could be introduced from six months. This is because many health workers stressed that though soya bean milk is very popular and readily available as a weaning food in Nigeria they were not sure of its safety in infants less than 4 months due to its gluten content. More suggestions on how to make the transition from exclusive breastfeeding to replacement feeding safe were:

'When introducing replacement feeds it should be done gradually one at a time so as to know which one he tolerates and keeps him satisfied more'.- Nutritionist/key informant
'The replacement food should be palatable like breast milk, not peppery and given at frequent intervals, small quantities at a time initially to allow the gastrointestinal tract to adjust to the change'-Paediatric nurse key informant.
'...mother should make sure she is relaxed and has enough time to patiently feed the infant'-Paediatric nurse key informant.
'The woman should hold her infant close to her body as much as possible, she should place the infant in the same position she places him during breast feeding when she wants to feed him with the replacement food this will reduce the psychological trauma further enhance bonding'- Paediatrician key informant.

Health workers also recommended the use of a supportive brassiere, analgesics, diuretics, lactation suppressants and possibly antibiotics depending on the severity of breast problems abrupt cessation might predispose the women to.

Women in FGDS felt that the woman might also be depressed from the fact that she could no longer breast feed her infant so she needs a lot of also tender loving care from

her family and health workers. They said that some husbands are very supportive but some might even abandon the woman. Other recommendations from women included, the use of a herbal preparation which dries up breast milk and pacifies an infant after cessation of breastfeeding and rubbing in a menthol preparation on the breast to help in gradually *'drying up'* the breast milk.

The fact that no woman mentioned the need to be on a family planning method might suggest that sexual relationships might be the last thing on the mind of a nursing mother who is HIV positive, however health workers thought it is very important for such a woman to commence a family planning method immediately she delivers.

3.2.7 Preferred Options:

'As far as there is a risk of transmission through breastfeeding it should be prevented at all costs, we should not sacrifice these children' Paediatrician key informant

Various alternatives came up as preferred options for prevention of MTCT through breastfeeding. This was strongly expressed and therefore worth mentioning. Amongst them

'...ensure that the woman gets at least two courses of antiretroviral drugs during labour and while breastfeeding, I think that is the next acceptable option short of not breastfeeding at all'.- Obstetrician key informant on modified early and abrupt cessation of breastfeeding

was a modification of early and abrupt cessation of breastfeeding as suggested by an obstetrician.

Various modifications of surrogacy were another option

thought to be viable by both health workers and women in focus group discussions. One variety was to give the child to a young woman who has never had a child to breast feed with the consent of her husband. Herbal preparations are then rubbed into her breast to initiate lactation. Another way is to give the child to a female relative who is currently breastfeeding. In both cases the *'surrogate mothers'* would have to be screened for HIV.

Cow or goats milk were suggested as an option where surrogacy is not available. In rural areas where these animals are commonly reared, this option was regarded as '*cheap, available and acceptable*'. For those who choose the option of artificial formula, the health workers said they would provide counselling and close supervision to ensure hygienic preparation.

The possibility of getting financial assistance from local and international NGOs, religious bodies, governments and families for the purpose of purchasing infant formula is one which health workers and women thought should also be explored.

Conclusive statements made by health workers on why they do not recommend early and abrupt cessation of breastfeeding were:

'If you are breastfeeding, breastfeed as the normal population otherwise don't breastfeed at all... if social stigma is what is in question, the general public should be enlightened on the various reasons why a woman may not breastfeed including reasons like cancer of the breast, hepatitis B etc'

'...really I don't think early and abrupt cessation of breastfeeding will reduce the risk of diarrhoeal disease or malnutrition...it might just defer the age at which these diseases are acquired...abrupt weaning at three to six months will suddenly increase the risk of diarrhoeal disease and malnutrition... ...the emotional trauma of sudden cessation will predispose him to acute malnutrition...so is this whole process worth it this the question we must answer as health workers' –Paediatrician key informant.

Chapter 4: Discussion

The 2 phased methodology of this study offered an opportunity for triangulation of results. The key findings across methods were that abrupt and early weaning do occur and are acceptable practices to women, however health workers are unlikely to support this practice.

4.1 Weaning Practices:

Infants are generally breastfed to at least 1 year of age in Nigeria. Any woman who breastfeeds for less than ten months has weaned too early and is looked upon with suspicion-it is either she is pregnant, very fashion/career conscious and therefore irresponsible or is very ill probably with HIV.

4.1.1 Early Weaning:

This is acceptable and prescribed by grandmothers if it is due to pregnancy or sometimes ill health; any other reason is culturally unacceptable. This means that there is a culturally wrong and right reason why a woman may wean early. This creates a window of opportunity for promoting HIV to be one of the culturally '*correct*' reasons for early weaning. This has to be approached with caution so that it does not result in '*cultural stigmatisation*' of women who might choose this option, or even reduce the exclusive breastfeeding rate in the general population the so called '*spill over effect*'. A suggestion by a key informant publicise a list of reasons why women may wean early is unlikely to prevent the stigmatisation problem.

4.1.2. Abrupt Cessation:

Abrupt cessation of breastfeeding was found to be stopping child from breastfeeding within a day in Nigeria.

The prevalence of abrupt cessation of breastfeeding in Nigeria was surprisingly very high; this might be a regional thing though because many of the women interviewed were either from the north and middle belt or have stayed in the north for a long period of time. The fact that it happens in Nigeria at all makes it an indigenous and not a foreign practice and therefore is likely to be easily transferable and acceptable.

4.1.3 Process Of Weaning:

The various processes of weaning a child in Nigeria, namely –sending a child away for a week or two, putting something to the breast, giving other foods, and doing nothing special, are acceptable within the early and abrupt cessation of breastfeeding practice provided it suits or is convenient for the mother/child pair. Sending the child away might be potentially harmful in the context of early and abrupt cessation of breastfeeding because the infant we are talking about here is only about 3-6 months old. The HIV positive mother and her counsellor should explore, work out the safety and decide upon the method she is going to use long ahead of time.

4.1.4. Weaning Foods:

Weaning foods were usually introduced between the ages of 3-6months starting with liquid foods and gradually moving to semi-solid and then solid foods. The weaning foods

available to the Nigerian woman are nutritionally adequate as replacement food for an infant who is about 5-6 months old. Most of the commonly used weaning foods are not animal milk based so this might pose a problem if the woman chooses to cease breastfeeding at 3 months for instance. Soya beans, groundnuts, and cereals that are commonly used as weaning foods in Nigeria are generally not accepted (by nutritionists) as suitable for very young infants. Goat and cow milk is available and used in instances where a child loses its mother at birth. It is accessible and affordable so an HIV infected mother could easily acquire one or two she goats (especially in rural areas) months before she delivers if she is unable to afford artificial milk. The choice of artificial milk is still open even though some women and health workers agreed that it is too expensive for the average Nigerian woman. Considering that artificial formula is only direly needed in the first 3 months, with support from the extended family, religious, governmental and non-governmental organisations, women might be able to afford artificial formula for a short period of time. It is important however to emphasise while counselling women that mixed feeding whatsoever is contra-indicated.

4.2 Breastfeeding Practices:

Findings from the qualitative data that suggested that even though breastfeeding was common most infants were not exclusively breastfed.

Predominant breastfeeding was the commonest type of breastfeeding. Exclusive breastfeeding is one of the cornerstone practices in early and abrupt cessation of breastfeeding; therefore, for early and abrupt cessation of breastfeeding to succeed it

must be ensured that women will actually breastfeed exclusively. Mixed and predominant feeding must be avoided at all costs.

Probably with sustained sensitization on exclusive breastfeeding the rate might improve over time since rates as high as 80-90 % is found in hospitals and communities close to BFHI designated hospitals. From focus group discussions and key informant interviews it was obvious that mothers, mothers-in-law and grandmothers have to be adequately involved and mobilised in the promotion of exclusive breastfeeding.

4.3 HIV and Breastfeeding:

Almost all women interviewed across all methods used for data collection were not aware of MTCT through breastfeeding. Since health workers were of the view that the exclusive breastfeeding rate will be affected negatively when the awareness level about MTCT through breastfeeding is raised, careful thought and planning has to be given to how messages about this are disseminated.

The way health workers disseminate this message during ANC talks, counselling sessions etc will go a long way in determining the knowledge, attitude and practice of Nigerian women in relation to HIV and breastfeeding in the future.

4.4 Early and Abrupt Cessation of Breastfeeding In The Context of HIV in Nigeria:

The difficult and emotional nature of this practice seems to have put Nigerian women in a quagmire; they do not seem to have firm opinion of their own - probably because the idea was unfamiliar to them. Their reactions and suggestions points to the fact that they think

their opinions on the feasibility of and cultural acceptance of the practice are not important. Interestingly, some health workers think so too. Health workers seem to have placed themselves in the position of the custodians of health for the community. Both parties seem to be comfortable with this alliance for now, but I think health workers should gradually involve women more in the area of decision making.

Many health workers were infuriated by the message that seemed to suggest that HIV positive women in developing countries should go ahead and breast their infants –since, ‘they can neither afford nor guarantee hygienic preparation of artificial formula’ while HIV positive women in developed countries should not breastfeed. Nigerian health workers see this as double standards and dehumanising. I would like to think that it was simply a matter of clarity. I suppose the message meant –as a last option, early and abrupt cessation of breastfeeding should be the option in developing countries after all avenues has been explored. Except this message is re-presented, it might continue to hinder the feasibility of early and abrupt cessation of breastfeeding in Nigeria.

The fact that there is no concrete evidence on the effectiveness and efficacy of early and abrupt cessation of breastfeeding from any where is also a hindrance to the acceptability of this practice amongst health workers in Nigeria.

4.5 The Process Of Early And Abrupt Cessation Of Breastfeeding:

Many health workers generally felt HIV positive mothers should either breastfeed like the general population or not breastfeed at all. They claim that any modification or message outside this will introduce a lot of confusion in the breastfeeding policy.

A lot of emphasis was laid on the health personnel demand early and abrupt cessation of breastfeeding. The backbone of the practice in terms of manpower requirements is counsellors/lactation managers. The 3 stages suggested for the process of early and abrupt cessation of breastfeeding are all dependent on a lot of counselling.

It is important to note that before implementing this practice there needs to be a functional, free or heavily subsidised voluntary counselling and confidential testing (VCCT) for all women coming for antenatal clinics otherwise the uptake and implementation of the practice can not be optimal.

Prevention of mixed feeding, ensuring that infant is getting adequate, hygienically prepared feeds, reduction of the risk of psychological trauma, on both mother and child, diarrhoeal disease, breast pathology, risk of pregnancy are important issues that have to be closely monitored during the process of early and abrupt cessation of breastfeeding

4.6 Preferred Options:

To many health workers early and abrupt cessation of breastfeeding should not be an option. Alternatives like surrogacy, use of goat/cow's milk, artificial formula and at worse early and abrupt cessation of breastfeeding with the use of ARV drugs should be explored as preferred options.

Chapter 5: Conclusions

The major issues at stake concerning the practice of early and abrupt cessation of breastfeeding in Nigeria are the feasibility of the practice in terms of

1. The acceptance of the practice vis a viz the potential/willingness of health workers, the women directly involved and their families and the community as a whole to carry out this practice.
2. Costs to families infected / affected and health institutions
3. Manpower demands and
4. Availability of an affordable and acceptable replacement food.

In spite of the difficult and emotional nature of this practice, the huge manpower and financial demands on health institution and families, my opinion is that early and abrupt cessation of breastfeeding is feasible in Nigeria as conceded by some health workers and women. The extended family social support system found in Nigeria serves as a good back up for the sustainability of this modified infant feeding pattern especially if the community gets adequately sensitized and motivated.

The weaning foods currently used for the general population are affordable, accessible and nutritionally adequate as replacement food. It can however be further improved to suit the nutritional needs of very young infants.

The weaning and breastfeeding practices in a Nigeria are relatively similar to or easily adaptable to the practice of early and abrupt cessation of breastfeeding in that relactation is not a normal practice-there by reducing the risks of mixed feeding, abrupt cessation of breastfeeding is quite common (even though it takes place at a later age), and early

cessation of breastfeeding does occur and is culturally acceptable in certain situations. If well promoted early and abrupt cessation of breastfeeding may well become one of the culturally accepted reasons for early weaning.

The high rates of predominant breastfeeding compared to exclusive breastfeeding are alarming and need to be addressed urgently by increased sensitization of breastfeeding mothers and grandmothers who have a great influence on infant feeding decisions made in the community.

The manpower demand of early and abrupt cessation of breastfeeding is quite high and will require a lot of training and re-training of all categories of health workers in the basic skills of HIV/AIDS counselling, care and support with particular emphasis on infant feeding counselling and lactation management. The need for support from local and international governmental and non-governmental organisations in the area of poverty alleviation and women empowerment to improve the access to adequate replacement feeds and ARV drugs came out from focus group discussions and key informant interviews

The real threat to the feasibility of early and abrupt cessation of breastfeeding in Nigeria is the strong views held against it by many health workers – this cannot be ignored since it is unlikely that women will choose this option if are not assured of the support of health workers will support n this practice.

While more research is going on in different parts of Africa to ascertain the effectiveness and efficacy if early and abrupt cessation of breastfeeding, it might be useful for health workers to as a matter of urgency explore and develop other acceptable and affordable

strategies for the reduction of MTCT of HIV in Nigeria. However women should be allowed choose whatever option that suit them and supported in their choice.

Chapter 6: Recommendations

The major recommendation that came out from this study is that:

- € Health workers and experts in MTCT of HIV in Nigeria should as a matter of urgency explore and develop other acceptable and affordable strategies for the reduction of MTCT of HIV with particular emphasis on infant feeding.
- € Women should be adequately supported in what ever infant feeding choice they make.

General recommendations concerning MTCT of HIV are:

- € More funds should be directed into conducting operational research on the different methods of reducing MTCT of HIV including early and abrupt cessation of breastfeeding immediately.
- € There should be training and re-training of all cadres of health workers in HIV/AIDS counselling with particular emphasis on infant feeding and lactation management.
- € To improve uptake of VCCT there should be increased affordability and accessibility to VCCT centres and ARV drugs for HIV positive mothers and their infants.
- € All health institutions in Nigeria should set up HIV positive mothers friendly services.
- € Local and international governments and non governmental organisation should show increased commitment and support for HIV positive mothers especially for provision of replacement feeding and ARV drugs.

6.1 Further Research

- ∓ It will be useful to research on ways soya beans (which is readily available in Nigeria) can be locally processed to make it an adequate and safe replacement feed for very young infants.
- ∓ Operational research on the option of early and abrupt cessation of breastfeeding should be embarked upon immediately to determine the effectiveness and efficacy of this practice in Nigeria.

WORD COUNT 15,500

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Appendix A

INFORMATION SHEET FOR QUESTIONNAIRE

I am Victoria Isiramem a medical doctor by profession. I am studying for an MSc in mother and child health in Centre for International Child Health, University College London. For my project I have chosen to explore the understanding and process of early and abrupt cessation of breastfeeding in the Nigerian context, using Kaduna state as my site of study.

To do this I require you to please respond to this questionnaire. Your responses and ideas shall be of great value in this project. However you reserve the right to decline an interview, answering any individual answer, or to stop the interview at any time. Your refusal to participate in this project shall not in any way affect you or your infant's treatment in the clinic.

For further information you can contact me at the following address:

Dr Victoria Irishmen

No. 3 Kanta road

Ali Akilu building

P O Box 103

Kaduna

Email: vicisiramem@yahoo.com

Thank you.

(Appendix B).

INFORMATION SHEET FOR FOCUS GROUP DISCUSSION AND INTERVIEW

I am Victoria Isiramen a medical doctor by profession. I am studying for an MSc in mother and child health in Centre for International Child Health, University College London. For my project I have chosen to explore the understanding and process of early and abrupt cessation of breastfeeding in the Nigerian context using Kaduna state as my site of study.

To do this I shall interview and discuss with groups of women and health workers. Your suggestions and experiences shall be of great value in this project. However you reserve the right to decline an interview, decline answering any individual answer, or to stop the interview at any time. Your refusal to participate in this project shall not in any way affect you or your infant's treatment in the clinic.

For further information you can contact me at the following address:

Dr Victoria Isiramen

No. 3 Kanta road

Ali Akilu building

P O Box 103

Kaduna

Email: vicisiramen@yahoo.com

Thank you.

Appendix C
QUESTIONNAIRE

The purpose of this questionnaire is to obtain data on and explore the process of early and abrupt cessation of breastfeeding from women attending paediatric out patient department in ABUTH, Kaduna.

CODE NUMBER _____ **Date interview was conducted:** _____

1. Education of woman (years of schooling)_____
2. Woman's age (years) _____
3. Occupation (full time housewife, trader, professional, other- specify)_____
4. Marital status: single married
5. Religion: Islam Christianity Other (specify) _____
6. Ethnic group:_____
7. How many children do you have_____
8. Are you currently breastfeeding? Yes No
9. If yes, how old is this baby (months) _____
10. How old is the previous baby you breastfed now (years)? _____

For subsequent questions I shall be asking about breast-feeding practices for this baby and the last previous baby you breastfed

11. When your babies were very young did you practice Exclusive breastfeeding (that is feeding your baby with breast milk only and medications if prescribed by a medical personnel)

This baby Yes No Previous baby Yes No

Any other pattern of breastfeeding specify_____ -

12. How old was your infant when you introduced liquids? (Age in months)

This infant _____ Previous infant _____

13. How old was your infant when you introduced solids? (Age in months)

This infant _____; Previous infant _____

14. At what age did you completely stop breastfeeding your infants every day and every night (Age in months): This infant _____; Previous infant _____

15. How long did it take for you to completely stop breastfeeding your infant from the day you began to reduce the number of breastfeeds/day and night to the day he/she no longer suckled from your breasts? (Number of days, weeks or months):

This infant _____; Previous infant _____

16. When you completely stopped breastfeeding, did you ever put your child back to the breast occasionally (less than once per day and night, e.g. when your child starts crying, when baby was ill)? This infant Yes No Previous infant Yes

No

17. Why did you stop breastfeeding this infant -or the previous infant you breastfed? (Ask the question and tick only the answers given. Do not probe, except ask, "Is there any other reason?")

This infant:

Infant old enough	Resumption of sexual relationship
Infant no longer wanted to breastfed	Separation from infant due to work
To encourage infant to eat solid food	Separation from infant due to other reasons
Pregnancy	Mother too sick to breastfeed
Mother can afford replacement feeding	Infant too sick to breastfeed
Advised by health provider	Infant not growing well
Advised by husband or partner	Fear of transmitting HIV
Advised by other person	

Other reason (specify) _____

Question 17 continued:

Previous infant:

Infant old enough	Separation from infant due to work
Infant no longer wanted to breastfed	Separation from infant due to other reasons
To encourage infant to eat solid food	Mother too sick to breastfeed
Pregnancy	Infant too sick to breastfeed
Mother can afford replacement feeding	Infant not growing well
Advised by health provider	Fear of transmitting HIV
Advised by husband or partner	Other reason (specify)
Advised by other person	_____
Resumption of sexual relationship	_____

18. Did you do anything to help to stop breastfeeding your infant? (Ask the question and tick only the answers given). Do not probe, except to ask, "is there any other reason?")

This infant

- Put something on breast
- Sent infant to relative or friend or neighbour
- Took medicine to stop milk
- Gave infant other milk or food
- Gave infant a feeding bottle
- Child only getting one/two feeds per day
- Did nothing special

Previous infant:

- Other method (describe) _____
- _____
- Put something on breast
- Sent infant to relative or friend or neighbour
- Took medicine to stop milk
- Gave infant other milk or food
- Gave infant a feeding bottle

Child only getting one/two feeds per day

Did nothing special

Other method (describe)_____

19. Did you encounter any problems when you stopped?

This infant Yes No

Previous infant Yes No

20. If yes, what problems did you encounter when you stopped breastfeeding your infant?

(Ask the question and tick the only answers given. Do not probe, except to ask, “is there any other reason?”). If no proceed to next question.

This infant:

Infant cried or unhappy

Breast pain

Breast engorgement

Mother became ill

Infant became ill

Disapproval by partner or family or neighbours

Disapproval by health worker

No food or milk to feed the baby

Other problem (specify)

Previous infant

Infant cried or unhappy

Breast pain

Breast engorgement

Mother became ill

Infant became ill

Disapproval by partner or family or neighbours

Disapproval by health worker

No food or milk to feed the baby

Other problem (specify)

21. I want to change the subject now and talk about HIV. How do you think HIV is transmitted? (Ask the question and tick the only answers given. Do not probe, except to ask, Have you heard of any other ways)

Unprotected sexual intercourse

Contaminated sharp objects

Blood and blood products

MTCT, during pregnancy

MTCT, during delivery

MTCT, during breastfeeding

22. Are you aware of your HIV status?

Yes

No

Do not want to answer

Thank you very much for your time

Appendix D

FOCUS GROUP DISCUSSIONS QUESTION GUIDE

What are your experiences concerning breastfeeding?

How do you breastfeed your infants (type and length)

How do you wean your infants (Age, food and process)

What age is the youngest age at which infants are completely weaned in this community?

What is the shortest duration you take to stop an infant from breastfeeding completely?

Is it possible to stop an infant who has been on exclusive breastfeeding from breastfeeding completely in a day

Have you ever stopped your infant from breastfeeding completely within such a short duration?

Why did you do it?

How did you do it? (The process).

What food can be given to four-month-old infant who is not taking breast milk in your community?

Does the community have any support strategy or herbal remedies to help women who have to stop breastfeeding within a short time? If yes what are these strategies?

How does the community look at or treat women who have to stop breastfeeding their infants early and completely within a short time?

How is HIV transmitted?

What are your views on the fact that HIV can be transmitted from a mother to a child through breast milk?

How do you suggest an HIV infected woman should go about feeding her infant considering that it can be transmitted through breast milk?

What is your opinion on stopping an infant from breastfeeding at about 3-6 months within a day so as to reduce the chance getting HIV infected through breast milk?

What can be the process of doing this?

What kind of support do you think such women will need from health workers, family members and the community in this practice?

Appendix E

KEY INFORMANT INTERVIEW QUESTION GUIDE

How do women breastfeed in this community (type, length)

What is your estimate of the exclusive breastfeeding rate in this community?

What is the shortest time in which women completely stop breastfeeding and for what reason?

What are the processes women use to wean their infants?

What are the weaning foods available?

What if any are the kind of weaning and breastfeeding problems women present with?

How do you manage the infant feeding aspect of infants born to HIV infected mothers in this hospital?

What are your views on the option of early and abrupt cessation of breastfeeding as an option for reducing breastfeeding transmission of HIV?

What do you recommend to be the process and issues involved in implementing early and abrupt cessation of breastfeeding?