



KAMUZU COLLEGE OF NURSING

**EXPLORING FACTORS THAT INFLUENCE ADHERENCE TO EXCLUSIVE
BREASTFEEDING AMONG HIV POSITIVE MOTHERS AT BWAILA HOSPITAL IN
LILONGWE, MALAWI**

BY

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Submitted to the faculty of Midwifery, Neonatal and Reproductive Health Studies in partial
fulfilment of the requirement for A Degree of Master of Science in Midwifery

FEBRUARY 2018

DECLARATION

This thesis is my original work and has not been presented for a degree in any other University.

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CERTIFICATE OF APPROVAL

The undersigned approve that this thesis represents the student's own work and has not been presented anywhere else.

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DEDICATION

This thesis is dedicated to the Lord, Jesus Christ for His guidance and sufficient grace during the time I was pursuing this master's degree. Secondly, my mother Mary Anne Kandeya for always believing in me and motivating me to work hard to make her proud and finally to my father Billy Douglas Kandeya, who has single-handedly given me the drive to conquer everything in this life and the support he gave me as I soldiered on.

ACKNOWLEDGEMENT

I would like to offer my appreciation to my supervisors Dr Ursula Kafulafula and Mrs Bertha Chakhame for their tireless work and constant encouragement. Thank you for pushing me to produce quality and substantial work.

To the staff of Bwaila hospital for supporting this study. The participants from Bwaila family health unit department, who took their time to participate in the study. Thank you for sparing time to be interviewed.

I am also grateful to KCN and USAID for the scholarship that enabled me to pursue this masters degree.

To my classmates, who taught me data analysis and supported me all the way. Finally, I want to thank all those who contributed to the success of this study, whom I have not mentioned in person.

Abstract

Currently, there are over 39 million people living with HIV worldwide. The burden is high in the sub-Saharan Africa where there are over 11 million people living with HIV. Malawi is one of the countries with a high HIV prevalence rate, with 8.8% of the population living with HIV. The total number of people living with HIV in 2016 was 1,000 000 of which more than 50% of these were women of the childbearing age. Transmission of HIV from mother to infant during postpartum is a far much bigger problem because not a lot of interventions have focused on the transmission of HIV postnatally. The rate of HIV transmission during postpartum globally is estimated at 8.9% whereas in Malawi, it is estimated at 2.4% (Van de Perre, Kankasa, Nagot, Meda, & Tumwine, 2017; Gumede-Moyo, Filteau, Munthali, Todd, & Musonda, 2017). The aim of this study was to explore factors that influence adherence to exclusive breastfeeding among HIV-positive mothers, which is important in promoting exclusive breastfeeding which may reduce the rates of HIV transmission. Despite that mixed feeding practices in exposed infants have shown an increase in transmission rates of HIV, it has not been easy to adhere to exclusive breastfeeding as an infant feeding practice.

The study used descriptive qualitative research method to explore factors influencing adherence to exclusive breastfeeding among HIV-positive mothers at Bwaila Hospital in Lilongwe, Malawi. Purposively selected 15 HIV positive mothers with babies from 0-6 months of age were interviewed using a semi-structured interview guide. The data were analyzed manually using simple thematic analysis proposed by Braun & Clarke (2006). The results showed that knowledge of EBF, attitudes and perceptions towards EBF, availability of support

from significant others, health facility influence, socioeconomic status and intention to protect are some of the factors that influence HIV positive women to adhere to EBF.

In conclusion, there is need to intensify interventions that address several enabling factors, including; structural and social support, changing attitudes and subjective norms to provide the conditions conducive to EBF adherence.

KEYWORDS: exclusive breastfeeding; HIV positive women; adherence; influence

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LIST OF ABBREVIATIONS

AIDS:	acquired immune deficiency syndrome
ART:	antiretroviral therapy
AFASS:	acceptable, feasible, affordable, sustainable and safe
ARV:	antiretroviral
COMREC:	College Of Medicine Research and Ethics Committee
EBF:	exclusive breastfeeding
HIV:	human immunodeficiency virus
HAART:	Highly Active Antiretroviral Therapy
MF:	mixed feeding
MOH:	ministry of health
MTCT:	mother to child transmission
PMTCT:	prevention of mother to child transmission
SDG:	sustainable development goals
UN:	United Nations
UNAIDS:	United Nations Programme on HIV/AIDS
WHO:	World health organization

OPERATIONAL DEFINITIONS

Exclusive breastfeeding: feeding an infant no fluids or other feeds other than breast milk for the first six months of life.

Adherence: doing what is required by guidelines to show commitment.

Mixed feeding: feeding an infant breast milk and other liquids or foods such as water

Defaulting ART: discontinuation of antiretroviral therapy. This may be due to health reasons or the burden of taking medications every day.

Prevention of Mother to Child Transmission: the prevention of HIV infection to a child from the mother during pregnancy, delivery and postnatally by taking ARV prophylaxis, safe delivery and use of recommended infant feeding practices.

CHAPTER 1

INTRODUCTION AND BACKGROUND

Introduction

Currently, there are over 39 million people living with Human Immunodeficiency Virus (HIV) worldwide. In the year 2016, there were over 2.1 million new HIV infections globally. The burden is high in sub-Saharan Africa where there are over 11 million people living with HIV (UNAIDS, 2016). HIV has caused high morbidity and mortality rates amongst women and children. In Malawi, more than 1.1 million people were registered in antiretroviral therapy (ART) clinics since ART programme was rolled out. Twelve percent of the total registrations were pregnant women and 3.8% were breastfeeding women. 27, 207 children aged between 2-24 months were registered as exposed infants and 1.7% were confirmed HIV positive (MOH, 2016).

The figures above show that there is high prevalence rate of HIV in women and children in Malawi. In infants, HIV is commonly transmitted through mother to child transmission (MTCT). MTCT occurs “when an HIV- positive woman passes the virus to the baby during pregnancy, labour and delivery or after delivery through breastfeeding” (WHO, 2014 p.3). In an attempt to reduce the HIV prevalence rate, a PMTCT programme was introduced in 2001. This provided a window for HIV testing and treatment in women during antenatal, labour, delivery and postnatal. The programme recommends ART initiation to all pregnant women once found HIV positive, and it has been associated with reduced HIV transmission between the mother and the child. However, studies in Malawi have shown poor adherence rates to ART among HIV-positive mothers during the postnatal period. This may increase the rate of HIV transmission

from mother to child during breastfeeding as inadequate adherence to ART is associated with an increase in viral load, ART failure and viral resistance.

The World Health Organization (WHO) and the Malawi Ministry of Health (MOH) recommend that mothers exclusively breastfeed their children from birth up to six months as part of prevention of mother-to-child transmission (PMTCT) of HIV (WHO & Ministry of Health, 2016). Exclusive breastfeeding (EBF) is vital for the survival of the child and the reduction in transmission of HIV from mother-to-child in underdeveloped countries like Malawi. The WHO recommends that “in light of the effectiveness of Antiretroviral (ARV), HIV-infected mothers should continue breastfeeding their infant until twenty-two months of age” (WHO, 2016 p. 3). This recommendation focuses on the use of breastfeeding to improve the infant’s chances of survival while reducing the risk of HIV transmission.

Transmission of HIV from mother to infant during postpartum is a far much bigger problem because not a lot of interventions have focused on the transmission of HIV postnatally. The guidelines for feeding exposed infants keep on changing. As a result, women are not given adequate information and care as regards to feeding their infants. This may be due to lack of knowledge among health workers to teach these women on the proper methods of infant feeding and socio-economic challenges in Malawi leading to most women not feeding their exposed infants appropriately. Breastfeeding is the most appropriate method of infant feeding because it is readily available, cheap, provides adequate immunological factors and necessary nutrition, and consequently results in reduced morbidity and mortality.

Despite that mixed feeding practices in exposed infants have shown an increase in transmission rates of HIV (Maman et al. 2012), it has not been easy to adhere to exclusive

breastfeeding as an infant feeding practice. This is common in Malawi where in most communities, culture and socio-economic status stipulate mixed methods of infant feeding. Mixed feeding and poor adherence to ART increase the HIV transmission during breastfeeding since the viral burden of the mother increases. There is an increase in the risk of HIV transmission through breastfeeding if the infant feeding guidelines are not followed. Therefore the purpose of this study was to explore factors that influence adherence to exclusive breastfeeding among HIV-positive mothers at Bwaila.

Background

HIV and AIDS epidemic has been around since the 1980s. In the years that have followed, the epidemic had spread to almost all parts of the world and by the year 1989, there were more cases of HIV in women than men in sub-Saharan Africa. In the mid-1990s, the transmission rate of HIV from mother to child was found to be between 14 and 25% in the developed countries and between 25 and 30% in developing countries. Information on whether mothers and babies received antiretroviral therapy in the 1990s has not been documented, but the possibility that antiretroviral treatment was available is low (UNAIDS, 2015).

In 2011, it was noted that the HIV was spreading rapidly (AIDS portal, 2015). A strategy had to be put in place to reduce the spread of HIV. The strategy was to devise a plan to combat the spread. The plan is known as the Global Plan which aimed at reducing the number of new HIV infections through MTCT by 90% by 2015. In this plan popularly known as the Aids portal 2015, it was estimated that improving the interventions to prevent the spread of HIV would reduce HIV by more than 250,000 new infections worldwide per annum (WHO, 2013; Aids portal, 2015).

HIV and AIDS estimates in Malawi.

Malawi is one of the countries with a high HIV prevalence rate, with 8.8% of the population living with HIV. The total number of people living with HIV in 2016 was 1,000 000. In adults aged between 15 to 49, the prevalence rate of HIV was 11%. The number of adults aged 15 and over living with HIV was 890 000 out of which 540 000 were women (UNAIDS, 2016). Almost 50% of people with HIV and AIDS in Malawi are women of the childbearing age. This entails that some babies are born from HIV positive mothers. The number of children aged 0 to 14 living with HIV was 110 000. A total number of deaths and orphans due to AIDS was 27 000 and 530 000 respectively (UNAIDS, 2016). Most babies are therefore contracting the virus from their mothers.

More than 300,000 children become infected with HIV every year worldwide. In 2012, it was estimated that 260,000 children between 1 and 15 years were infected with HIV around the world (White et al., 2014). More than 71% of the children infected with HIV are in sub-Saharan Africa (UNAIDS, 2015). If the situation is not put under control, more children will contract the virus during the postnatal period. With the lack of effective interventions to control the spread of HIV, it is estimated that 30-45% of HIV-exposed infants may contract the HIV virus during antenatal, delivery and postnatal period (De Cock, et al., 2006; Stewart, 2016).

Ziegle, (1985), one of the first researchers of HIV, found that HIV can be found in breast milk. He noted that there exists three HIV reservoirs in breast milk: RNA (cell-free viral particles), proviral DNA (cell-associated virus integrated into latent T-cells) and intracellular RNA (cell-associated virus inactivated producing T-cells). It is not clear as to how each transmission is done. However, HIV transmission during postpartum is believed to exist because

some infants that test negative for HIV RNA at six weeks after birth, may test positive later on. Furthermore, cracked nipples which are bleeding may also transmit the virus. The babies' mucosal lining of the mouth may already be compromised by contaminants hence rendering it susceptible to HIV infection in the blood. Without interventions to control the spread of HIV postnatally (especially due to poor infant feeding practices), 5-20% new HIV infections are expected. This may increase the pressure on government resources leading to increased morbidity and mortality rates due to HIV and AIDS in children (De Cock, et al., 2006).

HIV and AIDS in Malawi as a country has posed a lot of pressure on the country's resources. Transmission of HIV from mother to infant during postpartum is a far much bigger problem because not a lot of interventions have focused on the transmission of HIV postnatally. The guidelines for feeding exposed infants keep on changing. As a result, women are not given adequate information and care as regards to feeding their infants. This may be due to health workers' lack of knowledge to be imparted to these women on proper methods of infant feeding and socio-economic challenges in Malawi leading to most women not feeding their exposed infants appropriately. Breastfeeding is the most appropriate method of infant feeding because it is readily available, cheap, provides adequate immunological factors and necessary nutrition, and consequently results in reduced morbidity and mortality (Miotti, 2016).

In infants, HIV is commonly transmitted through mother to child transmission (MTCT). MTCT occurs "when an HIV- positive woman passes the virus to the baby during pregnancy, labour and delivery or after delivery through breastfeeding" (WHO, 2014 p.3). Malawi has a high prevalence rate of HIV among pregnant women (13.7%) (Malawi Demographic and Health Survey, 2015). In an attempt to reduce the HIV prevalence rate, a PMTCT (prevention of mother to child transmission) programme was introduced in 2001. This provided a window for HIV

testing and treatment in women during antenatal, labour, delivery and postnatal. The programme recommends ART initiation to all pregnant women once found HIV positive, and it has been associated with reduced HIV transmission between the mother and the child. In addition, ART and PMTCT interventions may reduce the risk of HIV transmission to below 5% (Cernadas, et al., 2010).

However, studies in Malawi have shown poor adherence rates to ART among HIV-positive mothers during the postnatal period. In one study, 30% of women who were initiated on ART under Option B+ defaulted within 3 months of commencing ART, but no study has described adherence among women in the Option B+ program (Haas et al., 2016). In a systematic review of studies that were done before 2012, it was noted that the level of adherence to ART during pregnancy was at 73%. However, only 53% of the women adhered to ART after delivery (Nachega et al., 2012). This may increase the rate of HIV transmission from mother to child during breastfeeding as inadequate adherence to ART is associated with an increase in viral load, ART failure and viral resistance (Nachega et al., 2007).

A wide range of policies and interventions have aimed to increase the rates of EBF in recent years, yet 363 million children (63%) in low-income settings are not exclusively breastfed and a further 101 million are not breastfed according to international recommendations (Victoria et al., 2016). Despite that WHO recommends EBF for the first six months of life, on average, children in Malawi are exclusively breastfed for a duration of between 3.7 - 5 months (Vaahtera, et al., 2010; MDHS, 2015). Currently, the rate of EBF among HIV-positive mothers in Malawi is not known. Malawi as a country is failing to comply with the WHO recommendations since the average rate of EBF in Malawi is 4-5 months (MDHS, 2015). This means that most babies do not get the required nutrients and immunological factors from their mothers. This predisposes them

to infections such as HIV. Exploring factors that influence adherence to exclusive breastfeeding among HIV-positive mothers is important in promoting exclusive breastfeeding which may reduce the rates of HIV transmission.

Although mixed feeding practices in exposed infants have shown an increase in transmission rates of HIV (Maman et al., 2012), it has not been easy to adhere to exclusive breastfeeding as an infant feeding practice. This is common in Malawi where in most communities, culture and socio-economic status stipulate mixed methods of infant feeding. Mixed feeding and poor adherence to ART increases the HIV transmission during breastfeeding since the viral burden of the mother increases. There is an increase in the risk of HIV transmission through breastfeeding if the infant feeding guidelines are not followed (Maman et al., 2012). Sankar et al., (2015) reviewed the effects of optimal breastfeeding on mortality in infants and children ages 0-23 months and found that infants who were mixed fed were 2.8 times more likely to die than those who were exclusively breastfed. To reduce the transmission of HIV from mother to child, it is very important to understand the factors that influence adherence to exclusive breastfeeding among HIV-positive mothers. This can help to reduce the transmission of HIV from mother to child as health workers will be able to provide adequate infant feeding counselling which will enable mothers to make optimal decisions (Maman et al., 2012).

Transmission of HIV from mother to child postnatally can be reduced by allowing the proper infant feeding practices that cultures stipulate and the provision of ART to complement each other. These together with other considerations such as socio-economic status, knowledge of infant feeding methods and exclusive breastfeeding intentions can help to reduce HIV transmission through breastfeeding (Coovadia et al., 2007). In the developed countries, exclusive breastfeeding has been found to reduce infant mortality rate by 19%. Similarly, if proper infant

feeding practices can be emphasised and followed in sub-Saharan Africa, the rates of HIV transmission postnatally may be reduced. This can only be possible if the interventions that promote proper infant feeding practices are improved (Coovadia et al., 2007; Natulinda et al., 2015). This can be achieved only if health care systems work together with communities because it is not easy to follow the most appropriate infant feeding practice that would be appropriate for all households and social economic status of the HIV positive mothers.

Information on the duration of exclusive breastfeeding and the dangers of mixed feeding have to be greatly promoted (Coovadia et al., 2007; Berman, 2016). This means that breastfeeding as a route of HIV transmission needs to be given much thought as it is contributing a lot to MTCT. Unless proper infant feeding practices are put in place, MTCT will continue to be on the rise. Exploring the factors that influence adherence to exclusive breastfeeding among HIV-positive women is important because it is a major determinant of maternal and child health. The maternal and child health in HIV-exposed infants is influenced and affected by a number of elements. These elements include maternal knowledge, attitudes and beliefs which may be further influenced by maternal education, breastfeeding intentions, cultural expectations, health facility practices, family resources, maternal health, perceived risk of disease transmission to the infant and stigma. The risk of HIV transmission from mother to child increases with poor adherence to WHO's recommendations of infant feeding (Williams et al., 2015).

Considering that the transmission of HIV from mother to child has contributed a lot to all HIV infections, a lot has to be done to reduce the spread of HIV that may be perpetuated by poor infant feeding practices. Conforming to an infant feeding practice particularly becomes a big challenge when the mother has to decide between the risk of HIV transmission through breastfeeding and the risk of their child dying from other causes like pneumonia (WHO & MOH

Guidelines, 2009). Exclusive breastfeeding (EBF) is important in the health of infants as it reduces infant mortality by 3% in the first year of life (Coovadia et al., 2007; Sguassero, 2008). Adequate breastfeeding is considered to be EBF from birth up to six months, followed by continued breastfeeding with complementary feeds which are safe and nutritionally adequate up to 24 months (Greiner, 2013).

Problem statement

The WHO and Malawi Ministry of Health recommend that babies born from HIV positive mothers be exclusively breastfed for six months from birth and that the mother be on ART. Complementary feeds can then be gradually introduced whilst breastfeeding is continued. “Breastfeeding should then only stop once a nutritionally adequate and safe diet without breast milk can be provided” (WHO, 2016 p. 4). This was adopted because it has proven to prevent the transmission of HIV from the mother to her child.

The current Malawi demographic and health survey report has indicated that mothers in Malawi exclusively breastfeed their infants for an average of four to five months (MDHS, 2015). This means that most infants are introduced to mixed feeding before six months. During this period, the infant has not developed optimal immunity to fight against infections. This has created a gap in PMTCT since there is poor adherence to ART during the postnatal period which may consequently increase the risk of HIV transmission from mother to child during breastfeeding (Nachega et al., 2012). Poor infant feeding in exposed infants coupled with poor adherence to ART increases the risk of HIV transmission from mother to child during breastfeeding. It is in light of this that there is need to investigate the factors influencing adherence to EBF among HIV-positive women.

Justification of the study

In this study, new knowledge of the factors that influence adherence to exclusive breastfeeding among HIV-positive women would be generated. This knowledge will assist HIV health workers to give adequate information on infant feeding and assist HIV-positive mothers to understand, make an informed choice and comply with the treatment plan. It will also promote acceptance of the recommended infant feeding options by WHO which will, in turn, reduce the rate of transmission of HIV from mother to child. In the long run, this will improve the survival rate of infants born from HIV-infected mothers hence reducing infant mortality rate in Malawi.

Broad objective

To determine the factors that influence adherence to exclusive breastfeeding among HIV-positive women at Bwaila hospital in Lilongwe, Malawi.

Specific Objectives

- To explore the knowledge of HIV positive women on EBF
- To assess the perceptions, attitudes and beliefs of HIVpositive women on exclusive breastfeeding
- To explore the influence of the family and community on adherence to exclusive breastfeeding.
- To identify health facility-related factors influencing adherence to EBF among HIV-positive mothers.

Research question

- What are the factors that influence adherence to exclusive breastfeeding among HIV-positive mothers?

CHAPTER 2

LITERATURE REVIEW

This chapter focuses on the historical and current evidence on the factors that influence HIV positive mothers to adhere to exclusive breastfeeding. The literature review covers the following areas: knowledge of exclusive breastfeeding in HIV AIDS, information from a health facility, cultural expectations, family values and breastfeeding intentions and socio-economic challenges.

The literature was sourced from the following electronic databases: HINARI, PubMed, Science Direct, Google and Google Scholar. The terms used during the search were: ‘factors’, ‘influencing’, ‘adherence’, ‘HIV’, ‘breastfeeding’, ‘lactating mothers’ and exclusive breastfeeding. These were entered separately using ‘AND’ and ‘OR’. Reference lists of published journal articles were used to retrieve articles. The articles were searched for international, Africa and local literature. This was done to ensure that only relevant and adequate articles have been picked for use in the study. Only articles that were in English language were used because the researcher’s official language is English. The literature used in this study ranges from 1985-2017.

Knowledge

The knowledge that exclusive breastfeeding reduces the risk of HIV transmission from HIVpositive mothers to their children compared to mixed feeding, partial breastfeeding and replacement feeding is of utmost importance on the adherence to exclusive breastfeeding. If mothers know that during postpartum babies acquire all the necessary immunological factors

from their mothers through breastfeeding which helps their bodies to fight infections hence reducing the risk of HIV infection, they are more likely to exclusively breastfeed their children (Coovadia et al., 2007). The knowledge on the advantages of exclusive breastfeeding also has a big influence on the duration the mothers will exclusively breastfeed their children. The current MDHS report (2015) has indicated that mothers in general exclusively breastfeed their children for an average of three months. This does not comply with the WHO's recommendation that mothers should exclusively breastfeed their infants for six months (WHO, 2010). Mothers are more likely to exclusively breastfeed their children when they are aware of the advantages of EBF (Lawani, Onyebuchi, Iyoke, Nkwo & Onoh, 2014).

It has also been found that exclusive breastfeeding provides a continuously reduced risk of HIV transmission in babies who remain on breastfeeding beyond 6 months. Coutsooudis, Pillay, Spooner, Kuhn, & Coovadia, 2006; Iliff et al., 2006; Torres, Bedel, Wachira & Dalmau, 2014), also noted that EBF carries a reduced risk of HIV transmission from mother to child than mixed feeding. When mothers know that during mixed feeding the immune factors of breast milk are neutralised by the damage to the child's digestive tract by contaminants or allergens in the food supplements, they are more likely to exclusively breastfeed their infants. This is because they would want to prevent the possibility of transmitting the virus to their newborn. Newborns who are HIV-exposed stand a higher chance of survival when exclusively breastfed than mixed fed (Young et al., 2011).

In relation to this, Stewart, (2016), noted that in some immunological studies the findings are that exclusive breastfeeding from birth up to six months is very important as the factors in human breast milk especially the milk from the HIV-infected mother may directly combat the factors that transmit the HIV infection. In a study done in Durban, South Africa, it was observed

that when a child is exclusively breastfed for the first 3 months of life the threat of HIV transmission from mother to child is reduced significantly than when they are mix fed.

In agreement to this, Nduati, Mbori-Ngacha, & John, (2010), found out that the most common method of infant feeding is breastfeeding in newborns because from human milk children will not only get essential nutrients but also immunological factors from mother to child, which will protect the baby against potentially life-threatening infections. A new study has also found that the risk of HIV transmission from HIV-infected mothers to their newborns is reduced if they practice exclusive breastfeeding beyond four months. These findings are of utmost importance in sub-Saharan Africa where infants are in danger of dying from diarrheal diseases or pneumonia (Coovadia, 2007; Natulinda et al., 2015). According to Jones, (2015), approximately 1.3 million infant deaths annually (13% of under-five deaths) could be avoided if exclusive breastfeeding was practised universally and was increased to 90% for newborns up to 6 months of age.

It has also been noted that HIV positive mothers are more likely to prevent exclusively breastfeeding their infants when they know that HIV can be transmitted through breastfeeding. It was reported in the Malawi Demographic and Health Survey that 91% of women and 86% of men have the knowledge that HIV has been known to be found in breast milk of HIV infected mothers and that HIV can be transmitted through breastfeeding (MDHS, 2010). No woman would want to transmit the HIV to their child. This has caused a lot of concern since if the infant has sores in the mouth, the virus can be transmitted from mother to infant through breastfeeding. This increases the rate of HIV transmission from mothers to babies in populations that breastfeed their babies (for example, Africa) than in areas where women usually use formula feeding as an infant feeding method (for example, the United States and Europe). In this case, mothers are

inclined to choose what they would regard as safer methods of infant feeding such as formula (Leshabari, Blystad, & Moland, 2007).

However, some of the HIV positive mothers would have the information that HIV can be transmitted through breastfeeding but are forced to practice mixed feeding because of the stigma of HIV they are more likely to face when their HIV status is divulged when they are seen formula feeding their infants. These women are forced to breastfeed their infants in public but feed them formula in private to try to reduce the chances of transmitting the virus to their infants (Bobat et al., 2007; Gara et al., 2008; Aishat, Olufunmilayo, David, & Gidado, 2015).

Some critics have found out that exposed infants who are mixed-fed develop AIDS faster than infants who are on exclusive breastfeeding (Bobat et al., 2007). This knowledge may influence the mothers to exclusively breastfeed their infant than using mixed feeding. This was also proved by Coutsooudis et al., (2006) who found that the risk of the infant acquiring HIV is highest when they were put on breastfeeding together with other food supplements and liquids by their HIV-infected mothers

Most mothers do not have adequate knowledge on infant feeding hence the lack of informed decision making which may endanger the children (Rendani, Motlatso, Phaweni, & Karl, 2011; Aishat et al., 2015). Lack of adequate counselling on infant feeding methods including their dangers and benefits may force HIV-positive women to make infant feeding decisions based on inadequate information. This may endanger their newborns' health (e.g., mixed feeding, under feeding) thereby enhancing HIV transmission. In their quest to avoid HIV transmission to their infants, HIV positive mothers may be putting the lives of their newborns at

risk unintentionally. This focuses greatly on the provision of adequate information about postpartum HIV transmission to all women during the antenatal and immediate postnatal periods.

Health workers need to promote exclusive breastfeeding in women whose HIV status is not known because the benefits of exclusive breastfeeding are high compared to problems that may come as a result of lack of immunological factors found in breastfeeding (Piwoz et al., 2006).

Information from a health facility

The type of information that health facilities provide also has a major influence on HIV positive mothers' adherence to exclusive breastfeeding. Literature has not clearly stated the type of information that health facilities provide to HIV positive mothers on exclusive breastfeeding which makes it difficult to pinpoint the actual information women receive from health facilities on infant feeding. One initiative that has been emphasized is the baby-friendly hospital initiative which has influenced mothers to exclusively breastfeed their infants (Hawkins, Stern, Baum, & Gillman, 2014). In some African countries, infant feeding counsellors are used to provide information on infant feeding. One such example in Malawi is the mother to mother programme being carried out in some health facilities (Leshabari, Blystad, & Moland, 2007; Natulinda et al., 2015). This allows peer education on the best way to feed HIV exposed infants.

In order for women to receive adequate information, there is a need for enough personnel to provide the information. Shortage of staff in health facilities has brought a major setback on the quality of infant feeding information given to the women. In the end, women are just encouraged to exclusively breastfeed their babies without being given individualized care based on their needs. Information about duration of EBF, complementary feeds and the dangers of

mixed feeding is not normally provided. In addition, the guidelines for infant feeding in HIV keep on changing. This makes it difficult for health workers to keep up to date with the information. As a result, the information and care that is provided to women is not standardized which creates a gap. The counselling done is also different as it is based on the knowledge base of the health worker (Rollins et al., 2010). There is a need for more research to determine the impact of the training carried out on infant feeding in HIV-positive women. The way the counsellors interpret the recommendations is of utmost importance as it determines the information HIV positive women receive.

Other critics have noted that the information which is given to HIVpositive mothers on infant feeding is inconsistent and may cause confusion to the mothers. Most HIVpositive mothers receive inconsistent information on infant feeding from health workers, colleagues and the community at large. This makes it difficult for the women to decide on the correct information. Most of the women (90%) receive counselling from health workers about exclusive breastfeeding and these workers have an influence on their infant feeding practices. This has also been documented in other studies (Chezem et al., 2010; Doherty et al., 2006, Piwoz et al., 2006; Aishat, Olufunmilayo, David, & Gidado, 2015). This may lead to women not making an informed decision as it has been observed that women are most likely to abide by information given to them by health workers. For instance, those women who have received counselling on exclusive breastfeeding by healthcare workers are likely to breastfeed exclusively for longer periods and avoid mixed feeding (Ludvigsson, 2008). Similarly, Ndubuka et al., (2013) also noted that most women are more likely to exclusively breastfeed their infants when counselling on infant feeding is done during antenatal visits. This clearly indicates the influence health workers have on women on the choice of infant feeding.

The perceptions of health care workers on infant feeding options and practices are of greater importance for them to give proper information on infant feeding. (Piwoz et al., 2007; Young et al., 2011). Health workers need to play an active role in giving these women adequate and correct information on feeding options as well as help them to make informed choices. Minnie & Greeff (2006); Aishat et al., (2015) also had the same findings in South Africa where health education about infant feeding at clinics had a major influence on HIV positive mothers' infant feeding practices of early infant feeding. Education about exclusive breastfeeding should start during antepartum, through labour and delivery and should continue after delivery.

Health facilities have the responsibility to give the women all the needed information on infant feeding. Without adequate and proper counselling including information about the risks of mixed feeding and benefits of exclusive breastfeeding as well as formula feeding, HIVpositive women may be forced to make decisions not based on adequate information. For instance, when women are told that HIV can be transmitted through breast milk, they will definitely refrain from exclusive breastfeeding. Because no mother would want to transmit the HIV to their baby through breastfeeding, they may end up unintentionally endangering their infants' health by deciding not to exclusively breastfeed and use mixed feeding or formula not hygienically prepared. This stresses on the need for the provision of adequate and clear information on exclusive breastfeeding to all HIV-positive women seeking antenatal care.

Cultural expectations, family values and breastfeeding intentions

PMTCT guidelines recommend exclusive breastfeeding from birth up to six months among HIV-positive women on antiretroviral therapy. It has proven difficult to promote exclusive breastfeeding in communities where mixed feeding is the culturally accepted method

of infant feeding. This has caused a conflict of interest to the mothers as they have to conform to the cultural aspects of their communities. This has prevented the scaling up of programmes that promote exclusive breastfeeding. Exploring the factors that influence HIV-positive women's adherence to exclusive breastfeeding is important to promoting adherence to PMTCT guidelines which will, in turn, reduce HIV transmission from mother to child hence reducing morbidity and mortality (Lawani et al., 2014).

Some critics have noted that family values and community norms also have a direct bearing on the infant feeding practices mothers follow in sub-Saharan Africa as in most developing countries. Exclusive breastfeeding is the expected method of infant feeding and choosing formula feeding is similar to divulging an HIV status of an individual. Divulging an HIV status may lead to violence and divorce (Adejuyigbe & Odebiyi, 2008). “About 87% of the mothers disclose their HIV status to their spouses, and 65.6% of the mothers disclose their status to their family members” (Adejuyigbe et al., 2008 p303). This is the case because of the various problems that come with disclosure of HIV statuses such as stigma, divorce and violence.

Significant others such as relations, friends and the community as a whole have important influence on an HIV positive mother's infant feeding practices. Women are more likely to adhere to an infant feeding practice that is approved by the significant others. This may create a gap in instances where the significant others do not have adequate information on proper infant feeding. This may affect the adherence to the treatment regimen and feeding practices to protect the exposed child hence increasing the transmission rate of HIV. Therefore, there is a need for a behavioural change advocacy that may include all significant people surrounding the HIV positive mothers. Health education should also be targeted on changing the knowledge,

perception, understanding and attitudes of families and communities as well as addressing the risks of mixed feeding in HIV-positive mothers (Piwoz et al., 2006; Natulinda et al., 2015).

In addition to this, some researchers have found out that old women have a major influence on the first time mothers' infant feeding practices. They are regarded as the people with most experience in caring for newborns. It is of utmost importance that issues concerning HIV status disclosure be extended to significant others so they can provide proper guidance when needed. It is of little importance to educate mothers only when mostly the decisions concerning newborn care are made by their elders. There is a need to come up with health campaigns targeting everyone (Mofenson, 2010).

This was also noted by (Kafulafula et al., 2013) that partners also take a leading role in issues of infant feeding. Some husbands are committed so much so that they even remind their wives to breastfeed their babies. Naturally, husbands believe in breastfeeding babies on demand. They do not like to see their babies cry. They would under normal circumstances ask the wife to breastfeed when a baby is crying. Health workers such as doctors and nurses can also take part in encouraging mothers to exclusively breastfeed their babies. This emphasizes on giving health education to the significant others to ensure exclusive breastfeeding.

Studies have also shown that male partner participation in antenatal care has an important role if it could be included in the maternal and child health system. This may promote issues of disclosure of HIV status which may, in turn, promote partner involvement in issues of infant feeding in HIV-positive women and hence reduce poor adherence to appropriate feeding practices. Partners should be involved in counselling together with their wives during testing of HIV. Adequate support should be given to families affected to prevent issues of stigma and

divorce that may arise in their relationship. There is a need to come up with programmes to promote exclusive breastfeeding from birth up to six months of all newborns for all women who are breastfeeding regardless of HIV status (Laar & Govender, 2011). Exclusive breastfeeding can also be a big challenge to women giving birth for the first time. In this case, it is essential to provide appropriate psychological and physical support through the provision of a breastfeeding enabling environment.

Socio-economic challenges

It has also been observed from other studies that some HIV positive women think that their health will deteriorate when they exclusively breastfeed their infants. There is a general belief that when a baby is breastfeeding, it takes away nutrients from the mother's body which may reduce the immunity of the mother rendering the body susceptible to infections. In line with this are results from some studies that were conducted in sub-Saharan Africa including Malawi. In these studies, it was revealed that there are mothers who feel breastfeeding is demanding on their bodies both physically and mentally (Bently et al., 2005). This may have a negative impact on the rates of exclusive breastfeeding amongst HIV positive mothers. In addition to this, it is also believed that for a mother to produce enough milk for the baby, they need to eat good food. Based on the socio-economic challenges the woman may have, exclusive breastfeeding may be a challenge.

In a research conducted in Kenya, Swaziland, South Africa and Namibia where HIV-positive women also alleged that a woman could only produce enough milk for a baby if they ate good food (Vaahtera et al., 2011). There is no evidence that supports the direct relationship between milk production and the mothers' nutrition status. However, for the women to be able to

exclusively breastfeed, they need to be in their right physical and psychological health. HIV positive mothers need to be able to eat a balanced meal in order to maintain their optimum health. It is only possible for them to exclusively breastfeed their babies when they are not ill. Ill health will also hinder them to produce enough milk for the baby.

These findings are vital for the underdeveloped countries because most women in these countries are poor and do not have enough food to maintain a good nutrition status. Due to poor socio-economic status in countries like Malawi, most mothers prefer to spend time and effort in finding food for their families compared to staying at home and breastfeed their babies as required. Mothers spend a lot of time outside homes in search of money and food hence not exclusively breastfeeding their babies (Bobat et al., 2007; Kafulafula et al., 2013). This has led to increased cases of mixed feeding which has been proven to promote transmission of HIV from mother to child.

In relation to this, Kafulafula et al., (2013) also found that the setting where the women breastfeed their infants also has an influence on the feeding practices of HIV-positive women. The environment may either encourage or hinder the women to breastfeed their babies. For instance, for a working mother and a businesswoman, it is difficult to exclusively breastfeed their infants.

SUMMARY OF LITERATURE REVIEW

If mothers know that during postpartum babies acquire all the necessary immunological factors from their mothers through breastfeeding which helps their bodies to fight infections hence reducing the risk of HIV infection, they are more likely to exclusively breastfeed their

children. The knowledge on the advantages of exclusive breastfeeding also has a big influence on the duration the mothers will exclusively breastfeed their children. Mothers are more likely to exclusively breastfeed their children when they are aware of the advantages of EBF. It has also been found that exclusive breastfeeding provides a continuously reduced risk of HIV transmission in babies who remain on breastfeeding beyond 6 months.

Health workers need to promote exclusive breastfeeding in women whose HIV status is not known because the percentage of HIV transmission through breastfeeding is still low compared to benefits of breastfeeding and problems that may come as a result of lack of immunological factors found in breastfeeding. Because no mother would want to transmit the HIV to their baby through breastfeeding, they may end up unintentionally endangering their infants' health by deciding not to exclusively breastfeed and use mixed feeding or formula not hygienically prepared.

Cultural expectations, family values and breastfeeding intentions are some of the factors that may promote EBF. PMTCT guidelines recommend exclusive breastfeeding from birth up to six months among HIV-positive women on antiretroviral therapy. There is a need to come up with programmes to promote exclusive breastfeeding from birth up to six months of all newborns for all women who are breastfeeding regardless of HIV status.

The factors that may influence HIV positive mothers' choice of infant feeding practice include the availability of resources, societal-cultural practices, health workers' attitudes, distance between the mother and the baby and disclosure of one's HIV status.

CHAPTER 3

METHODOLOGY

Introduction

This chapter presents details of the study design, place, population, sample size and sampling methods, recruitment criteria, data collection procedure, data management, analysis and trustworthiness of the study. Issues pertaining to pre-test, ethical considerations, limitation of the study and dissemination of research findings will be also elaborated.

Study design

A descriptive qualitative study design was used to explore factors influencing adherence to exclusive breastfeeding of HIV-positive women at Bwaila Hospital. Holloway (2005) explains that a qualitative approach is used to explore the behaviour, perspectives, feelings and experiences of people and what lies at the core of their lives. Therefore, the design was the best approach in this study since it assisted in exploring the factors that influence HIV positive

women to exclusively breastfeed their infants. Qualitative research is a key component in developing effective health promotion strategies and interventions and is often underused in public health practice (Crosby, DiClemente, & Salazar, 2006).

Study setting

The study was conducted at Bwaila family health unit where HIV-positive mothers who have just given birth are given care. This is a district hospital offering tertiary and secondary care, located in Lilongwe district, in the central region of Malawi. Bwaila is a referral hospital for community hospitals, which offers secondary care in the central region of Malawi, as well as health centres, which offer primary care within Lilongwe.. The hospital was chosen because of a large number of people the institution serves (17,000 deliveries in 2016) (anecdotal reports). MDHS (2015), reported that in 2014 Lilongwe urban registered 75,000 women antenatally at ART clinics of which most of these registered at Bwaila hospital since it has the busiest maternity unit in the SADC region (Hamela et al., 2013). Bwaila is also a major teaching hospital for medical and nursing students from various colleges. It was amongst the first hospitals to offer antiretroviral therapy to HIV-positive mothers in Malawi.

Study population

The study population was HIV positive mothers with babies from 0-6 months of age at the family health unit of Bwaila hospital. These women were capable of providing rich information regarding the factors that influence them to exclusively breastfeed their HIV-exposed infants.

Inclusion criteria

An inclusion criterion is the list of requirements that all participants have to meet in order to qualify for a study.

- The mother is HIV positive.
- On ART for 3 months above
- Had babies from 0-6 months old
- Were breastfeeding the baby
- Were adhering to ART

Exclusion criteria

Exclusion criteria describe which participants are not to be enrolled regardless of their potential to develop outcome of interest.

- HIV-positive mothers with children more than six months old
- Women not on ART

Sample size

The minimum sample size for this study was 15 participants and the maximum was determined by data saturation. In qualitative studies, samples are typically small and based on information needs (Polit & Beck, 2010). Whitehead & Annells (2007) suggested that a common sample size range in qualitative research is usually between 15-30 participants but this can vary depending on data saturation. The small sample size was suitable because of the potentially detailed data that could be generated from each participant (Polit & Beck, 2010). The sample

size of 15 was chosen in order to gain detailed information about the responses concerning the factors that influence HIV positive mothers to exclusively breastfeed their exposed infants. In addition, because of the in-depth nature of this study and the analysis of data required, sample of 15 participants was ideal. However, the fifteen was determined by data saturation.

Sampling method

Purposive sampling was used to select participants among those who met inclusion criteria. Purposive sampling was chosen because there was a need to have participants who would be able to provide rich information pertaining to experiences in infant feeding of exposed infants. Purposive sampling is a method used in qualitative research and involves the researcher intentionally selecting who to include in the study on the basis that those selected can present the requisite data (Sandelowski, 2005). HIV positive women were intentionally selected by the researcher as they would contribute to the appropriate data in terms of relevance and depth.

Data Collection Instrument

In this study, a semi-structured interview guide was used (Appendix 3). The instrument had open-ended questions that had been formulated according to the study objectives and a systematic review of the literature. The main thematic areas were the factors that influence HIV positive women on exclusive breastfeeding of their infants focusing on the type of information given to women by health care workers, HIV positive mothers' perceptions, attitudes and beliefs on exclusive breastfeeding and factors that promote and hinder exclusive breastfeeding. In this study, use of a semi-structured interview guide with open-ended questions stimulated HIV positive mothers to give rich information about their experiences. In addition, Polit & Beck (2010), indicate that semi-structured interviews allow the researcher to have a framework in

which open-ended questions are posed to encourage the participants to talk freely about the issue being researched.

Data collection process

After obtaining ethical and departmental approval, recruitment of participants was done in the ward mentioned above with the assistance from the unit matron and nurse ward in charge. The participants were given detailed written information about the study (Appendix 1) and the consent form to read, understand and sign to indicate their willingness to participate (Appendix 2). For those participants who could not read, the written information was explained to them. For the participants who could not write, a thumbprint was used as a signature. The interviews were conducted in Chichewa (Malawi national language). It had been chosen since it is the language that the mothers would understand and be able to share and express their experiences freely.

The place for the interview was agreed upon by the participants in order to maintain confidentiality and anonymity. Time for the interview was also considered in order to avoid any inconveniences such as prolonged waiting periods at the hospital. The interview lasted approximately 40 minutes to one hour.

The in-depth interviews (IDI's) were recorded using the audio digital recorder. This assisted in capturing the factors influencing the HIV positive women to practice exclusive breastfeeding in their own words and to increase confirmability of the data. It also assisted the interviewer to maintain eye contact which is an important listening skill in an interview.

Data Analysis

In qualitative studies, the purpose of data analysis is to prepare and organize the data, formulate the data into themes, and interpret the results. The data was analyzed manually using simple thematic analysis proposed by Braun & Clarke (2006). The data analysis involved a six-phase process. Firstly, the researcher had to get familiar with the data. Secondly, all the data were transcribed verbatim. Thirdly, codes were identified and themes and subthemes were generated. Then the themes were reviewed. The themes were then named and defined. Finally, a report was written on the findings.

The audio data were transcribed verbatim to get the actual information that the participant wanted to communicate. Then the transcribed data was read and reread. This was done so that the researcher would be familiar and get immersed in the data so as to know the depth of the content. The researcher had to repeatedly read the transcripts in an active way whilst searching for meanings and patterns. All the manuscripts were then read through before coding was done whilst considering all the words that had been spoken by many people (Braun & Clarke, 2006).

Coding was done for issues that were recurrent across the data, were interesting and important to the research question. All the things that were unique were also coded (Ritchie, Lewis, Macnaughton, & Nicholls, 2014). This was done in an attempt to go beyond the surface meanings of the data and accurately tell the story of the actual meaning of the data (Corbin & Strauss, 2015).

After generation of codes, the ones that were similar were put together to form a category or a theme. Then the researcher had to make decisions on the themes that were more important as regards to the phenomenon. A table was drawn to summarize the results. The themes were then described showing connections and differences that existed between them. After themes were

identified, they were then reviewed. This was done to refine them. Themes that did not have adequate data were also included as they were also perceived pertinent. All the themes that needed to be combined were combined and those that needed separation were separated. The themes were then named and defined (Braun & Clarke, 2006).

Finally, the researcher wrote a descriptive report on the factors that influence adherence to exclusive breastfeeding among HIV positive women.

Data Management

The data files and recorder were locked in the drawer of the researcher's study table and were only accessible by the researcher and two supervisors. The electronic data were kept in researcher's computer with a password which was known to the researcher only.

Trustworthiness

Munhall (2007) defined trustworthiness as the degree to which the participants have been fully included in the research process and have had the opportunity to reflect and comment on their story and retold by the narrative researcher. The researcher used a framework by Guba (1981) to increase the trustworthiness of this study (Polit & Beck, 2010). This framework encompasses four criteria for developing trustworthiness of a qualitative study, which includes credibility, dependability, confirmability and transferability.

Credibility

Credibility refers to confidence in the truth of the data and interpretations of them (Polit & Beck, 2010). The researcher used probes to encourage participants to give detailed information. Participants were also given a chance to participate or refuse to participate in order to ensure that

data collection involves only those who were genuinely willing to participate and prepared to answer questions freely and honestly. A debrief session was carried out with the supervisor as well as peer scrutiny. The meetings provided a sounding board for the investigator to test her developing ideas and interpretations, and probing from others helped the researcher to recognize her own biases and preferences.

Dependability

To achieve dependability of the data, the researcher reported in details all processes within the study to allow other researchers to repeat the work and produce similar results. These processes included; the research methods, detailed collection of data and analysis of the study. The researcher had a log book of the steps and the decisions (including the rationale for decisions) that the researcher had followed during the project, from the start of the research project to reporting of the findings which are called audit and decision trails. The written report also provides a thorough understanding of the methods employed in the study.

Confirmability

In this study, confirmability was achieved by recording all the words spoken by participants and the researcher during an in-depth interview in order to distinguish the participant's data from interviewer's view. Direct quotes from the participants were also used in the study report. The researcher acted as an active listener and facilitator to allow participants to give detailed information about their experience. The transcripts from the participants have been securely stored for future reference.

Transferability

Transferability describes how the results will be applicable and meaningful to individuals not involved in the research (Speziale & Carpenter, 2007). In this study, transferability was ensured by providing sufficient descriptive data of the participants in the research report so that anyone who wants to use it can evaluate the applicability of the data to other or similar contexts. The thick description of the phenomenon under investigation was also provided to enable someone interested in using the results to reach a conclusion.

Pre-test interviews

The researcher conducted pre-test interviews with 2 HIV positive mothers who had just given birth and met the inclusion criteria. The pre-test interviews were carried out at Bwaila postnatal ward using the same interview guide. Pretesting allowed modifications of the study tool to get the required information. The pre-test interview was conducted in June 2017. According to Yin (2003), the pre-test study improves study project since it assesses its feasibility, improves clarity, eradicates problems and refines the methodology. This enabled the researcher to test if the audio-recording equipment was working and it also helped to know if the interview guide would capture the required data.

Dissemination of study results

Study findings will be presented to academic staff at Kamuzu College of Nursing (KCN) during research seminars and Bwaila maternity department during Continuous Professional Development (CPD) meetings in addition to a written report. A copy of the thesis will be placed in KCN library. Another copy of the thesis will be sent to COMREC and other copies will be sent to Ministry of Health and Bwaila maternity department. The results will be published in

Nursing and Midwifery journals. In addition, the results will be disseminated at conferences both locally as well as internationally.

Ethical consideration

It is a requirement that all research go through research ethics committees to ensure that information acquired and disseminated is trustworthy and will not cause harm to subjects. To ensure that standards have been followed, approval to conduct the study was sought and gained from College of Medicine Research Council (COMREC) (Appendix 4). After approval, permission was sought from Bwaila hospital maternity department to pretest and conduct the study at the hospital. Information about the study was given to the participants (Appendix 5). Participants were asked to sign a written informed consent prior to participation in an agreement to their willingness to participate (Appendix 2). The consent form contained information on the purpose, benefits, and risks of the study. The risks included psychological harm. If such a risk occurred, participants would be given counselling to mitigate the risk. Participants were informed of their right to refuse or withdraw at any point of the study and that no penalty would be granted upon such a decision.

Participants were duly informed that there would be no monetary and other benefits for taking part in the study but that their information would contribute to the quality of PMTCT care of exposed infants in the hospitals. Participants were also assured that their identification would not be known in any publication or presentation of the findings.

CHAPTER 4

STUDY FINDINGS

Introduction

This chapter presents the findings of a study that aimed at exploring the factors that influence adherence to exclusive breastfeeding among HIV positive women at Bwaila hospital in Lilongwe, Malawi. The specific objectives of the study were to: to explore the type of infant feeding information HIV-positive mothers receive from healthcare workers during pregnancy, labour and postnatal, to understand the perceptions, attitudes and beliefs of HIV-positive mothers on exclusive breastfeeding, to determine factors promoting exclusive breastfeeding in HIV-positive women and to determine the factors hindering exclusive breastfeeding in HIV positive women.

The findings of the study are presented in two sections. The first section contains demographic information of 15 HIV positive mothers who were recruited from the family health unit at Bwaila hospital. The HIV positive women had babies less than 6 months old and had come for a postnatal check-up. The second section contains the analysis of the qualitative data obtained through in-depth interviews using semi-structured interview guide. Direct quotes from participants have been used to show what was said. The participants have been identified using the serial numbers which were given to them during the interview.

Table 1: Demographic information of participants

Demographic characteristics of the participants

Characteristic	Number
Age in years	
17-25	6
26-35	5
36-45	4
Marital status	
Married	9
Not married	6
Level of education	
Primary	7
Secondary	8
Parity	
1-2	6
3-4	7
5 Above	2
Occupation	
Business	8
Housewife/none	5
Farmer	1
Cleaner	1
Tribe	
Chewa	5
Tumbuka	2
Yao	1
Lomwe	3
Ngoni	4

Table 1 shows that most of the participants were between the ages of 17 and 35. Most were married and the level of education was evenly distributed between primary and secondary. The most common parity range is between 3 and 4. Most of the women are business ladies.

Table 2: Summary of Results

Findings from qualitative data

SUB THEMES	THEMES
<ul style="list-style-type: none"> • Knowledge of EBF based on the frequency of breastfeeding • Knowledge of EBF based on duration • Knowledge of EBF based on exclusivity of breast milk • Awareness of lack of knowledge on EBF • Inaccurate definition of EBF • Confusion due to ever-changing guidelines regarding duration of EBF in HIV positive women 	HIV positive mothers' knowledge of EBF
<ul style="list-style-type: none"> • Benefits to baby • Negative effects of EBF on the mother 	Effects of EBF on the mother and the baby
<ul style="list-style-type: none"> • Support from family • Lack of support • Effects of disclosure of one's HIV status 	Availability of support from significant others
<ul style="list-style-type: none"> • Information, support and encouragement from the healthcare providers 	Influence of health facility
<ul style="list-style-type: none"> • Availability of resources • Lack of resources 	Socio-economic status
	Intention to protect the baby

Findings from in-depth interviews with participants on exploring the factors that influence adherence to exclusive breastfeeding among HIV positive women are presented under the following themes: HIV positive mothers' knowledge on exclusive breastfeeding, perceptions and attitudes of HIV positive mothers towards EBF, effects of EBF on the mother and the baby, support from significant others, the influence of health facility and socio-economic status.

HIV POSITIVE MOTHERS' KNOWLEDGE OF EXCLUSIVE BREASTFEEDING

The participants were asked what exclusive breastfeeding is and the type of counselling they received during pregnancy in regards to infant feeding. The participants described their understanding of exclusive breastfeeding as frequently breastfeeding the baby as well as in terms of the benefits and duration of breastfeeding.

The sub-themes that emerged from their responses were: knowledge of EBF based on the frequency of breastfeeding, knowledge of EBF based on duration, knowledge of EBF based on exclusivity of breast milk, awareness of lack of knowledge on EBF, inaccurate definition of EBF and significant others lacking information.

Knowledge of EBF based on the frequency of breastfeeding.

Most of the participants defined EBF in terms of frequency of breastfeeding the baby in a day. Some defined EBF as breastfeeding for more than 6 times in a day whilst some defined EBF as breastfeeding the baby more than 8 times in a day.

“When we say exclusive breastfeeding, we mean breastfeeding the baby frequently. They said that, on a day the baby should be breastfed more than 6 times. Exclusive breastfeeding is very important because the baby grows fast when being exclusively

breastfed and the baby is healthy”. (Participant #1, 31 years, breastfed before whilst HIV positive)

One participant had this to say on the definition of breastfeeding based on frequency.

“Breastfeeding a baby 8 times a day. I breastfed the baby after every 2 hours. I exclusively breastfeed the baby because I want the baby to be healthy.” (Participant # 3, 23 years, para 1).

Knowledge of EBF based on duration

Some participants were able to define exclusive breastfeeding in terms of the duration of the exclusive breastfeeding. They defined exclusive breastfeeding as breastfeeding the baby for 6 months and then wean the baby off. Some explained that when they say a woman has exclusively breastfed the child it means that they have been breastfeeding the baby for 6 months. However, others mentioned the duration of 1 year and a few mentioned 2 years.

“Exclusive breastfeeding for 6 months then breastfeeding for a year and ten months and then you wean the baby off breastfeeding” (participant # 2, 37 years, breastfed whilst HIV positive)

Another woman had this to say on the duration of EBF

My other child breastfed for 7 months. This was because I was afraid that when breastfeeding was continued, the virus could be passed on to the baby. I got some of the information from people, others from the hospital and through reading. I heard this information when I was pregnant (participant # 9, 32 years, para 3).

Some women mentioned inconsistency in hospital instructions due to ever-changing guidelines on the duration of EBF in HIV positive women. They explained having been confused by the ever-changing guidelines on the duration EBF amongst HIV positive mothers. This is most common among those women who have previous experience and they have gone through the same process. The confusion comes in for the duration of breastfeeding. At first, women were told to practice EBF for 6 months, then 1 year and recently they have been told to continue breastfeeding for 2 years.

“Some people breastfeed their babies for 2 years, others even 3 years. I feel this can bring problems more especially, amongst those of us who are HIV positive as far as protecting the baby is concerned. This is because the cut-off limit for breastfeeding a baby when you are HIV positive is 1 month, 6 months or 2 years. You have to stop there. Most people in the community continue to breastfeed their babies up to 3 years” (participant #1, 31 years, breastfed before whilst HIV positive).

Another participant had different thoughts for fear of passing on the virus to the baby. She feels they have not been given a reason for the change in guidelines.

“At first, we were told to breastfeed for 6 months and recently, we have been told to breastfeed for 2 years, I don’t really know why. Maybe it could be that they have done so because they are giving us medications for the baby.” (Participant # 14, 32 years, para 3).

Knowledge of EBF based on exclusivity of breast milk

Some of the women defined exclusive breastfeeding in terms of exclusivity of breast milk to the baby. They explained that exclusive breastfeeding means that the baby is given breast milk only without any other foods for 6 months.

Exclusive breastfeeding means that you just breastfeed the baby breast milk; no any other foods or drinks should be given to the baby until the baby reaches 6 months (participant 4, 23 years, para 1).

This was also mentioned by another participant who defined EBF as

Exclusively breastfeeding the baby without any other food supplements till the baby reaches 6 months (participant 4, 23 years, para 1).

Lack of knowledge on EBF

A few participants expressed having very little or no knowledge at all on EBF. Some mentioned that they heard about EBF very early in their pregnancy and as such, they had forgotten the information they received whilst others attributed the lack of knowledge to the missed opportunity due to poor timing of the health education. Most services are offered at the same time at the hospital and as such, they miss out on others, for instance, health education and HIV testing of the babies are done at the same time.

“I have forgotten the counselling they gave me at the hospital on how to care for the baby and breastfeed after birth. I was told about it very early in pregnancy” (participant # 3, 23 years, para 1).

Another participant had this to say on why she does not know anything concerning exclusive breastfeeding:

“On breastfeeding of the baby, nothing was said. The time they were giving a health talk on that, was when we were told to go and have the blood samples taken from the baby.

We did not get some of the things our friends were told” (participant #5, 24 years, para 1).

Another participant had very little knowledge on exclusive breastfeeding because she had given birth at the traditional birth attendant. The little information she had was acquired from friends. She had hope that she would get the other information when she attends the under-five clinic.

“I have never heard anything from the hospital. I did not receive any counselling on infant feeding, I gave birth at the traditional birth attendant (Nayere). I have heard that, after birth, a baby should be exclusively breastfed for 6 months and then stop breastfeeding completely” (participant # 6, 39 years, para 4).

One participant explained how significant others have given her the wrong information. This information has misled a lot of mothers who are lactating especially because it comes from the elders in the society such as mothers and grandmothers. An example of such information is giving babies porridge very early in life because it is believed that breast milk alone is not enough. This information may lead to other problems such as mixed feeding which increases the risk of HIV transmission from mother to child during breastfeeding.

“Sometimes parents may say that the baby is crying a lot because the breast milk is not enough and that you should feed the baby porridge. It really happens at times. You are not supposed to accept such things as it is the behaviour of parents but you are the one with the right information. Do not take part in such things” (participant # 14, 32 years, para 3).

Another participant had this to say on the wrong advice people give to the HIV positive mothers:

“Some people say that if a woman is HIV positive, she may transmit the virus to her baby during breastfeeding. They also say that when the baby is born, she should not be breastfed at all, but rather, the baby should be put on formula. They say an HIV positive woman should not breastfeed a baby” (participant 13, 29 years, para 2).

Inaccurate definition of EBF

One participant defined exclusive breastfeeding as following the instructions one is given at the hospital. She was not able to mention any component of exclusive breastfeeding

Exclusive breastfeeding means following the instructions that were given to you at the hospital so that the baby can grow well and that the baby should not contract the virus. They said 8 times a day, but I exceed (participant # 15, 17 years, para 1).

EFFECTS OF EXCLUSIVE BREASTFEEDING ON THE MOTHER AND BABY

The participants were asked how they perceive EBF, their attitudes towards it as well as beliefs towards EBF. It was found that most of the women thought EBF is a good practice as long as a woman is adhering to medications. Other women positively perceived exclusive breastfeeding due to the absence of challenges when breastfeeding. Mothers feel it is the easiest practice they can follow.

The sub-themes that emerged from the findings are benefits of EBF on the baby and negative effects of EBF to the mother.

Benefits of exclusive breastfeeding to the baby

Most of the women feel it is a good practice if the mother is adhering to ART. If a mother defaults her ART, the baby may be at risk of contracting the HIV. After babies are born, they are given nevirapine to be taking every day. This also offers protection to the babies so that they do not contract the virus. There is need to also adhere to the nevirapine for protection of the baby.

“My experience is that as long as you adhere to what the nurses and doctors are telling you...because I also enrolled in another research when I was pregnant, we were tested and the results came out that everything was fine. This encouraged me a lot as I felt everything was alright” (participant #1, 31 years, breastfed before whilst HIV positive)

One participant explained the importance of combining ART and exclusive breastfeeding. She further explained the increased risk of HIV transmission from mother to child if the mother is not adhering to the medications.

“This method of infant feeding is very good as long as the baby is exclusively breastfeeding and the mother adheres to her medications; he baby will be protected. However, the baby may contract the virus if the mother is not adhering to her medications because the virus will be more active at that time. In this case, when you are breastfeeding the child, it is like you are breastfeeding contaminated milk. This increases the chances of transmission of the virus. But if the baby is exclusively breastfed and you are adhering to your medication, the baby will be safe (participant # 7, 33 years, has breastfed before whilst HIV positive).

Most of the participants mentioned the importance of EBF that it helps the baby to be healthy so its body can fight infections and the baby is protected from various diseases. The

participants mentioned breast milk as the only food that can be given to babies and that it contains all the nutrients that the baby needs to be healthy.

“I chose this practice because as little as the baby is, I cannot give the baby any other food; he is still very young. So I am supposed to breastfeed up to the prescribed time. I was told to only breastfeed up to 6 months without any food supplements. After 6 months onwards, that is when I could make a choice to introduce other food supplements such as juice and yogi. The importance of breastfeeding is that his body should be healthy and that the baby should grow normally. Breast milk contains all the food necessary for the baby to grow. This is important as it helps the baby not to become malnourished. The baby will be strong in a day to day life” (Participant # 5, 24 years, para 1).

Another participant confirmed the benefits of exclusive breastfeeding to the baby based on the experience she had had.

“I have seen that exclusive breastfeeding has its advantages because the baby was born at 8 months. She was born with 1.8 kilograms and as such, we were in the nursery for some time. I have been working hard on breastfeeding her and today I was told that she has reached 3.5 kilograms which shows how important exclusive breastfeeding is. I do not give her any other food supplements but her weight is improving. When I was being discharged from Kangaroo the nurses commended my good job. I have not met any challenges (participant # 13, 29 years, para 2)”.

Negative effects of exclusive breastfeeding on the mother

Some of the women negatively perceived exclusive breastfeeding for various reasons. Others felt that exclusive breastfeeding has negative effects on the body of the mother. It is

believed that HIV positive mothers get sick and die soon after giving birth. Other women believe that prolonged breastfeeding for over 2 years increases the risk of HIV transmission from mother to baby.

Some participants negatively perceive exclusive breastfeeding due to the negative effects it has on the breastfeeding mother. Others explained how hard it is to produce breast milk and others think that exclusive breastfeeding makes them sick.

“Sometimes breast milk does not come out much. On the advantages of exclusive breastfeeding, when breast milk is enough, the baby will be satisfied and will breastfeed a lot” (participant 4, 23 years, para 1).

Another participant had this to say about the effects of exclusive breastfeeding on her body:

“Am having constant dizziness at all times. I have shortage of blood; they tested me and it was 7’ (participant # 3, 23 years, para 1).

Some participants demonstrated awareness of the risk of HIV transmission from mother to baby during exclusive breastfeeding especially if breastfeeding exceeds 2 years. The baby has grown teeth at this age and may damage the mother’s nipples leading to an increased risk of HIV transmission.

“The beliefs this side are that some people breastfeed their babies for 2 years, others even 3 years. I feel this can bring problems more especially, amongst those of us who are HIV positive as far as protecting the baby is concerned. This is because the cut-off limit for breastfeeding a baby when you are HIV positive is 1 month, 6 months or 2 years. You

have to stop there. Most people in the community continue to breastfeed their babies up to 3 years. Some women give birth at the traditional birth attendants, and they do not know if they have the virus or not. They end up breastfeeding their babies for 3 years. It is only those who attend antenatal care clinics at the hospital who will have some information, and know what to do” (participant # 1, 31 years, breastfed before whilst HIV positive).

One of the participants had this to say about the negative effects of prolonged breastfeeding:

“Let me say that, when a baby reaches 6 months the teeth may have started to erupt or that the gums are mature. It happens that the child may bite the breast. The biting may cause sores on the breast. When the child is breastfeeding, she may end up suckling together with blood or pus which may increase the risk of HIV transmission from mother to child” (participant # 3, 23 years, para 1).

Some of the participants explained that they are not able to exclusively breastfeed their children due to sickness. The most common illnesses mentioned were breast sores and nipple cracking. These are very common and they increase the risk of HIV transmission from mother to baby. Most women explained that they do not breastfeed when these occur. Other women mentioned other illnesses that may cause general body weakness so much so that the mother may fail to pick up the baby as well as any illness that may lead to hospital admission.

“The thing that can stop me from breastfeeding my baby is sickness. Sometimes women may get breast sores and cracked nipples. These may predispose the baby to contract the HIV. But sometimes you may not have the sores but the baby may still contract the virus.

That is why I think, the health workers provide nevirapine. On my part, the other thing that can discourage me is when I am not feeling well. This may discourage me from exclusively breastfeeding my baby. But then I have constantly convinced myself that as long as I am okay, there is nothing that can stop me from breastfeeding my baby exclusively” (participant # 1, 36, has breastfed before whilst HIV positive).

Some participants explained their positive perception of EBF based on the absence of challenges when practising exclusive breastfeeding. They said EBF is good as there are no challenges they meet when breastfeeding the baby.

“I feel exclusive breastfeeding is a good practice. I am yet to see this baby since it is still new. As of now, I have not met any challenges” (participant # 9, 32 years, has breastfed before whilst HIV positive).

Another participant had this to say in the absence of challenges when she is practising exclusive breastfeeding:

“I have not met any challenges with exclusive breastfeeding” (participant # 13, 29 years, para 2).

AVAILABILITY OF SUPPORT FROM SIGNIFICANT OTHERS

The participants were asked to explain the factors that promote EBF. It was found that most of the women thought the support and encouragement from significant others such as husband and mother encourage them to practice EBF. The other factor that came out strongly was the information, support and encouragement from the health care providers. This has

equipped them with knowledge and information on the best way to care for their babies after birth so they do not contract the virus

The sub-themes that were formulated under this theme were: availability of support and encouragement from significant others, lack of support and effects of disclosure of one's HIV status.

Support and encouragement from family.

Most of the participants mentioned how the support and encouragement they receive from their significant others influence them to practice exclusive breastfeeding. They explained how their spouses remind them to breastfeed their children as well as reminding them to take their medications without skipping. Some of the participants described the role their mothers and relatives played in relieving them of household chores to give them enough time to care for their babies.

“It happens sometimes when am asleep and the baby is crying, he wakes me up to breastfeed the baby. Sometimes when am deeply asleep and the baby is not crying, my husband wakes the baby up and tells me to breastfeed. The baby breastfeeds the whole night; it is in the early morning hours that I let her sleep. I breastfeed her again at 7 in the morning. My friends tell me that when you are HIV positive, you need to exclusively breastfeed the baby to protect the baby from contracting the virus and that the baby may be healthy” (participant 15, 17 years, para 1).

Another participant explained how the relatives relieve her of household chores to give her enough time to take care of the baby.

“My sister-in-law has also played a big role as she comes to my house to assist me to take care of the baby. I have a relative at home who helps me with household chores. She cleans the dishes, mops the floor, washes clothes and sometimes cooks. This at least gives me the chance to exclusively breastfeed the baby” (participant # 9, 32, para 3).

Another participant explained how the lack of support would hinder exclusive breastfeeding. She explained that intensity of household chores would stop her from having a lot of time to care for the baby and breastfeed the baby. It is only when there is somebody to help with household chores that you may have some time for the baby.

“The factor that would hinder exclusive breastfeeding is the intensity of household chores. It could happen that the time you want to breastfeed your baby, is the same time you are supposed to prepare a meal. In the end, you may not have time to breastfeed your baby because of things like that” (participant # 7, 33 years, has breastfed before whilst HIV positive)

Effects of disclosure of one's HIV status

Some of the participants explained how disclosing one's status may lead to stigma. When an HIV positive woman weans the baby off breastfeeding, people will talk behind her back. Others may give the woman bad advice contrary to the one given at the hospital. This comes about due to the beliefs in the society that an HIV positive mother should not breastfeed for fear of passing on the virus to the baby. The women feel this may lead to prolonged breastfeeding which may risk the baby to contract the HIV. Other women may fail to breastfeed their babies to conform to societal expectations of an HIV positive mother.

“Only that when you wean the baby off breastfeeding, people talk a lot. They say that it is because you are HIV positive that you cannot continue breastfeeding your child” (participant # 9, 39 years, has breastfed before whilst HIV positive)

Another participant explained that when a woman discloses her HIV status, people will give them wrong advice. Most of them are discouraged from breastfeeding the babies. This is quite a challenge to most of the HIV positive women during the time they have to decide on infant feeding.

“I have heard that children can contract the virus from their mothers. Others say that if the mother is HIV positive, it is not possible for the baby to be born without the virus. Some people say that when you are HIV positive, you should put your child on formula and should not breastfeed your child. They say breastfeeding your child may increase the chances of the child contracting the virus” (participant # 7, 33 years, has breastfed before whilst HIV positive).

INFLUENCE OF HEALTH FACILITY

This theme came out in all the interviews. All participants explained how information, support and encouragement from the hospital have assisted them to adhere to exclusive breastfeeding. They feel the health workers have given them direction on how to care for their exposed infants and how they have supported them to prevent transmitting the HIV to the infants. They feel the information has been adequate.

All the participants explained how the information and support from the hospital have assisted them in taking care of their children. Most of the women received tremendous support

from health workers the time they were diagnosed with HIV and the support has continued through their day to day life. The information, encouragement and support from health workers have helped the women to take care of their children and others even have babies who have gone through the process and are HIV negative

“The healthcare workers were visiting me at home when I was pregnant to give me counselling. They have been coming home telling me that I should eat frequently so that I can be healthy and also that the baby can be healthy. They also told me that after the baby is born, I should exclusively breastfeed the baby and that I should never forget to give the baby the medications every day” (participant 15, 17 years, para 1).

Another participant explained the importance of following all the instructions and advice from the hospital. She explained that the most important advice comes from the hospital and HIV positive women should not take advice from any people anyhow.

“I feel that here we learn a lot of good things and that the advice from other people may not be helpful. Sometimes parents may say that the baby is crying a lot because the breast milk is not enough and that you should feed the baby porridge. It really happens at times. You are not supposed to accept such things as it is the behaviour of parents but you are the one with the right information. Do not take part in such things” (participant # 14, 32 years, para 3).

SOCIO-ECONOMIC STATUS

Most of the participants also explained how the availability of resources such as food and money influences the breastfeeding mothers to practice exclusive breastfeeding. The presence of

food around the house is enough insurance to exclusive breastfeeding. The women also explained how culturally and naturally mothers are expected to protect their children from harm. If a mother has already intended to protect the baby from the HIV through EBF, she will do everything possible to ensure that the baby is protected.

Availability of resources

The participants explained how the availability of resources encourages them to practice exclusive breastfeeding. They explained that a lactating mother should be able to have adequate food in order for them to be able to produce enough milk that will be adequate for the baby. The food should contain a balanced diet containing all the six food groups in order for it to be nutritious enough.

“Eating healthy, having a balanced diet, and eating frequently. A person cannot produce enough milk if she is not eating adequately. Therefore, a mother should know that she must eat frequently food containing all the 6 food groups for the food will help in the production of milk for the baby. After I have eaten is when I know that the baby will exclusively breastfeed, whether the baby wants or not, the baby will breastfeed” (participant 10, 35 years, has breastfed before whilst HIV positive).

Another participant had this to say on the maternity leave she had taken from work.

“The other thing is that I am able to achieve the things I want. Currently, I am not going to the salon so that I can properly take care of the baby” (participant # 4, 19 years, para 1).

Lack of resources

Other participants explained the effects of lack of resources that a mother has to balance between taking care of the baby and finding means of getting resources. Most of the times, lactating mothers are forced to work or do some businesses to get the money they can use to buy the food and resources for their homes. There comes a time when a mother has to prioritize the business than the baby which may lead to less breastfeeding time for the baby.

“If the food is not enough at home, it can be a setback for the baby to exclusively breastfeed because there will not be enough milk produced by the breasts for the baby to feed on’ (participant # 10, 35 years, has breastfed before whilst HIV positive).

Another participant had this to say on the same:

“Maybe getting busy with some other activities such as gambling can also stop you from practising exclusive breastfeeding. Business can also stop you from that. If the baby is crying at the time you are busy serving a customer, instead of us attending to the baby, we may prioritize customers” (participant # 9, 32 years, para 3).

INTENTION TO PROTECT THE BABY

Some participants explained how their intent to protect their babies has influenced them to practice exclusive breastfeeding. These mothers would do anything that they are told to protect their children from contracting the virus. They were told that exclusive breastfeeding protects the baby from contracting the virus and the mothers have chosen to practice EBF so their babies do not contract the virus.

“Right now, my greatest worry is transmitting the virus to the baby because I do not really know if it is true that the baby may contract the virus if she has mouth sores or that she may contract the virus through breastfeeding or not...I just breastfeed because I was told that it protects the baby from contracting the virus” (participant # 11, 22 years, para 1).

Another participant had this to say on the same:

“I have seen some people who are HIV positive who, have given birth to children and the children are HIV negative. The children are not even constantly sick. Keeping that in mind, how can I fail to take care of my own?” (Participant # 8, 30 years, para 3).

CHAPTER 5

DISCUSSION

Introduction

This chapter presents a detailed discussion of the findings of the study that was aimed at exploring the factors that influence adherence to exclusive breastfeeding among HIV positive mothers at Bwaila hospital in Lilongwe. The discussion focuses on the findings from the objectives of the study which were to explore the knowledge HIV-positive mothers have on EBF, to find out the perceptions, attitudes and beliefs of HIV-positive women on exclusive breastfeeding, to explore the influence of the family and community on adherence to exclusive breastfeeding and to identify health facility-related factors influencing adherence to EBF among HIV positive mothers.

Maternal knowledge of EBF

The findings of the study have shown that the majority of the HIV positive women have inadequate knowledge of EBF. Inadequate knowledge on EBF may lead to women making unsound decisions that may endanger the lives of their children. Exclusive breastfeeding means frequently breastfeeding the baby breast milk only without any other food supplements for the first 6 months of age (Peres et al., 2015). In this study, most women defined EBF only by mentioning one or two components embedded in the actual definition. This means that when they are breastfeeding their babies, they only focus on the components they know creating a gap on the other aspects of exclusive breastfeeding. This may deprive the baby of receiving all the necessary nutrients from the mother that they need for their growth. When the babies are

breastfeeding less they may end up having malnutrition which may affect their growth and survival. This was also found in other studies where lack of knowledge on EBF led women to make unsound decisions due to the lack of informed decision making which may endanger the children (Rendani, Motlatso, Phaweni, & Karl, 2011; Aishat et al., 2015).

However, the study also showed that some women have knowledge of how long and how frequent EBF is supposed to be done. Having some knowledge of EBF will enable the women to breastfeed their babies for the required duration as set by the WHO. This is very important as it will help to ensure that babies do not just get the required nutrients but also the immunological factors needed by their bodies to fight infections such as HIV. In relation to this, Stewart (2016) noted that exclusive breastfeeding from birth up to six months is very important as the protective factors in human breast milk especially the milk from the HIV-infected mother may directly combat the factors that transmit the HIV infection. These factors may help to reduce the rate of transmission of the virus from the mother to the baby. In addition to this, in studies done by (Coovadia et al., 2007; Natulinda et al., 2015) in Durban South Africa, it was observed that when a child is exclusively breastfed for the first 3 months of life the threat of HIV transmission from mother to child is reduced significantly than when they are mixed fed.

Furthermore, a new study also found that the risk of HIV transmission from HIV-infected mothers to their newborns is reduced if they practice exclusive breastfeeding beyond four months (Dhakal, Lee, & Nam, 2017). These findings are of utmost importance in sub-Saharan Africa including Malawi because infants are in danger of dying from diarrheal diseases or pneumonia (Coovadia, 2007; Natulinda et al., 2015). This confirms the importance of practising EBF for 6 months in the reduction of HIV transmission from mother to child. However, the

current MDHS report (2015) has indicated that mothers in Malawi generally exclusively breastfeed their children for an average of three months. This shows a big gap with the WHO's recommendation that mothers exclusively breastfeed their infants for six months (WHO, 2010). Malawi as a country is failing to comply with these recommendations. This factor needs to be considered and incorporated in the programs aimed at improving exclusive breastfeeding if the fight against the mother to child transmission has to be improved.

Additionally, the current study has also shown how the ever-changing guidelines for infant feeding in HIV positive mothers make it difficult for health workers to keep up to date with the information. As a result, the information and care that is provided to women is not standardized which creates a gap. The biggest gap has been noted for the duration of breastfeeding. This has led to most women having different durations of breastfeeding depending on what they were told. Exclusive breastfeeding continuously reduces the risk of HIV transmission in babies who continue breastfeeding beyond 6 months. It is imperative that babies remain on breastfeeding for 2 years if the rates of HIV transmission have to be reduced. The inconsistent information that HIV positive mothers receive on infant feeding from health workers, colleagues and the community at large make it difficult for the women to decide on the correct information.

This finding has also been documented in other studies (Chezem et al. 2010; Doherty et al., 2006, Piwoz et al. 2006; Aishat, Olufunmilayo, David, & Gidado, 2015). Rollins et al., (2010) noted that even the counselling done is also different as it is based on the knowledge base of the health workers. This may lead to women not making an informed decision as it has been observed that women are most likely to abide by information given to them by health workers. However, this becomes a problem when the information is contradictory. There is a need for

more research to determine the impact of the training carried out on infant feeding in HIV-positive women. The way the counsellors interpret the recommendations is of utmost importance as it determines the information HIV positive women receive.

The study also revealed that some women know the exclusivity of breast milk in exclusive breastfeeding. This is very important as mixed feeding may lead to increased chances of HIV transmission from mother to child. When a woman practices EBF, the baby may be protected from contracting the virus. Some researchers have confirmed the advantage of exclusive breastfeeding that newborns who are HIV-exposed stand a higher chance of survival when exclusively breastfed than mixed fed (Young et al., 2011). This means that if a higher population knows the importance of exclusivity of breast milk, a lot of babies may be saved from contracting the virus.

In line with these findings, other researchers have found out that during mixed feeding, the immune factors of breast milk are neutralized by the damage to the child's digestive tract by contaminants or allergens in the food supplements (Mgongo et al., 2013). This increases the rate of HIV transmission from mother to baby and consequent faster development to AIDS (Bobat et al., 2007). Coutsooudis, Pillay, Spooner, Kuhn, & Coovadia (2006); Iliff et al (2006); Torres, Bedel, Wachira and Dalmau (2014), also noted the reduced risk of HIV transmission that EBF carries than mixed feeding or restricted feeding. This knowledge is very important to HIV positive women as it may motivate them to exclusively breastfeed their children thereby reducing the rate of transmission of HIV from mother to child. Therefore, health workers have a very big responsibility of giving all the necessary information so that the HIV positive women are able to make an informed decision.

The study has also shown how the lack of knowledge of the mother and significant others on EBF may affect adherence to EBF. Some women explained how they have been influenced by significant others to practice mixed feeding with an aim of getting the baby satisfied. In most societies, it is believed that breast milk alone may not be adequate for the baby and that the baby may die of starvation (Koima, 2010). To prevent this, the mothers are forced to give the babies porridge at a very tender age. However, women are more likely to adhere to an infant feeding practice that is approved by the significant others (Ulumbi, 2014). This may create a gap in instances where the significant others do not have adequate information on proper infant feeding. This may affect the adherence to the treatment regimen and feeding practices to protect the exposed child hence increasing the transmission rate of HIV.

This finding has also been revealed in other studies that people strongly believe that mother's milk alone is not enough for growth without giving porridge. The common reasons for early initiation of complementary food were inadequate breast milk and mothers' perception that the child was thirsty. These reasons were found in different settings as noted by other researchers in Tabora Tanzania, Malawi, Zambia, Nigeria and India (Fadnes et al., 2010; Kamudoni et al., 2010). Therefore there is a need for a behavioural change advocacy that may include all significant people surrounding the HIV positive mothers. Health education should also be targeted on changing the knowledge, perception, understanding and attitudes of families and communities as well as addressing the risks of mixed feeding in HIV-positive mothers (Piwoz et al., 2006; Natulinda et al., 2015).

Effects of exclusive breastfeeding on the mother and the baby

The participants reported that most mothers are likely to practice exclusive breastfeeding if they have seen and experienced the benefits of exclusive breastfeeding to the baby. These benefits act as a motivating factor to practising EBF. In line with this, other studies have also found that if mothers know that during postpartum babies acquire all the necessary immunological factors from their mothers through breastfeeding, they are more likely to exclusively breastfeed their children (Coovadia et al., 2007). Breast milk helps the babies to fight infections hence reducing the risk of HIV infection. Lawani, Onyebuchi, Iyoke, Nkwo and Onoh, (2014) also found out that mothers are more likely to exclusively breastfeed their children when they are aware of the benefits of EBF. This is a very important factor in the promotion of EBF. The study has also revealed that mothers are more likely to adhere to EBF when they know that EBF is the safest breastfeeding practice and that it protects the baby from contracting the virus. This is because they would want to prevent the possibility of transmitting the virus to their baby.

The study has also found out that mothers are more likely to adhere to exclusive breastfeeding if they are also adhering to ART. There is a general belief that the baby can only be protected from contracting the HIV with a combination of ART and EBF (Okanda, Borkowf, Girde, Thomas & Lecher, 2014). Most mothers who are practising exclusive breastfeeding are also very good at ART adherence. This is in line with findings from Tanzania, where 81.6% of the mothers who reported to be on HAART adhered to EBF compared to those who were not on HAART (Koima, 2010). This may be due to the health education given during follow up visits to the hospital. In a study in Rwanda, Peltier and colleagues (2009), found that mothers who were on HAART exclusively breastfed more than those mothers not on ART. This could be attributed

to the perceived safety of breast milk due to reduced HIV viral loads when a mother uses HAART.

The current study found out that some women may not adhere to EBF because of the negative effects of EBF on their bodies. It has been observed that some HIV positive women feel their health will deteriorate when they exclusively breastfeed their infants. There is a general belief that when a baby is breastfeeding, it takes away nutrients from the mother's body which may reduce the immunity of the mother rendering the body susceptible to infections. This may be true as most women in Malawi are poor and as such their nutritional status is not optimal. In line with this are results from some studies that were conducted in sub-Saharan Africa including Malawi. In these studies, it was revealed that there are mothers who feel breastfeeding is demanding on their bodies both physically and mentally (Bently et al., 2005). This may have a negative impact on the rates of exclusive breastfeeding amongst HIV positive mothers.

Similar findings were found by Kafulafula et al., (2014) that these beliefs may hinder exclusive breastfeeding by HIV positive mothers for fear of rendering their bodies susceptible to full-blown AIDS. This finding concurs with that from an earlier study of HIV-positive mothers in Lilongwe, Malawi, in which mothers believed that EBF would enhance the progression of HIV to AIDS. The body may not be able to meet the demands of both the mother and the baby. This may eventually render their bodies susceptible to infections. Some mothers complained of not producing enough milk necessary for the baby's growth. This may be associated with psychological stress associated with fear and worry on their health and the possible outcome of their children together with the lack of financial resources and food which may affect the mothers' milk letdown reflex, breast emptying and subsequent milk production (Dewey, 2001)

This, in turn, may reduce the success rate of exclusive breastfeeding in these mothers because of the resultant breast milk insufficiency.

In addition to this, the study also found that most mothers believe that to produce enough milk for the baby, they need to eat good food. This food needs to be adequate and contain all the 6 food groups. Based on the socio-economic challenges the woman may have, exclusive breastfeeding may be a challenge, especially when they feel the food is not adequate as this may reduce milk production. In line with this, are findings of research studies conducted in Kenya, Swaziland, South Africa and Namibia where HIV-positive women also alleged that a woman could only produce enough milk for a baby if they ate good food. However, there is no evidence that supports the direct relationship between milk production and the mothers' nutrition status. However, for the women to be able to exclusively breastfeed, they need to be in their right physical and psychological health. HIV positive mothers need to be able to eat a balanced meal in order to maintain their optimum health. It is only possible for them to exclusively breastfeed their babies when they are not ill. Ill health will also hinder them to produce enough milk for the baby.

The study has also shown that HIV positive mothers are more likely to stop exclusive breastfeeding their infants when they know that HIV can be transmitted through breastfeeding (especially if practised longer than 2 years). This has instilled fear in most mothers that they either avoid EBF altogether or only practice it for a few months. It was reported in the Malawi demographic and health survey that 91% of women and 86% of men have the knowledge that HIV has been known to be found in breast milk of HIV infected mothers and that HIV can be transmitted through breastfeeding (MDHS, 2010). No woman would want to transmit the HIV to her child. This has caused a lot of concern, especially where the infant has sores in the mouth, as

the virus can be transmitted from mother to infant through breastfeeding. This increases the rate of HIV transmission from mothers to babies in populations that breastfeed their babies (for example, Africa) than in areas where women usually use formula feeding as an infant feeding method (for example, the United States and Europe). In this case, mothers are inclined to choose what they would regard as safer methods of infant feeding such as formula, and mixed feeding (Leshabari et al., 2007).

Availability of support from significant others

The study also revealed how the support rendered by family members and friends may influence EBF. During the first few months of childbirth, the mothers need assistance with household chores so that they are able to properly care for their children. This is because the mothers have just undergone the stresses of labour and delivery which means they need adequate rest so that their bodies may be restored to optimum function. In this study, most mothers explained how family members assist them with household chores and taking care of the baby which gives them time to adequately breastfeed the baby.

This finding is consistent with findings from other studies. A study in Myanmar revealed that family member support contributed to adherence to EBF by mothers (Thet et al., 2016). Breastfeeding mothers usually become overwhelmed with the amount of work they have to do. Balance has to be reached between the care of the baby and caring for the household including other children. When the balance is lacking, one may suffer and there will not be optimal functioning. Those women who lack support are more likely not to exclusively breastfeed their babies.

In the present study, it was noted that spouses take a leading role in supporting their wives' infant feeding practices. Some of the mothers are exhausted from all the stresses of labour and delivery and may need somebody to remind them and wake them up so that they are able to breastfeed their babies during the night. Spouses usually remind the mothers to breastfeed their babies when the mothers are asleep and also when the baby is crying. This was also noted by Kafulafula et al., (2013) that partners take a leading role in issues of infant feeding. Some husbands are so committed so much so that they even remind their wives to breastfeed their babies. Naturally, husbands believe in breastfeeding babies on demand. They do not like to see their babies cry. They would under normal circumstances ask the wife to breastfeed when a baby is crying. This in turn promotes exclusive breastfeeding.

In this study, it was found out that when a woman weans the baby early from breastfeeding, she automatically becomes the talk of the society. Exclusive breastfeeding is the expected method of infant feeding and choosing formula feeding is similar to divulging an HIV status of an individual. This is the case because of the various problems that come with disclosure of HIV status such as stigma, divorce and violence. Some critics have noted that family values and community norms also have a direct bearing on the infant feeding practices mothers follow in sub-Saharan Africa as in most developing countries. Divulging an HIV status may lead to violence and divorce (Adejuyigbe & Odebiyi, 2008). "About 87% of the mothers disclose their HIV status to their spouses, and 65.6% of the mothers disclose their status to their family members" (Adejuyigbe et al., 2008 p303).

The current breastfeeding guidelines by WHO stipulate that babies be breastfed for 2 years. This shows the existence of a knowledge gap between the required and what is being done on the ground. The results on the societal expectations show that not much has changed despite the

change in the guidelines. Literature has not clearly stated the type of information that health facilities provide to HIV positive mothers on exclusive breastfeeding which makes it difficult to pinpoint the actual information women receive from health facilities on infant feeding. In order for the women to receive adequate information, there is a need for enough personnel to provide the information. Shortage of staff in health facilities has brought a major setback on the quality of infant feeding information given to the women. In the end, women are just encouraged to exclusively breastfeed their babies without being given individualized care based on their needs.

The current study also shows that some of the HIV positive mothers have the information that HIV can be transmitted through mixed feeding. However, these women are forced to practice mixed feeding because of the stigma of HIV they are more likely to face when their HIV status is divulged and they are seen breastfeeding their infants. The society believes that an HIV positive mother should not breastfeed at all. These women are forced to breastfeed their infants in private but feed their infants with formula in public to try to reduce the chances of transmitting the virus to their infants (Bobat et al., 2007; Gara et al., 2008; Aishat, Olufunmilayo, David, & Gidado, 2015).

This is in contrast with findings from a study in Tanzania where people believe that exclusive breastfeeding is for women who are HIV positive (Maonga et al., 2016). The discrepancy may come in due to different cultural beliefs towards newborns. There is a need for breastfeeding interventions such as early initiation of breastfeeding and EBF to be strengthened and scaled up. There is a need to increase community awareness and education on advantages and negative effects of mix feeding.

Influence of health facility

The study also found that HIV positive women are likely to adhere to information from the hospital. The type of infant feeding information that health facilities provide has a major influence on HIV positive mothers' adherence to exclusive breastfeeding. HIV positive mothers are likely to adhere to instructions from health workers. This is because the hospital is the only trusted source of information and the hospital has offered them support since their diagnosis. Most of the women receive counselling from health workers about exclusive breastfeeding and these workers have an influence on their infant feeding practices.

It is important to note that in other studies it has been found that the information the health workers give the women also depends on the knowledge and perceptions of health care workers on infant feeding practices. They can only give the proper information if they have the proper knowledge on infant feeding and are perceiving the guidelines positively (Piwoz et al., 2007; Young et al., 2011). This was also found in this study. Women may want to have information on the other feeding practices such as replacement feeding but health workers do not provide such information. The health workers already have a bias over the feeding practices. Health workers need to play an active role in giving these women adequate and correct information on feeding options as well as help them to make informed choices.

Minnie & Greeff (2006); Aishat et al., (2015) also had the same findings in South Africa where health education about infant feeding at clinics had a major influence on HIV positive mothers' infant feeding practices. Education about exclusive breastfeeding should start during antepartum through labour and delivery and should continue after delivery. Adequate training for health care providers on breastfeeding support skills can aid in increasing the practice of EBF.

Ndubuka et al., (2013) noted that most women are more likely to exclusively breastfeed their infants when counselling on infant feeding is done during antenatal visits. This clearly indicates the influence health facilities have on women on the adherence of EBF. The situation in Malawi may be attributed to the education level of the women as shown in demographics that most of the women had not gone to secondary school which may affect retention of information for longer periods.

Health workers have the responsibility to give the women all the needed information on infant feeding. Without adequate counselling including information about the risks of mixed feeding and benefits of exclusive breastfeeding, HIV-positive women may be forced to make decisions based on inadequate information. For instance, when women are told that HIV can be transmitted through breast milk, they will definitely refrain from exclusive breastfeeding. Because no mother would want to transmit the HIV to their baby through breastfeeding, they may end up unintentionally endangering their infants' health by deciding not to exclusively breastfeed and use mixed feeding or formula that is not hygienically prepared. This stresses on the need for the provision of adequate and clear information on exclusive breastfeeding to all HIV-positive women seeking antenatal care as well as how breastfeeding may reduce the rate of HIV transmission.

One initiative that has been emphasized on the importance of EBF in health facilities in Malawi is the baby-friendly hospital initiative which has influenced mothers to exclusively breastfeed their infants (Hawkins, et al., 2014). In some African countries, infant feeding counsellors are used to provide information on infant feeding. Another example in Malawi is the mother to mother programme being carried out in some health facilities like Bwaila hospital

(Leshabari, et al., 2007; Natulinda et al., 2015). This allows peer education on the best way to feed HIV- exposed infants.

Socio-economic status

The study has also revealed that most mothers spend a lot of time outside the household in search of money and food to feed the family. This reduces the breastfeeding time for the baby. Most of the women interviewed are business ladies. This demands a lot of time from them and the women end up prioritizing the customers to make ends meet. Most of the babies who are left at home end up being mixed fed. The babies are breastfed when the mother is around the household and are given other foods when the mother is away on business. This has been established as one of the major hindrances to exclusive breastfeeding. This finding is in line with other studies that maternal occupation appears to be a predictive factor for EBF, since a paid job or business outside the household may be considered a factor promoting the discontinuation of exclusive breastfeeding (Brecailo, Corso, Almeida & Schmitz, 2010). This can further be explained by the fact that these breastfeeding mothers do not have their own financial resources and need to start some paid work shortly after birth (Queluz et al., 2012).

These findings are vital for the underdeveloped world because most women in these countries are poor and do not have enough food to maintain a good nutrition status. Due to poor socio-economic status in countries like Malawi, most mothers prefer to spend time and effort in finding food for their families compared to staying at home to breastfeed their babies as required. Mothers spend a lot of time outside homes in search of money and food hence not exclusively breastfeeding their babies (Bobat et al., 2007; Kafulafula et al., 2013). This has led to increased cases of mixed feeding which has been proved to promote transmission of HIV from mother to

child. In relation to this, Kafulafula et al., (2013) also found out that the setting where the women breastfeed their infants also has an influence on the feeding practices of HIV-positive women. The environment may either encourage or hinder the women to breastfeed their babies. For instance, for a working mother and a businesswoman, it is difficult to exclusively breastfeed their infants. If the mother spends more time at the market doing business, the baby may not be breastfed as much.

Intention to protect the baby

The study has also revealed that some mothers adhere to EBF with the aim of protecting their children from contracting the virus. These mothers would do anything that they are told to protect their children from contracting the virus. However, it must be noted that with the intention to protect, there are negative effects that may come in. An individual who has an intention may do anything deemed necessary to arrive at a goal. This finding has not been documented in other findings. This may be due to the differences in culture where in Malawi women are expected to provide all the protection there is to their children. Women may end up following some bad advice as long as they feel their children may be protected. There is a need for further investigation as to what protection these mothers are offering to their children so that the children do not contract the HIV.

CONCLUSION

The study identified important factors that influence HIV positive mothers to adhere to exclusive breastfeeding. The findings highlight the importance of the knowledge that the women have on EBF, the effects of EBF on the mother and baby, socio-economic status, availability of

support as well as intention to protect their babies as factors that promote adherence to EBF. Mothers need to be prepared for family and community pressures that encourage mixed feeding and the cultural influences that conflict with EBF. It is important to note that mothers have several concerns related to effects of exclusive breastfeeding both on their bodies and their infants. This is especially the case in contexts with high rates of HIV and infant illnesses. The perceived association between EBF and an increase in the spread of HIV needs to be challenged as it affects the promotion of EBF. There is need to promote EBF as a healthy option that can benefit all children.

The finding that most of the mothers are willing to practice EBF holds a promise in terms of promoting breastfeeding, but EBF will need to be emphasized to prevent mixed feeding among HIV-infected mothers. Exploring factors that influence adherence to exclusive breastfeeding among HIV positive mothers is an essential point of focus in order to promote EBF in HIV positive mothers in Malawi. The findings of the study point to the significance of combining the health system, social-cultural and informational support as enabling factors that will help to translate intention into behaviour (Göksen, 2002).

RECOMMENDATIONS

- Health education on EBF should be extended to significant others for support. Optimal conditions and practices for infant feeding are usually contrary to parent and community beliefs and related practices. According to Paul (1955), the successful introduction of an intervention requires harmony between local culture and recommended guidelines,

suggesting that evidence-based policy and interventions also should somehow be in line with societal norms and expectations if they are to improve outcomes (Worthman, Tomlinson & Rotheram-Borus, 2016).

- Health workers should be trained on the new recommendations by WHO on breastfeeding and HIV to ensure the provision of standardized care. There is need to focus on designing consistent messages on infant feeding and approaches to counselling as well as media campaigns as they could be useful to encourage the practice of EBF. In order to allow for sufficient insight into what messages are relayed at a community level and how people make sense of these recommendations, all health workers need to have adequate knowledge so as the HIV positive women may be provided with standardized care.
- There is a need for scaling up utilization of baby friendly hospital initiatives. With the existence of shortages among health workers, this is one initiative that helps in imparting knowledge to lactating mothers on the proper infant feeding methods. Scaling up utilization of the baby-friendly services would assist to reduce the spread of HIV during postpartum as mothers would make an informed choice. There is need to ensure that all health facilities actively implement the Ten Steps of the Baby-Friendly Hospital Initiative (Richter, 2016).

Areas of further study

- Explore knowledge, attitudes and practices of health workers on exclusive breastfeeding. Currently, there is no literature that stipulates the actual information that health workers give to the HIV positive women. The assumption is that health workers counsel the

mothers based on their own attitudes and beliefs. Mothers are not provided with all the information they need to make an informed choice.

- Intervention study on the uptake and utilization of baby friendly hospital initiatives. The extent of the utilization of the baby friendly hospital initiatives is not known; as such the assumption is that it is being underutilized.
- Explore the effects of food security on exclusive breastfeeding. There is no study that has been done to investigate the relationship between the quantity of food a lactating mother eats and the amount of milk produced for the baby. This is a common belief in most societies and needs scientific evidence.

Limitations of the study

The study was conducted at Bwaila hospital hence findings are limited to Bwaila hospital. The limitation has resulted from the limited time the researcher had to complete the thesis. However, the findings may provide useful information regarding the experience of HIV-positive mothers who have cared for HIV-exposed infants in similar settings.

The study also used qualitative method which means the results cannot be generalized due to the small sample and the interpretations of the stories are subject to what the researcher thinks.

The study also used purposive sampling which is biased as only participants meeting a criterion are selected. The researcher decided on who to include in the study.

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APPENDICES

Appendix 1: Information sheet for HIV-positive mothers with exposed children

Dear participants

My name is Bianca Kandeya and I am currently registered as a student at the University of Malawi, Kamuzu College of Nursing for Master of Science degree in Midwifery. I am conducting a research project on the ‘factors that influence adherence to exclusive breastfeeding among HIV-positive women at Bwaila hospital in Lilongwe and I write this letter to ask you to participate in the study mentioned above. The aim of the study is to explore the factors that influence adherence to exclusive breastfeeding among HIV-positive mothers.

Participation in the study is entirely voluntary. You may choose to participate or withdraw from the study at any time, which will not have any effects on the services that you are receiving from the health care providers in this hospital. Furthermore, the study does not have any foreseeable physical harm (risks); however, in cases of any emotional or psychological harm, you may forward your concern and complaints to the researcher at Kamuzu College of Nursing.

I appreciate that you will derive no benefit from participating in the study. However, the factors that influence adherence to exclusive breastfeeding among HIV-positive mothers will assist in responding to HIV-positive mothers needs and guide nursing care to minimise HIV transmission from mother to child during infant feeding of exposed children. No reports in this study will identify you in any way and results of the study will be given to you should you so wish. Should you agree to participate, I will ask you to sign a consent form or put a fingerprint on the space provided to indicate that you have accepted to be interviewed. It is anticipated that the interview will take 40 minutes to one hour of your time. The interview will be conducted at a time that is

most suitable and convenient to you in a quiet environment to avoid any disturbances. To validate the information given, I would like to review the records of the follow-up visits conducted. I would also like to contact you through the phone number given or the map after the initial interview.

The study has been approved by College of Medicine Research Ethics Committee (COMREC) and Bwaila hospital.

Thank you for taking the time to read this information letter.

Should you require any further information regarding the study or your rights as study participant you are free to contact me on the following number: 0995188774 or the chairperson, COMREC Secretariat, P/Bag 360, Chichiri, Blantyre 3 or you may call on 01989766.

Appendix 1.1: Kalata yofotokoza za kafukufuku pa zomwe zimapangitsa amayi omwe ali ndi kachilombo koyambitsa matenda a edzi apitilize kuyamwitsira mwana mwakathithi

Wokondedwa.....

Ndine Bianca Kandeya wophunzira zaunamwino kusukulu yaukachenjede ya Malawi ku Kamuzu Koleji, amene ndikuphunzira zokhudza umoyo wa uchembere ndipo ndikupanga kafukufuku wokhuza zinthu zomwe zimapangitsa amayi omwe ali ndi kachilombo koyambitsa matenda a edzi kuti apitilize kuyamwitsira mwana mwakathithi.

Ndalemba chikalatachi ndi cholinga chofuna kukupemphani kuti mutengepo mbali polowa nawo mukafukufukuyu. Cholinga cha kafukufukuyu ndi kusathula zinthu zomwe zimapangitsa amayi omwe ali ndi kachilombo koyambitsa matenda a edzi apitilize kuyamwitsira mwana mwakathithi. Izi zizathandiza ogwira ntchito kuchipatala kugwira bwino ntchito yawo ndi amayi omwe akuyang'anira mwana amene wabadwa kwa mzimayi amene ali ndi kachilombo koyambitsa matenda a edzi ndipo ali pachiopezo chotenga matendawa.

Dziwani kuti simukukakamizidwa kutengapo mbali komanso muli ndiufulu ngati mukufuna kusiya nthawi imene mungafune popanda vuto lina lililonse ndipo muli omasuka kufunsa mafunso alionse okhudza kafukufukuyu. Mukuyeneranso kudziwa kuti mayankho anu adzasungidwa mwachinsisi ndipo sizizadziwika kuti anayankha mafunsowa ndindani chifukwa mayina anu sadzayikidwa pamapepala a mafunso m'malo mwake tizagwiritsa ntchito manambala. Dziwaninso kuti palibe chiopesezo china chili chonse pakafukufukuyi. Tikamaliza kafukufuku, ndimafunanso kukaona ndondomeko yanu ya momwe mumabwelera ku chipatala kudzalandira mankhwala a ma ARV, kukuimbirani foni ngati pali zina zofunsa komanso

kukulondolani kwanu pogwiritsa ntchito mapu ngati mbali ina yofuna kutsimikiza mayankho anu.

Ngati mwavomereza kutengapo mbali pakafukufukuyi muzapemphedwa kusayina fomu kapena kusindikiza chala chanu ndiponso kuyankhapo mafunso kwanthawi yosachepera mphindi 40 kapena ola limodzi.

Ngati pangakhale mafunso kapena nkhwawa ina ili yonse yokhudzana ndikafukufukuyu khalani omasuka ndikubweretsa madandaulo anu poyimba nambala iyi; 0995188774 kapena lembalani kalata kwa wapampando, COMREC P/Bag 360, Chichiri, Blantyre 3 kapena muyimbire telefoni pa nambala iyi 01989766

Appendix 2: Consent Form

PLEASE READ AND SIGN THE FORM IF YOU ARE TAKING PART IN THIS STUDY

I..... (Name/ Thumb Print), voluntarily give permission to participate in the study.

I have read or have had another person read to me and understood the content of the information letter and I have been given the opportunity to ask questions, where deemed necessary, about the study.

I understand that the information I give will be kept confidential and will only be accessed by the researcher and/or those people who are directly concerned with the study

I know that I do not have to suffer any injury or harm during the research process and the information that I will give to the researcher will not be used against me in future.

.....

Participant's Signature

Thumbprint

.....

.....

Researcher's Signature

Date

Should you have any further inquiries please contact: The Chairperson, COMREC Secretariat P/Bag 360, Chichiri, Blantyre 3 or you may call on 01 989 766.

Appendix 2.1: Kalata yapempha chilolezo kwa azimayi omwe ali ndi kachilombo koyambitsa matenda a edzi komanso abereka kumene.

Sayinani dzina lanu kapena sindikizani chala chanu ngati mwavomereza kutengapo mbali pakafukufukuyu

Ine..... (Dzina)/Sindikizani chala) ndavomera ndikupeleka chilolezo mosaumilizidwa kutengapo mbali pakafukufuku uyu. Ndawerenga kapena kuwerengeredwa ndi munthu wina, komanso ndamvetsa cholinga chake, ndiponso ndapatsidwa mwayi ofunsa mafunso ngati pangafunikire pa kafukufuku uyu. Ndamvetsa kuti zomwe nditayankhule pa kafukufuku uyu, zizasungwidwa mwa chinsinsi ndipo zizagwiritsidwa ntchito ndi mwini kafukufuku yekha komanso omwe ali okhudzidwa ndi kafukufukuyu.

Ndikudziwa kuti palibe chiopsezo china chilichonse panthawi yomwe ndikutengapo mbali pakafukufuku uyu, komanso kuti mayankho ndikupereka kwa mwini kafukufukuyu sadzagwiritsidwa ntchito motsutsana ndiine mtsogolo muno.

.....

Dzina la otenga mbali Tsiku

posindikiza chala

.....

Mwini kafukufuku

Tsiku

Ngati pangakhale mafunso kapena nkhawa iliyonse yokhudzana ndikafukufukuyu bweretsani madandaulo anu kwa wapampando wa COMREC pa telefoni nambala iyi 01989766.

Appendix 3: Interview guide for a study on the factors that influence HIV-positive mothers adherence to exclusive breastfeeding.

SECTION A: DEMOGRAPHIC DATA AND INFANT INFORMATION

Participant #:

Age:

Marital status:

The level of education:

Address (include nearby features):

Parity:

Occupation:

Tribe:

Date of birth of a current baby:

2. Can you please tell me a little about yourself; (when you were diagnosed, when you started ART, how long have you been on ART and how your health has been so far?)

SECTION B

B 1: Infant feeding information HIV positive mothers receive.

1. What do you know about infant feeding methods?

PROBE: What is it, how does it work, why was your child put on that feeding method and how many days has your child been on that feeding method?

B2: Perceptions, attitudes and beliefs of HIV positive mothers on exclusive breastfeeding

What is your experience with exclusive breastfeeding?

PROBE: How did you feel when you heard that your infant is exposed and you needed to exclusively breastfeed your infant for 6 months? what was your reaction, what was your perception about exclusive breastfeeding, what information were you given as regards to exclusive breastfeeding, how did they give this information to you written or verbally, when was the information given (before, during or after the birth of the child, Who gave you the information (Doctor/Clinician, Nurse or if others specify), how important was this information during the care of your exposed infant.

B3: Factors influencing exclusive breastfeeding in HIV-positive mothers.

What are the factors that influence you to exclusively breastfeed your infant?

PROBE: how do you ensure that your infant is exclusively breastfed? What role did the health care workers play in supporting you in implementing exclusive breastfeeding (reassurance, proper answering of questions, approachable, giving enough information), how important was their role during care of your exposed infants. What are the factors that hinder exclusive breastfeeding and how do they hinder?

THANKS FOR YOUR PARTICIPATION!

Appendix 3.1: Mafuso a kholo pakafukufuku wa zomwe zikupangitsa amayi omwe ali ndi kachilombo koyambitsa matenda a edzi kusankha njira yoyamwitsira mwana.

GAWO LOYAMBA (A): MBIRI YA MAYI NDI MWANA

Nambala ya otengapo mbali

Zaka:

Muli pabanja kapena ayi:

Sukulu munalekezera pati:

Kumudzi (kuphatikizapo zomwe anayandikana nazo pafupi):

Uchembere wachingati:

Mumatani kuti mupeze ndalama:

Mtundu wanu:

Tsiku lobadwa lamwana:

Mungandifotokozereko pang'ono za mbiri ya umoyo wanu (anakupezani ndi kachilombo liti, nangan munayamba liti kumwa mankhwala, mwamwa mankhwala kwa nthawi yaitali bwanji komanso umoyo wanu wakhala otani chikupezereni ndi matendawa)

GAWO LACHIWIRI (B)

B1: Zomwe mayi akudziwa panjira zakayamwitsidwe ka mwana

1. Mukudziwapo chiyani pa za kayamwitsidwe ka mwana yemwe ali ndi chiopsyezo chotengera kachilombo koyambitsa matenda a edzi.

Funso lothandiza kupeza zambiri: Kodi njirazi zimatanthauza chani, komanso mumamuyamwitsa mwana bwanji, nanga nchifukwa chani munasankha njirayi komanso mwana wanuyi wakhala nthawi yaitali bwanji akuyamwa kugwiritsa ntchito njirayi?

B2: Zinthu zomwe mayi akukumana nazo panthawi yomwe akuyamwitsa mwakathithi

kodi ndi zinthu ziti zomwe mukukumana nazo panthawi yomwe mukuyamwitsa mwana wanu mwakathithi? Mukuiona bwanji njirayi?

Funso lothandiza kupeza zambiri: tandifotokozereni momwe munamvera mumtima mwanu atakuuzani kuti mwana wanu ali pa chiopsyezo chotenga kachilombo ka HIV kuchokera kwa inu ndipo mukuyenera kumuyamwitsa mwakathithi kwa miyezi isanu ndi umodzi? Munachilandira bwanji ndipo maganizo anu anali otani, nanga kodi inuyo mumaiona bwanji njira yoyamwitsa mwakathithi, kodi muli ndi uthenga otani omwe mukuudziwa pa nkhani yoyamwitsa mwakathithi, nanga uthengawu munaumva kuchoka kuti, kodi munawerenga kapena munthu anakuuzani pakamwa, kodi uthengawu anakuuzani pomwe munali oyembekezera, panthawi yohira kapena mutachira kale, kodi munamva kwa a dokotala, anamwino kapena anthu ena (ndani), mmene mukuonera, kodi uthengawu ndiofunika bwanji mukasamalidwe ka mwana wanuyu yemwe ali pachiopsezo chotenga kachilomboka?

B3: Zinthu zomwe zikuyeneretsa mayi kuti ayamwitse mwakathithi

kodi ndi zinthu ziti zomwe zimakuyeneretsani inu kuti muthe kuyamwitsa mwana wanu mwakathithi?

Funso lothandiza kupeza zambiri: mumapanga chiyanimkuti muonesetse kuti mwana wanu akuyamwa mwakathithi? Mukuona ngati ogwira ntchito ya chipatala anatengapo gawo lanji pokuthandizani kuti mwana wanu ayamwe mwakathithi (chilimbikitso, kuyankha mafunso moyenera, kukambika komanso nsangala, kupereka uthenga okwanira), mukuona ngati gawo lomwe a chipatala anatengapo lukuthandizani bwanji posamalira mwanayu. Ndizinthu ziti zomwe zimalepheletsa kuyamwitsa mwana wanu mwakathithi, nanga kodi zimalepheletsa bwanji?

ZIKOMO POTENGA NAWO GAWO PA KAFUKUFUKUYI

Appendix 4: authorization letter from COMREC



Appendix 5: Letter to the District Health Officer.

University of Malawi

Kamuzu College of Nursing

Post Office Box 415,

BLANTYRE

The District Health Officer

Bwaila Hospital

P.O Box 1274

LILONGWE

Dear Sir/ Madam

REQUEST FOR PERMISSION TO PRE-TEST AND CONDUCT A RESEARCH STUDY

I write to seek permission to pre-test and conduct a research study at Bwaila hospital, maternity department. The pre-test will be conducted in postnatal Ward while research study will be conducted family health unit. I am a student currently pursuing a Master of Science Degree in midwifery at the above institution. In partial fulfilment of the degree, I am supposed to carry out a research study related to child health practice. The title of the research project is ‘factors that influence adherence to exclusive breastfeeding among HIV-positive mothers at Bwaila hospital

in Lilongwe'. The pre-test and study will be conducted in June 2017. Fifteen HIV-positive mothers who have given birth in maternity department will be interviewed. Two HIV-positive will be interviewed for pre-test from postnatal Ward. The knowledge gained will assist in improving standard and quality of care given to HIV-positive mothers with exposed infants at the hospital.

Enclosed is the research proposal.

I look forward to your favourable consideration.

Yours Faithfully

BIANCA KANDEYA (MISS)

Ref. No.:
Telephone No.: **265 726 466/464**
Telefax No.: **265 727817**
Telex No.:
E-Mail: **lilongwedho@malawi.**



In reply please quote NO DZH/MALAWI,
Lilongwe District Health Office
P.O. Box 1274
Lilongwe
Malawi

COMMUNICATIONS TO BE ADDRESSED TO:

02nd February 2017

The In-charge, Bwaila Hospital

Dear Sir/Madam

ATTACHMENT LETTER TO LILONGWE DISTRICT HEALTH CENTRES

Permission has been granted to the bearer of this letter: Bianca Kandeya, from Kamuzu College of Nursing to conduct a research study at your Hospital.

" Factors influencing HIV positive mothers choice of Infant feeding "

Any assistance rendered would be appreciated.

Ministry of Health & Population
Lilongwe District Health Office
DISTRICT MEDICAL OFFICER
14 FEB 2017
Dr. E. Rambiki
For: **DISTRICT HEALTH OFFICER**
Lilongwe