



Experience of HIV Positive Mothers on Delayed HIV Testing of Exposed Infants at Mchinji District Hospital

By

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Declaration

I, Chiyanjano Mphatso, declare that this dissertation has never been presented for any award to any institution of higher learning here or abroad and the work contained in it is original unless otherwise stated. The sources of information quoted in this thesis have been acknowledged and included on the list of references.

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Dedication

To all HIV positive mothers who amidst many challenges try their best to bring their HIV exposed infants for early infant HIV testing.

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Above all, I give thanks to Almighty God for the gift of life and all its endowments.

List of Abbreviations

AIDS:	Acquired immune deficiency syndrome
ARV:	Antiretroviral
AZT:	Zidovudine
DHIS:	Demographic health information system
DHS:	Demographic Health Survey
DNA-PCR:	Deoxyribonucleic acid- polymerase chain reaction
EID:	Early Infant Diagnosis
HIV:	Human Immunodeficiency Virus
MOH:	Ministry of Health
NAC:	National AIDS Commission
NVP:	Neverapine
PMTCT:	Prevention of mother to child Transmission
UNAIDS:	Joint United Nations Programme on HIV/AIDS
WHO:	World Health Organization
WMA:	World Medical Association

List of definition of terms

Delay HIV testing and diagnosis:	HIV testing after six weeks of age
Early infant diagnosis of HIV:	HIV test within the first two months of life
HIV exposed Infant:	Infants born to HIV-infected mothers
Infant:	Child aged below one year

Table of Contents

Declaration.....	i
Approval	ii
Dedication.....	iii
Acknowledgements.....	iv
List of Abbreviations	v
List of definition of terms	vi
Abstract.....	x
CHAPTER 1: INTRODUCTION AND BACKGROUND	1
1.1 Introduction.....	1
1.2 Background.....	2
1.3 Significance of the study.....	5
1.4 Justification of the study	5
1.5 Problem Statement	6
1.6 Aim of the Study.....	6
1.7 Objectives	7
CHAPTER 2. LITERATURE REVIEW	8
2.1 Overview of infant HIV diagnosis.....	8
2.2 Current Infant HIV testing situation	8
2.3 Knowledge of HIV positive mothers on Infant HIV Testing.....	9
2.4 Causes of delayed infant HIV testing	10
2.5 Mitigating factors to delayed HIV testing of exposed infants	14
2.6. Conclusion.	15
2.7. Conceptual Framework.....	15
2.7.1 Health Belief Model.....	15
2.7.2 Major concepts of the model and definitions.....	16
2.7.3 Diagrammatic illustration of HBM.	18
2.7.4 Application of health belief model to the study	18
CHAPTER 3: METHODOLOGY	20
3.1 Study Design.....	20
3.2 Population and Sample	20

Version 1: June 2019 *Delayed HIV Testing of Exposed Infants* Page | vii

3.2.1 Study Population.....	20
3.2.2 Sampling Method.....	21
3.2.3 Sample Size.....	21
3.2.4 Inclusion Criteria.....	22
3.2.5 Exclusion Criteria.	22
3.3 Study Site.....	22
3.4 Data Collection	23
3.5 Data Analysis	25
3.6 Trustworthiness of the Research	26
3.7 Ethical Considerations	28
3.8 Study Limitations.....	29
3.9 Dissemination of Findings	30
CHAPTER 4: PRESENTATION OF FINDINGS	31
4.1 Introduction.....	31
4.2 Demographic characteristics of the participants	31
4.3 Qualitative findings.....	32
4.3.1 Theme one: Knowledge of mothers on HIV and AIDS	35
4.3.2 Theme two: Causes of delayed HIV testing of HIV exposed infants	38
4.3.3 Theme three: Motivators to HIV testing of exposed infants	41
CHAPTER 5: DISCUSSION.....	44
5.1 Introduction.....	44
5.2 Knowledge on HIV and AIDS	44
5.3 Delaying factors.	46
5.4 Conclusion	50
5.6 Recommendations.....	51
5.7 Areas for further research.	51
References.....	52
Appendices.....	60
Appendix A: Interview guide.....	60
Appendix B: Interview guide translated in Chichewa	62
Appendix C: Information Letter	65
Appendix D: Consent Form	67

Appendix E: Information letter translated into Chichewa	68
Appendix F: Consent form translated in Chichewa	70

Abstract

Many HIV-infected infants and children die from HIV/AIDS without HIV diagnosis or treatment. All HIV-exposed infants at the age of 4-6 weeks should receive a diagnostic test for DNA-PCR and early initiation of ART among those identified HIV infected. However, reports have indicated serious delays in HIV testing for HIV exposed infants.

The aim of this study was to examine experiences of HIV positive mothers on delayed HIV diagnosis of exposed infants at Mchinji District Hospital. A descriptive qualitative design was used to conduct this study. Mchinji is among the districts in the central region of Malawi where HIV prevalence was estimated as high as 7.6 %. The site was selected because data from the facility had shown significant delay in HIV testing and diagnosis for exposed infants. The statistics for 2015/2016 extracted from the health information systems for Mchinji district hospital showed that only 47% of exposed infants were tested for DNA-PCR within six weeks of age.

The study participants were women in the child bearing age (15-45 years) who were confirmed HIV positive and had an infant of more than six weeks of age who had not been tested for DNA-PCR or had been tested for DNA-PCR after six weeks of age. The participants were recruited from the study population using purposive sampling method. The sample size for the study was 15 and data saturation was the guiding principle in the sample size.

Data were collected using a Chichewa translated interview guide for individual interviews. Data were recorded through audio-taping and field notes were taken. Data were analysed manually using thematic analysis. The findings of the study will facilitate early infant diagnosis of HIV as stipulated in the guidelines for policy implementation. The findings may

also add knowledge to child health nursing practice and influence change and policy development in care of exposed infants.

Ethical approval to conduct the study was obtained from the College of Medicine Research and Ethics Committee. Thereafter, permission to conduct the study was obtained from Mchinji District Hospital.

The findings of the study showed that fear of stigma and discrimination, denial of one's HIV status, home deliveries, laziness, and migration to and from neighboring countries affected early infant diagnosis of HIV. These findings are to be disseminated through meetings at Mchinji District Hospital which was the study setting. A written report is to be submitted to the study site, Kamuzu College of Nursing and College of Medicine Research and Ethics Committee.

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 Introduction

Many HIV- infected infants and children die from HIV and AIDS without HIV diagnosis or treatment. Globally in 2010, about 250,000 children aged less than 15years died from AIDS related causes (UNAIDS, 2011). Similarly, in 2015, 3.5 million children died from AIDS related causes worldwide (UNAIDS, 2016a). In Malawi, HIV and AIDS accounted for 13% of under-five deaths in 2010 (WHO/CHERG, 2012), with an estimate of 4,300 children newly infected by HIV in 2016 (UNAIDS, 2017).

In an effort to reduce HIV/AIDS related deaths among children, World Health Organization (WHO) recommended early infant diagnosis (EID) of HIV and initiation of ART therapy soon thereafter (Wamalwa, et al., 2012). At the age of 4-6 weeks, all HIV-exposed infants (infants born to HIV-infected mothers) should receive a diagnostic test for DNA-PCR and early initiation of ART among those identified HIV infected (WHO, 2014). DNA-PCR is a sensitive technique used to detect specific HIV viral DNA in peripheral blood.

Early HIV diagnosis and initiation of ART is associated with better treatment outcomes and increased survival for HIV infected infants (WHO & UNICEF, 2009); however, implementation of EID is a challenge. In most parts of the world, testing rates for HIV exposed infants are very low. Globally, in 2011, only 35% of the HIV exposed infants received an HIV test within their first two months of life (WHO, 2013). Diagnosis of HIV- infected infants also often occurs too late to allow early initiation of ART in many African countries (Hassan et al., 2012). Among the Global Plan priority countries in the WHO Africa Region 2012, only South Africa and Swaziland were providing early infant diagnosis for more than 80% of infants in

need, while only Namibia and Zambia had achieved early infant diagnosis coverage of 50–80% for HIV-exposed infants (WHO, 2013, p.61).

In Malawi, reports have also indicated serious delays in HIV testing of exposed infants. According to the Joint United Nations Programme on HIV and AIDS (UNAIDS), only 15% of HIV exposed infants who were born in Malawi in 2013 underwent DNA-PCR testing within 2 months of birth (UNAIDS, 2014). The Malawi AIDS progress report (2015) also indicates that in 2014 quarter one, only 37% of HIV exposed infants received virological test within the first two months of birth, with 12-16% retained in care at 24 months (NAC, 2015). Similarly, Malawi Population-Based HIV Impact Assessment for 2015-2016 discovered that 49.4% of HIV exposed infants who were born during the assessment period received an HIV virological test within 2 months of birth (MOH, 2017). Some progress in early infant diagnosis of HIV have been reported in some health care facilities in Malawi, however it remains significantly below the 90% national target. Data from Mchinji District Hospital show that in 2015, the percentage of HIV exposed infants tested for HIV at six weeks of age was 47% (MOH, 2015). In view of this, the study intended to find out the experiences of HIV positive mothers on delayed HIV testing among HIV exposed infants at Mchinji District Hospital.

1.2 Background

The first case of HIV in Malawi was diagnosed in 1985 (MOH, 2015). During those early days of the disease, issues relating to sex, including HIV transmission were not addressed in public sphere as it was considered illegal (Kalipeni & Gosh, 2007). Since then, epidemiological data showed an escalating epidemic such that the HIV sero prevalence among women attending antenatal kept on rising from 2.6% in 1986 to over 30% in 1998 (Baker, 2011). Despite that,

Malawi's attempt to fight against the country's HIV and AIDS epidemic began in 1986, focusing largely on preventing the further spread of HIV infection, but later including elements of care support and mitigation (Mwale, 2006). Prevention of Mother to Child Transmission of HIV (PMTCT) was the first key strategy that was utilized to fight against HIV and AIDS among HIV exposed infants which later included elements of early infant diagnosis and initiation of treatment soon after.

In 2001, the government through the Ministry of Health introduced a national program for Prevention of Mother to Child Transmission of HIV (PMTCT) which was piloted in Chiradzulu and Thyolo district hospitals and, officially launched in 2003 (WHO, 2014). Under the PMTCT program, pregnant women were screened for HIV and those women tested to be HIV positive were given single dose nevirapine to take at the onset of labour with the purpose of reducing the risk of HIV transmission from the mother to the baby. During that time, the global fund had no any provision for drugs for children and the services were mainly targeting adults (WHO, 2014). The recommendation to stop breastfeeding as soon as replacement feeds were available was the first guidance on paediatric HIV care. This however became problematic as safe infant formula could not be assured. The realization that the risk of transmission must be balanced against optimal feeding practices also became important in the program.

Later on in the late 2000, Malawi introduced Zidovudine (AZT) combination prophylaxis for the mother with Zidovudine/ Lamivudine (AZT/3TC) being initiated at 28 weeks gestation. Exposed Infants were receiving Nevirapine (NVP) syrup for a week or more depending on the duration of exposure of the mother to ARVS (WHO, 2014, p.1). With the change of WHO guidelines four times within a period of ten years, Malawi HIV clinical guidelines kept on changing such that single dose nevirapine (sdNVP) for mothers and infants was phased out. The

Version 1: June 2019 *Delayed HIV Testing of Exposed Infants* Page | 3

combination of AZT and NVP for infants was proved highly effective through further studies and became the global standards. This was evident in some studies in which sdNVP were associated with higher rates of treatment discontinuation and drug resistance (McIntyre et. Al., 2009; Chohanet. al., 2015). During this period, exposed infants had to wait until 18 months of age to be tested for HIV (MOH, 2008).

Since July 2011, the Malawi government adopted early infant diagnosis and follow up of HIV exposed infants in conjunction with option B+ for the mother as one of the strategies recommended by World Health Organization to ensure early initiation of HIV treatment (MOH, 2016). The Malawi guidelines for clinical management of HIV in children and adults recommends active screening of all children under 24 months for HIV exposure and one DNA – PCR test as soon as possible from age six weeks for those identified as exposed infants. It also recommends follow up visits scheduled monthly for the first 6 months aligned with EPI vaccinations and 3 monthly visits from age 6 to at least 24 months. The guidelines further recommend all exposed children to have (parallel) confirmatory rapid antibody testing at age 12 and 24 months to confirm/ rule out HIV infection and a discharge after obtaining a negative HIV antibody test at least 6 weeks after stopping breastfeeding (MOH, 2016, p.17). Mchinji district hospital which is a government health facility started providing HIV testing for exposed infants as per national guidelines.

Following the national recommendation for EID, few studies which had been conducted in some health facilities revealed poor attitude of healthcare workers, lack of knowledge regarding EID and ART, fear of disclosure for one's HIV status among the barriers to successful early infant diagnosis.

1.3 Significance of the study

This study has explored the experience of HIV positive mothers on delayed HIV testing of HIV exposed infants. The study findings will be utilised in the improvement of HIV care and follow up of HIV exposed infants at the research site as well as at national level. The findings which will be disseminated in relevant research dissemination forums will inform PMTCT programmers and policy makers about factors that are critical for the improvement of HIV diagnosis of exposed infants. In addition, the gaps that have been identified in this study will also provide a basis for future research.

1.4 Justification of the study

AIDS accounts for 3% of deaths in children under-five years of age world wide and 6% of those in sub Saharan Africa (WHO, 2006). The Malawi situation is not an exception with HIV and AIDS accounting for 13% of under-five deaths in 2010 (WHO/CHERG, 2012), and an estimate of 4300 children newly infected by HIV in 2016 (UNAIDS, 2017). Most of these HIV infected infants and children also die from HIV/AIDS related causes before they are tested for HIV and initiated on treatment.

In Malawi, a study conducted at the Primary Health Care Level demonstrated that up to one-third of HIV-exposed infants failed to complete early infant diagnosis of HIV (EID) services because of time and costs required for multiple visits, and lack of awareness of the infants' fathers about their children being HIV-tested (Cromwell, 2015). A similar study conducted in Blantyre showed lack of knowledge regarding EID and infant ART, perception of health care worker as authority figures, fear of disclosure of own and or child's HIV status as well as lack of

social support as barriers that women face in accessing HIV testing and care for their infants (Donahue, Dube, Dow, Umar & Rie, 2012).

While barriers affecting participation of HIV – infected women in care and treatment programs for their infants in Blantyre had been identified, no studies had been conducted at Mchinji district hospital to examine the experience of HIV positive mothers on delayed HIV testing of exposed infants; hence the need for research. The findings of the study are to be utilized to address the issues of delayed HIV testing as well as HIV related morbidity and mortality.

1.5 Problem Statement

HIV testing of exposed infants at Mchinji District Hospital is significantly delayed. Data from the facility showed that the percentage of HIV exposed infants tested for HIV at six weeks of age in 2015 was 47% (MOH, 2015). This was contrary to the national HIV clinical guidelines which recommend active screening of all children under 24 months for HIV exposure and one DNA – PCR test as soon as possible from age six weeks for those identified as exposed infants. This also showed a negative progress towards achieving the 2015-2020 Malawi National strategic plan for HIV and AIDS which aims at meeting the ambitious 90-90-90 treatment target released by the UNAIDS in 2014. The ambitious 90-90-90 treatment target states that 90% of people living with HIV should be diagnosed, 90% of known HIV positive be initiated on ART and 90% of those initiated on ART be retained in care (NAC, 2014).

1.6 Aim of the Study

The aim of this study was to examine the experiences of HIV positive mothers on delayed HIV diagnosis for exposed infants at Mchinji District Hospital.

1.7 Objectives

- To explore knowledge of mothers who had HIV exposed infants on HIV and AIDS
- To identify causes of delayed HIV testing and diagnosis for HIV exposed infants.
- To identify motivating factors to HIV testing for exposed infants.

CHAPTER 2. LITERATURE REVIEW

2.1 Overview of infant HIV diagnosis

Early Infant Diagnosis is an important step to facilitate access to ART, improve infants' survival and augment the benefit of PMTCT program (Mirkuzie, Hinderaker, Sisay, Moland & Morkve, 2011). Infants born from HIV positive women are at risk of contracting the virus while in utero, during birth as well as during breastfeeding period. Literature has shown that almost 90% of children less than 15 years who are HIV positive acquired the virus from their mothers through vertical transmission (UNAIDS, 2011). Without any PMTCT interventions, 25-50% of children born from HIV positive mothers will get infected while with antiretroviral therapy and other interventions, the risk of MTCT can be reduced to less than 5% for breastfeeding populations and less than 2% in non-breastfeeding populations (WHO, 2010).

At the age of 4-6 weeks, all HIV-exposed infants (infants born to HIV-infected mothers) should receive a diagnostic test for DNA-PCR and early initiation of ART among those identified HIV infected (WHO, 2014). DNA-PCR is a sensitive technique used to detect specific HIV viral DNA in peripheral blood. It is the most widely used technique and generally considered to be the standard. Early infant diagnosis of HIV and early initiation of ART have been associated with delayed disease progression, rapid immune recovery and reduced chances of opportunistic infections (Lawn, Torok & Wood, 2011).

2.2 Current Infant HIV testing situation

Despite the benefits associated with infant HIV testing, uptake of the service remains low with only 15% of HIV-exposed infants accessing early infant diagnosis, globally (WHO, 2010). Literature has shown that the coverage of early infant diagnosis is less than 10% in five of the

priority countries in the Global Plan: Angola, Chad, the Democratic Republic of the Congo, Malawi and Nigeria (WHO, 2013). Efforts to scale up early infant diagnosis uptake are being implemented in many countries; unfortunately, factors such as low knowledge levels on EID by HIV positive young mothers, long distances to the health facilities that provide such, services, lack of psychosocial support from the partners/spouses and parents.; and stock out of testing kits have been cited as some of the barriers faced by HIV Positive women to return their HIV-Exposed Infants for HIV/AIDS services (Adeniyi et al., 2015; Ssempebwa, 2016).

2.3 Knowledge of HIV positive mothers on Infant HIV Testing

Mothers' knowledge and understanding of infant HIV testing is one of the factors that affect timely uptake of the service. Mothers obtain information regarding early infant diagnosis through various sources such as friends, healthcare workers and social media. Several studies that were conducted nationally and internationally have concluded that care givers need to have adequate knowledge regarding EID so as to facilitate access. In an observational study that was conducted in rural Kenya on dynamics and constraints of early infant diagnosis of HIV infection using mixed methodology, Hassan et al. (2012) observed that care givers had inadequate knowledge and understanding of EID. Most caregivers were aware of mother to child transmission of HIV through birth and breastfeeding; however, some caregivers thought it was impossible for vertical transmission to occur during pregnancy, mostly because the mother was on cotrimoxazole prophylaxis or ART (Hassan et al, 2012). Most care givers were also not sure of the number and exact time points or type of tests to be done for EID (Hassan et. Al., 2012). Similar findings were also drawn in other studies that were conducted in South Africa (Adeniyi et. al.,2015; Wollesenbet et al., 2015), Uganda (Izudu et. al., 2017) as well as in Malawi (Donahue, Dube, Dow, Umar & Rie, 2012).

In a qualitative study on “Disclosure, stigma of HIV positive child and access to early infant diagnosis in the rural communities of OR Tambo District in South Africa”, Adeniyi et. al. (2015), found that mothers had fairly good knowledge of mother to child transmission of HIV and risks during pregnancy, delivery and breastfeeding; infant HIV infection and the availability of treatment; however, knowledge of the optimal time for early infant diagnosis was lacking. Few participants knew that their exposed infants should be tested at six weeks of age; however there were variations in the times suggested by the rest of the participants (Adeniyi et al., 2015). Consistently, a cross sectional study of 246 HIV- positive mother-baby pairs on “Early diagnosis of HIV among infants born to HIV-positive mothers on option-B plus” that was conducted using a different methodology in Uganda, showed that the majority of the women (199 mothers) had no knowledge of the correct number of times and schedules for EID testing as compared to those who had knowledge (Izudu et al., 2016). Likewise, in Malawi, Donahue et al.(2012), found in their study on “Barriers affecting participation by HIV –infected women in care and treatment program for their infants in Blantyre ” that most women lacked understanding that early testing is a pathway to early treatment and they only had a vague awareness about the availability of infant ART. Furthermore, Donahue et al. (2012) found that some women preferred their HIV exposed infants not to be tested for fear of shortening the life of the baby once the result turns to be HIV positive. However; unlike other studies, Donahue et al. (2012) found that most women were aware that infant testing is available and could describe how it is performed.

2.4 Causes of delayed infant HIV testing

At the age of 4-6 weeks, all HIV-exposed infants (infants born to HIV-infected mothers) should receive a diagnostic test for DNA-PCR and early initiation of ART among those identified HIV infected (WHO, 2014). The Malawi EID program currently recommends that

HIV infected mothers bring their infants at six weeks of age to an under-five clinic for PCR and evaluation, even if the child is well (McCollum et al., 2012). Despite the recommendation, McCollum et al. found that most HIV exposed infants access EID late or do not enroll at all. These findings are consistent with findings of other studies from Mozambique, South Africa, Uganda Kenya, Ethiopia (Cook et al., 2011; Ciampa et al., 2012; Hassan et al., 2012; Kebede et al., 2014).

In a recent study on “Missed opportunities for early infant HIV diagnosis” in South Africa, Woldensen et al. (2015) found that mothers had no intentions to request for early infant diagnosis services because of limited knowledge on modes of mother to child transmission of HIV and mother to child transmission risk behaviour. In addition, Woldensen et al. (2015) also found that mothers who felt discriminated against for their HIV status were less likely to report for EID with their HIV exposed infant. Another qualitative study in the same setting “Disclosure, stigma of HIV positive child and access to early infant diagnosis in the communities of OR Tambo District” also found feelings of guilt, shame and embarrassment with respect to raising an HIV infected infant as reasons for women not to access EID services (Adeniyi et al., 2015). Similarly, in Malawi, some women preferred their HIV exposed infants not to be tested for fear of shortening the life of the baby once the result turns to be HIV positive (Donahue et al., 2012). Among the women, some explained that others do not see the importance of going to the hospital when their child is found positive because they feel that in any case the child is going to die. The option for them was to leave the child alone rather than troubling him by giving him drugs while others also felt that some mothers would just throw away their exposed infants, stop giving them medicine so that they can die, or kill them with poison (Donahue et al., 2012). However, on the contrary, Bobrow et al. (2016) found that test results for EID was a motivator for women to

access EID and the women preferred knowing the status of their infants so that they can provide the much needed care and start medication without delay.

Other studies that have been conducted in Malawi have also showed health care workers attitude, long distances, and lack of financial and social support as some of the barriers that women face in accessing HIV testing and care for their infants (O’Gorman et al., 2010; Iroz, 2013; Gourlay et al., 2013; Elwell, 2016). Healthcare worker attitude stood out as an important factor in making some HIV infected pregnant and postpartum women to be hesitant to return to the hospital, for fear of being humiliated and receiving harsh treatment from health workers (Irozi, 2013). Furthermore, some women reported of health workers leaving them on the queue unattended and coming back to give them their medications at their own time (Iroz, 2013). Consistently, Bobrow et al. (2016) found that women reported of spending money on transport and wasting time unnecessarily because health care workers fail to honour appointments given to women for their infants’ results and women fail to have the results when they return for appointments.

Besides poor interaction with healthcare providers, Bobrow et al. (2016) found that some women were not comfortable to have their infants tested without knowledge and permission from their husbands. Similarly, in their research on “Experiences and challenges in implementing early infant diagnosis of HIV infection at primary level”, Dube et al. (2012) found lack of permission from the partner as the primary reason that women who presented for early infant diagnosis gave for not proceeding with the testing. In their study, Dube et al. (2012) included education of mothers on infant testing as they attend PMTCT and postnatal visits, community sensitization and distribution of posters as well as free infant testing at 6 weeks of age. Unlike

other studies, Dube et al. (2012) found that an increased number of exposed infants (75.8% of infants born from 1214 HIV-positive mothers) were presented for EID at the study centre; however, among the infants who were presented for EID, some women failed to give consent necessary for the testing. A lesson that was concluded from their study was that integration of EID into the existing PMTCT services facilitated delivery of messages about the importance and availability of EID and early ART to the target population of HIV-infected pregnant women (Dube et al., 2012). It was also concluded that scheduling of appointments for EID so that they coincided with routine visits for the vaccination of infants at 6 weeks of age eliminated the need for additional visits for the sole purpose of testing infants for early diagnosis (Dube et al., 2012). A similar conclusion was also drawn in a retrospective review of patients' registers and electronic records of all pregnant women tested at four University of North Carolina (UNC) affiliated ANC clinics in Lilongwe, Malawi (Braun et al., 2011). In the study, focusing on how inadequate co-ordination of maternal and infant HIV services detrimentally affect early infant diagnosis outcomes, Braun et al. (2011) related separate programs for maternal and infant HIV prevention and care services with high attrition rates of HIV exposed and infected infants, late infant diagnosis and delayed paediatric antiretroviral therapy initiation among others. In the study, Braun et al.(2011) only 29.5% among HIV-infected infants successfully enrolled into facilities providing paediatric HIV services. The findings however contradict those of some other studies in which opportunities to test the exposed infants for HIV in the continuum of child care was not utilized as some infants who had defaulted from EID had been to a healthcare center for pentavalent vaccination at 6 weeks, yet they were not tested for EID (Mirkuzie et al., 2011; Woldensenbet, 2016).

2.5 Mitigating factors to delayed HIV testing of exposed infants

Scaling up early infant testing is very important for improving infant survival among those HIV exposed and infected. Infants rely on their caregivers mostly to take them to the health care facility to access HIV testing and for consent. Mothers need to be encouraged to bring their HIV exposed infants for HIV test as early as possible. Few studies that have been conducted have recommended repeatedly information to be given to HIV positive mothers on the availability of EID services and assisting them in early planning for accessing EID services (Hassan et al, 2012; Izudi et al., 2016). Besides giving mothers information, other studies have also established that integration of EID with PMTCT and paediatric HIV care services to MCH setting brings a positive effect on client satisfaction, leading to improved access to component services and reduction in stigma (Braun et al., 2011; Makau et al., 2015; Hassan et al., 2015; Elwell2016).

Studies have also brought evidence that social support from other women with the shared experience of an HIV – positive sero-status helps in early infant diagnosis (Sam-agudu et al., 2017). However, other studies have also brought evidence that whilst women with shared experience give social support, they are also by virtue of their role at risk of experiencing secondary traumatizing effects of sharing their experiences of living with HIV (Dlamini et al., 2012). Shared HIV testing and counseling for couples has also been proved to facilitate access to infant HIV testing. (Naigino et al., 2017) There is evidence that spouses or close relatives promote support to the role the woman will play in seeking health care of the exposed infant (Flax et al., 2017). There is also evidence that men dominate in decision making in Africa and determine to a greater extent the health seeking behaviour of their families (Mosha et. Al.,2013; Kabagenyi et. Al. 2014).

2.6. Conclusion.

Based on the findings of the studies done internationally and locally, there is serious delay for HIV testing of HIV exposed infants. There is need to explore further the causes of such delays especially at Mchinji district hospital.

2.7. Conceptual Framework

A conceptual framework is an abstract, logical structure of the meaning that guides the development of the study and enables to link the findings to the body of knowledge under study (Burns & Groove, 2010). The theoretical framework of this study is based on the health belief model.

2.7.1 Health Belief Model

This is a model which was first developed in the 1950s by social psychologists; Hochbaum, Rosenstock and Kegels working in the U.S. Public Health Services (Glanz & Bishop, 2010). It was developed as a way to explain why free medical screening programs offered by the US public health services, particularly for TB, were not very successful. It attempts to explain and predict health-related behaviours, particularly in regard to the uptake of health services. It focuses on avoiding disease rather than achieving health. It is based on the assumption that people's beliefs about health problems explain engagement or lack of engagement in health-related behavior.

The HBM is based on the understanding that if individuals perceive a negative health outcome to be severe, perceive themselves to be susceptible to it, perceive the benefits to behaviors that reduce the likelihood of that outcome to be high, and perceive the barriers to

adopting those behaviors to be low, then the behavior is likely for those individuals (Jones et al., 2015).

2.7.2 Major concepts of the model and definitions

The model originally had four major concepts; perceived benefit, perceived susceptibility, perceived severity and perceived barriers, but later on it was expanded to six major concepts.

2.7.2.1 Perceived Susceptibility

It refers to an individual's opinion of chances of getting an illness or a disease condition. Individual views of the possibility of acquiring an infection or a disease vary. In this concept, some individuals consider themselves as having a higher possibility of contracting an adverse condition while another category will also consider themselves as immune. The other group that falls in between the two extremes will admit to a possibility of vulnerability.

2.7.2.2 Perceived severity

It relates to one's views of how serious a condition is and its consequences. These effects can be considered from several aspects of life such as economic, social, physical or psychosocial. Even when one recognizes personal susceptibility, action will not occur unless the individual perceives the severity to be high enough to have serious organic or social complications.

2.7.2.3 Perceived benefits

This refers to one's belief in the efficacy of the advised action to reduce risk or seriousness of the impact. In this concept, the direction of action that an individual chooses will be influenced by the beliefs regarding the action. A person will accept the recommended

health action as beneficial based on the evaluation of perceived susceptibility and perceived severity.

2.72.4 Perceived barriers

These are one's opinion of the tangible and psychological cost of the advised action. It can include the complexity, duration, and accessibility of the treatment. A person weighs the effectiveness of the actions against the perceptions that it may be expensive, dangerous, time consuming or unpleasant

2.72.5 Cues for action

These are strategies to activate readiness. These can be internal or external. Internal cues include those issues that an individual experiences as symptoms for example pain. External cues include those indications that are made available to the individual by external sources such as information on the condition from friends, press and health workers.

2.7.2.6 Self-efficacy

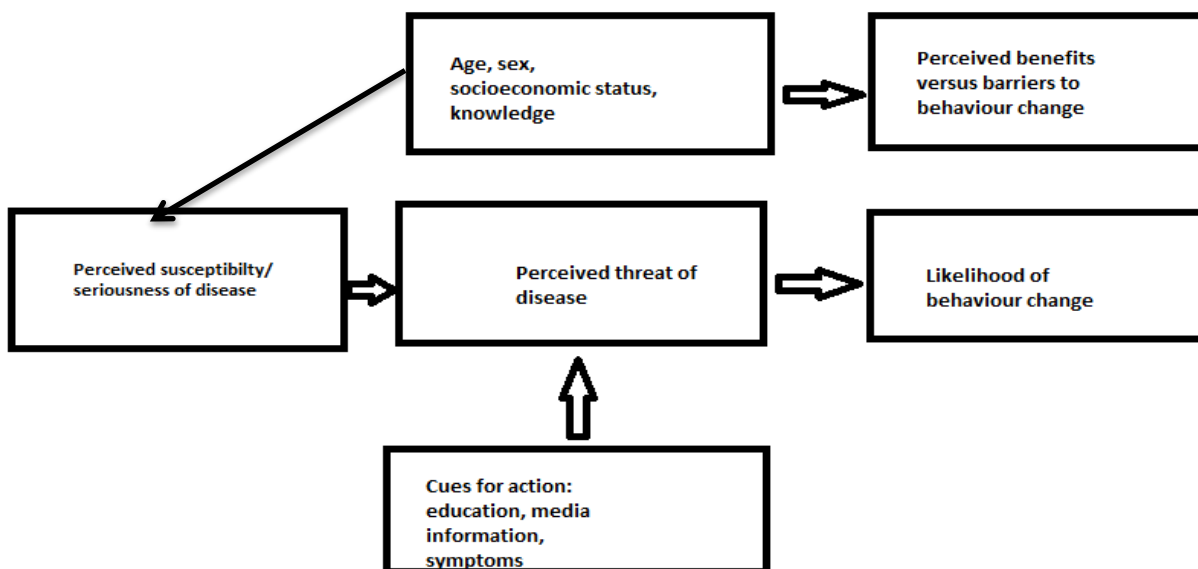
It is the confidence in one's ability to take action (self-confidence). The self-efficacy construct gives someone the energy and autonomy to engage in an action.

2.7.3 Diagrammatic illustration of HBM.

Individual perception

Modifying factors

Likelihood for action



Source: Glanz et al . (2009, p. 52)

2.7.4 Application of health belief model to the study

People react differently even with a similar situation depending on various factors. An individual's belief about health problems explains engagement or lack of engagement in health-related behaviors. HIV positive mothers with exposed infants will engage in health related behaviour based on personal beliefs or strategies available to decrease the occurrence of the disease. Information from media such as radio, IEC materials and health education about PMTCT/EID will act as a cue for an action to occur. Women who perceive that their infants are susceptible to HIV are likely to comply with the HIV screening services; however the severity of the risk will determine the course of action. Perceived benefits such as access to HIV care and

Version 1: June 2019 *Delayed HIV Testing of Exposed Infants* Page | 18

treatment will increase the likelihood of compliance. Conversely when barriers such as stigma and discrimination, distance to health facility, health worker attitude surpass the perceived benefits, they are likely to affect participation.

CHAPTER 3: METHODOLOGY

This chapter describes the study design, study population, study site, and the methods which were used to collect and analyze data. This chapter will also describe the sample and sampling technique, trustworthiness of the research and ethical considerations.

3.1 Study Design

The design for the study was an exploratory descriptive approach that utilized qualitative methods. Qualitative research method aims at helping understanding or explaining a social phenomenon in a natural rather than an experimental setting while emphasizing the experiences, attitudes, and views of the participants (Borroso, 2010). It focuses on the way people interpret and make sense of their experiences. This method generally utilizes exploratory research design as it stresses on obtaining, analyzing and giving meaning to non-numerical data which is obtained through techniques that use purposive sampling and semi- structured, open ended interviews. Exploratory research design is usually flexible enough to provide an opportunity for considering all the aspects of a problem (Almaki, 2016); however, a descriptive research design which is also somewhat rigid was also incorporated in this study to help the researcher to explore and describe experience of mothers on delayed HIV testing among exposed infants. Burns and Groove (2010) explain that descriptive study design is used to explore and describe the phenomena in real life and generating new knowledge about concepts or topics about which limited or no research has been conducted.

3.2 Population and Sample

3.2.1 Study Population.

The study population was HIV positive mothers from Mchinji District Hospital with infants who had been tested for DNA-PCR after six weeks of age or had not been tested at all.

The women were chosen because they have had experience of the phenomenon being studied as such they were able to give the anticipated information on the subject matter.

3.2.2 Sampling Method.

The participants for the study were recruited from the study population using purposive sampling method. This is a method where by a researcher looks at a group of participants with a shared characteristic or a set of characteristics, in this case, HIV positive mothers who had an infant who had been tested for DNA-PCR after six weeks of age or had not been tested at all. Ritchie et al. (2014) explain that in purposive sampling, the sample units are chosen because they have particular features or characteristics which will enable detailed exploration and understanding of the central themes and questions which the researcher wishes to study. This method was chosen because it would help to pick a sample that has desirable characteristics for the study. Liobondo-Wood and Haber (2010) explain that purposive sampling is a common strategy in which the researcher selects the cases to be included in the sample based on his/her knowledge of the population and its elements.

3.2.3 Sample Size.

The sample size for this study was 15. Initially, it was anticipated that a sample size of 30 participants would achieve data saturation. However, in this study, there was saturation of data with 15 participants as there was repetition of data collected. Ritchie et al. (2014) explain that qualitative samples are usually small in size, usually below fifty for a single study involving individual interviews. Furthermore, Ritchie et al. (2014); Polit and Beck (2017) explained that in qualitative studies, the type of information that is obtained is rich in details such that if data is properly analysed, there will come a point where increasing the sample size no longer contributes new evidence. Similarly, Dworkin (2012) recommends a sample size of five to

twenty-five participants for qualitative studies. In this case, the proposed sample size was considered large enough to provide rich detailed information in relation to the factors contributing to delay in testing and diagnosis of exposed infants; however, data saturation was the guiding principle in the sample size. Data saturation is when additional samples provide no new information and when there is only redundancy of previously collected data (Ritche et al., 2014; Fusch & Ness, 2015)

Looking at the scale of budget, the resources available and the nature of the research being a single study involving individual interviews, the sample size was also considered reasonable because it was manageable and quality was to be maintained in terms of data collection and analysis. In addition, the sample size had also been determined based on informational needs.

3.2.4 Inclusion Criteria

The participants of the study were women who were confirmed HIV positive and had infants who had been tested for DNA-PCR after six weeks of age or had not been tested at all. The women were also those living within the catchment area of Mchinji district hospital.

3.2.5 Exclusion Criteria.

Those women confirmed HIV positive and they were sick or their infants were sick on the day of data collection were excluded from the study. Those women referred from other health care facilities were also excluded from the study because they would change the meaning of the results since they may be affected by some geographical characteristics within their home area which may not be applicable to the study catchment area.

3.3 Study Site

The research was conducted at Mchinji District Hospital. This is a major government owned facility that provides HIV testing and health care for HIV exposed infants. It is a referral

Version 1: June 2019 *Delayed HIV Testing of Exposed Infants* Page | 22

site for every other health care facility in the district. It is located in Mchinji district which is in the Central region of Malawi. The district is sharing boundaries with Lilongwe city to the South-East, Kasungu district to the North-East and other two countries, Zambia to the West and Mozambique to the South (NSO & ICF Macro, 2010).

Selection of the facility was done because the facility falls within the central region which has a high HIV prevalence rate of 7.6%. Data from the facility also indicated PMTCT uptake of almost 95% yet EID was below 50% (MOH, 2015).

3.4 Data Collection

Study participants were recruited with support from health surveillance assistants and PMTCT mentor mothers who were already involved in follow up and defaulter tracing in ART/PMTCT program. These were part of the health care workers at the facility who were trained by the government with support from donors and they were at the time of the study working in under-five clinics mainly for education, exposed infants identification and linkage to services. These health care workers were also responsible for maintaining client appointment diary to track exposed infants and they were participating in monthly review of pink cards and EID log book to ensure all exposed infants due for services have taken up the service. These health care workers were informed about the study and its purpose and they were able to facilitate linkage of all exposed infants and their mothers from under-five clinics to ART clinic where specifically the study was conducted.

The study participants were informed verbally about the study, its objectives and their role so that they should understand before taking part (appendix c). Participants were further asked for their willingness to participate in the study and those willing to participate were asked

to sign a consent form to show their voluntary participation (appendix d), thereafter data were collected.

An interview guide (appendix a) was used to conduct face to face individual interviews which were conducted in Chichewa. The data collection instrument was semi- structured. It consisted of several key questions that helped to define key areas to be explored and provided the participants with some guidance on the scope of information required; however it allowed interviewer or interviewee to diverge in order to pursue an idea or response in more details. The key questions were open ended questions that required an explanation other than yes or no response. Gill et. al. (2008) explains that semi- structured interviews are essentially verbally administered and most of the questions are neutral, sensitive and open ended. Individual interviews were considered as particularly appropriate for exploring the sensitive topic considering that participants may not want to talk about their HIV issues in a group environment. The key questions were formulated by the researcher after brainstorming the key issues related to HIV diagnosis of the exposed infant, getting input from significant others and prioritizing more specific questions focusing on the area of study.

The data collection tool was pre-tested at the same facility to enable the researcher rectify any problems that could have been noted with the tool. After pretesting, some amendments were made on the data collection tool to ensure the right information was obtained.

The interviews were carried out in a quiet and closed room within the ART clinic. The room was viewed as convenient because it was within the normal set up for HIV care. The interviews were recorded through audio- taping to enhance accuracy by the researcher. All ART clinic staff was fully aware of the study and directed all eligible participants to the interview

room. Field notes were also taken during and immediately after each interview on observations, thoughts and ideas about the interview. The interviews were taking at least a minimum of 30 minutes and a maximum of 45 minutes. These interviews were carried out by the researcher herself.

3.5 Data Analysis

Data were analysed manually using thematic analysis. Braun & Clark, (2006) explain that thematic analysis is a method for identifying, analyzing, and reporting themes within data. This is performed through the process of coding in phases to create established and meaningful patterns.

Firstly, data were transcribed before the actual analysis. Transcription of data involves representation of audio data into written form so that the data can easily be studied and linked with hand written notes and to allow for easy coding (Bailey, 2008). The transcriptions captured information such as areas stressed by the interviewee, how fast or slow the interviewee responds to the questions, tone of voice and any pauses made before responding to the questions (Bailey, 2008, p.128). This allows the researcher to draw meanings from such features so that the data may be enriched with such features.

After transcription, the researcher translated the transcripts which were in vernacular language (Chichewa) into English. Words and sentences which contained significant information to the research objectives were noted and underlined

Thereafter, the data were coded such that exact words as reported from the data were obtained. Data were categorized based on key terms. In this case, the codes were compared to

sentences or paragraphs in the whole data set to identify variations, similarities, patterns and relationships. Thereafter, categories were defined from these codes.

Finally themes and subthemes were established from the categories in line with the study objectives. The themes established were described to find out if the study objectives were achieved and finally the researcher presented the identified themes as the main findings of this study.

3.6 Trustworthiness of the Research

Trustworthiness or rigour of a study refers to the degree of confidence in data, interpretation and methods used to ensure the quality of a study (Polit & Beck, 2014). In this study, the process was carried out according to Lincoln and Guba's (1985) criteria for rigour in qualitative studies, which involves credibility, dependability, confirmability, transferability and authenticity (Connelly, 2016).

3.6.1 Credibility

It refers to establishing confidence that the results of a research are believable (Polit & Beck, 2012). Lincoln and Guba (1985) suggested a number of techniques to address credibility which include activities such as triangulation, prolonged engagement, persistent observation, and peer debriefing. In this study, credibility was enhanced through peer debriefing. The researcher was exposed to disinterested peers in a boot camp to provide an external check on the research process, preliminary findings and interpretation against raw data for the purpose of exploring aspects of the enquiry that might otherwise remain only implicit within the enquirers mind. This was an academic conference which was organized by Kamuzu College of Nursing for Master of Science students to present and discuss their research work. In addition, credibility was enhanced

by direct quoting of participants' actual words in the findings. Since the interviews were translated into English from vernacular language, there could have been a possibility for misinterpretation of the participants meaning.

3.6.2 Dependability

Dependability refers to stability of data over time and conditions (Polit & Beck, 2017). This was done through ensuring that each process in the study is documented in the final report in details so as to enable external researchers with same data, perspectives and situation to achieve similar and non-contradictory conclusion.

3.6.3 Confirmability

This is described as objectivity, where by the interpretations and findings of a study represent the participants' views other than the researcher's biases (Polit & Beck, 2017). Confirmability has been enhanced through availability of records of raw data and documents that were accumulated during the research process including the records of findings, analysis and the final report. These provided room for tracing the course of the research systematically.

3.6.4 Transferability

Transferability is the extent to which findings can be transferred to other settings and it can be enhanced through increasing the amount of rich, descriptive information that is provided in the context of the study (Polit & Beck, 2017). In this study, the methods used were described in detail so as to allow others to utilize in other contexts.

3.6.5 Authenticity

This refers to the extent to which researchers fairly and faithfully show a range of realities (Polit & Beck, 2012). This was enhanced through credibility and confirmability as described above.

3.7 Ethical Considerations

Ethics is a system of moral values that is concerned with the degree to which research procedures adhere to professional, legal and social obligations to the study participants (Polit & Beck, 2012). In order to ensure that ethical issues have been considered, the researcher adopted the ethical principles for medical research involving human subjects as declared by the World Medical Association. The WMA declaration of Helsinki binds physicians or others who are involved in medical research involving human subjects to consider the health of the human subject a priority among the ethical principles and to consider the ethical, legal and regulatory norms and standards in their own countries as well as applicable international norms and standards (World Medical Association, 2013). In support, the research proposal was reviewed by College of Medicine Research and Ethics Committee (COMREC) which approved it before data collection was initiated. Furthermore, permission to conduct the study at Mchinji district Hospital was obtained from the Ministry of Health through Mchinji district health office (appendix g).

This study respected human rights for the women as study participants with emphasis on the rights to self-determination, privacy, anonymity, confidentiality, and protection from any harm. This was done by giving them information about the aim of the study, procedures involved, benefits or risks of the study to the participants as well as relevance of the research study to health care consumers in Malawi and worldwide. Participants were interviewed

individually in an enclosed area to ensure privacy and confidentiality and they were given codes for identification to ensure anonymity. They were also assured of confidentiality in that their identities would not be disclosed in the final report or publications.

The participants were informed that the study does not have any reasonably foreseen risk or discomfort to them or their infants; however they were informed to forward their concerns to the researcher in case of psychological or physical discomfort as a result of this study. It was planned that participants would be referred to experts, for instance, in case of psychological trauma as a result of this study; however, there was nothing of this nature that happened.

Participants were also informed that they were free to withdraw at any stage, stop an interview or not to answer questions whenever they felt like and that their refusal to participate in the study would not affect their access to health care services. Following the explanations, participants signed a consent form to show voluntary willingness and acceptance to participate in the study and also consent to being audio-taped.

3.8 Study Limitations

The study findings should be transferred with caution because of some variations in characteristics of study sites. One notable special characteristic for Mchinji is the cross border effect that can have an impact on the study findings. The other limitations were inadequate time and financial resources since they were limited to the academic period and budget. This study was very significant, and it would have been more beneficial if it was conducted at a larger scale considering that delayed HIV testing among exposed infants was a national challenge.

3.9 Dissemination of Findings

The study findings and possible recommendations will be disseminated locally at the study setting. A feedback meeting with the DHO and some health care workers at MDH will be done to share the findings and structure possible recommendations and solutions.

A written report about the study will also be submitted to COMREC, Kamuzu College of Nursing, management of MDH and a report will be published as a journal article. A thesis will be submitted to KCN Library at Blantyre campus. The researcher will also disseminate the research findings in other health forums such as Continuous professional development (CPD) conference.

CHAPTER 4: PRESENTATION OF FINDINGS

4.1 Introduction

This chapter presents the results of the study which include demographic data and the themes that emerged.

4.2 Demographic characteristics of the participants

A total of 15 HIV positive women participated in the study. All the participants were married except one who was a widow. Their ages ranged from 18 years to 37 years with an average of 22 years. The majority of the participants had also attended at least formal education ranging from primary to secondary level with only 2 who had not undergone any formal education. All the participants were residing within the catchment population of Mchinji district hospital. Table 1 presents the demographic characteristics of the participants.

Table 1. Demographic characteristics of the participants (n=15)

Demographic characteristics	frequency
Educational level	
Never attended	2
Primary	9
Secondary	4
Tertiary	0
Occupation	
House wife	9
Small scale business	6
Permanent employment	0

Religion

Moslems	1
Christians	13
Pagans	1

Marital status

Married	15
Not married	0
Divorced	0

4.3 Qualitative findings

The study focused mainly on experience of mothers on delayed HIV testing of exposed infants. Mothers of HIV exposed infants were asked about their experience regarding the information they receive on HIV and AIDS, causes of delayed HIV testing among exposed infants and motivating factors to HIV testing of exposed infants. Three predetermined themes that were used during analysis included knowledge of mothers on HIV and AIDS, causes of delayed HIV testing of exposed infants and motivating factors to HIV testing of exposed infants. Subthemes and formulated meanings that were identified are shown in table 2.

Table 2. Themes, Subthemes and Formulated meanings

Predetermined Theme	Sub themes	Formulated meaning
Knowledge of mothers on HIV and AIDs	Diagnosing HIV in pregnant or lactating mothers and their HIV exposed infants Mode of mother to child HIV transmission. Management of HIV positive pregnant or lactating mothers and HIV exposed infants Sources of HIV information	HIV testing of pregnant mothers, HIV testing of infants Transmission period, Feeding options HIV testing during antenatal and postnatal period, provision of cotrimoxazole, neverapine, ARVs, Health care workers, friends
Causes of delayed HIV testing of HIV exposed infants	Fear of stigma and HIV testing outcome. Women's denial of their HIV positive result	Being blamed, exposing one's own HIV status, anxious Disbelief, lack of acceptance.

	Women delivering at home Laziness of the women Missing appointment dates Healthcare worker factors	Feeling guilty, taking things for granted Lack of interest, considering issues lightly Migration, Missing results, wrong testing approaches, wrong information on testing schedules.
Motivators to hinder delayed HIV testing of exposed infants	Encouragement through home visiting by health care workers Encouragement on hospital delivery by health care workers Mother- infant pair Male involvement Use of force	Home visiting, Health education Health education, awaiting labour in waiting homes. Parental involvement, Giving women appointment dates within the recommended infant HIV testing schedules Partner roles, social support

4. 3.1 Theme one: Knowledge of mothers on HIV and AIDS

The theme presents knowledge of the mothers regarding HIV transmission from mother to child and its related management in the continuum of care. It elicited knowledge of the women regarding HIV and ADS in pregnant and postpartum women and how it relates to the testing of an exposed infant. The Malawi clinical guidelines for HIV prevention and management for adults and children (2015) identifies HIV testing of a pregnant and postpartum woman as a portal of entry for management of the HIV positive women and their HIV exposed infants. Under this theme, three sub themes emerged which were; knowledge of mothers on diagnosing HIV and AIDS in pregnant or lactating women and HIV exposed infants, knowledge of mothers on modes of mother to child HIV transmission, knowledge of mothers on management of HIV in pregnant or lactating mothers and their exposed infants and sources of HIV information.

4.3.1.1 Sub theme one: Knowledge on diagnosing HIV and AIDS in pregnant or lactating women and their HIV exposed infants.

The women were asked to explain what happens to a pregnant or lactating mother who is HIV positive. The majority of the women stated that pregnant women are tested for HIV at the antenatal clinic and there is need for early identification. For example, one of the participants stated that *“the way we know, if a woman has been identified early, she is given medication at the antenatal clinic so that the child should not acquire the virus from the mother”*. Some of the participants also stated that when lactating mothers come for family planning services, they are requested to go for an HIV test first before they receive the family planning service as expressed in the response below:

“What happens is that when you come to the antenatal clinic or for family planning services, they say we should first be tested for HIV”.

In addition, the participants explained that a child born from an HIV positive mother is supposed to be tested for HIV. For example, they stated that the child is supposed to be tested for the first time at six weeks when the mother is starting family planning. However, there were few participants who stated that a child is supposed to be tested for HIV for the first time at one year. There was only one participant who completely differed with the other participants that a child born from an HIV positive mother can be identified as HIV infected by just looking at the appearance of the child. She expressed her views as follows: *“It is not difficult to recognise a child who has acquired HIV by just looking at him or her. The child will show some features in appearance, body weight and eyes. These can easily help you know that the child has acquired the virus.”*

4.3.1.2 Sub theme two: Knowledge of mothers on Mode of mother to child HIV Transmission.

The participants were asked about their knowledge regarding to the modes of mother to child transmission of HIV. All the women explained that children born and or breastfeeding from an HIV positive mother are at risk of contracting HIV from their mothers during the period of pregnancy, during delivery period and even during breastfeeding period. Some women further indicated that when a baby is breast feeding if there are sores on the breast or in the mouth of the baby then the baby can contract the HIV.

4.3.1.3 Sub theme three: Knowledge of mothers on Management of HIV in pregnant or lactating mothers and their HIV exposed infants

The participants were asked about their experience regarding the health care that is offered to pregnant or lactating women who have tested HIV positive. The majority of the

women were able to explain that once a pregnant or lactating mother tests HIV positive, the woman has to be initiated on antiretroviral therapy for prevention of mother to child transmission of HIV (PMTCT) immediately. Others also added to say that the woman has to be initiated on ARVs to promote her own health. Some of them were also talking about cotrimoxazole preventive therapy being given in addition to antiretroviral therapy and others were also explaining about Nevirapine syrup being given for the baby as well as cotrimoxazole preventive therapy. One of the mothers explained that previously HIV positive women were commenced on ART when their immunity was low but nowadays the protocol is different. She further explained that the women are given nevirapine syrup for the baby. She expressed herself as follows: *“Previously, if one is tested HIV positive then she was supposed to be commenced on Bactrim but now they say one should start taking ARVs right away and one has to take the ARVs consistently. When the pregnancy is term, the woman is given nevirapine to give the baby soon after birth before the baby starts breastfeeding or if you forget, before three days”.*

4.3.1.4 Sub theme four: Sources of HIV information for the mothers

Mainly all the women got the information regarding HIV testing of exposed infants from the health workers such as nurses, doctors and other support staff. Most of them got the information during HIV testing at antenatal clinic, while some also got the information from the ART clinic when collecting drugs. Some women also got the information from health care providers in maternity department soon after delivery. Some women also got the information from friends in the community as well as during visits at the hospital.

4.3.2 Theme two: Causes of delayed HIV testing of HIV exposed infants

Much as the women had knowledge regarding HIV and AIDs, there were some issues which they mentioned to have played a role in delaying HIV testing of exposed infants. The women who participated in the study were asked their experience regarding the delay in HIV testing of exposed infants and they acknowledged the problem; however they attributed the delay to a number of factors. Sub themes that emerged from the causes of delay to HIV testing of exposed infants included delays due to fear of HIV related stigma and fear of infant testing outcome, delays caused by the women's denial of their HIV positive result, delays due to the effects of delivering at home, delays due to laziness of women, delays caused by health care workers and delays due to women's missing of appointment dates.

4.3.2.1 Sub theme one: Delays due to Fear of HIV related stigma and HIV infant testing outcome

Fear was the common reason that most women mentioned as a contributing factor to delayed HIV testing of exposed infants. Some women explained that they fear that the child will test HIV positive and they will be blamed for infecting the child. Others also feared that their HIV status and that of their child would be exposed leading to being discussed and stigmatized by friends in the community.

One of the women expressed her fears as follows; *“My first born child is also HIV positive and he is on ART. They counseled me about PMTCT but I did not take the PMTCT measures because I was living in my home village and the hospital is very close to our community so everyone from my community would have known that I have been found with HIV because the hospital is very close to our community.*

Concurring with her, another respondent also indicated that *“After I got results that I am HIV positive, I disclosed to my mother, thinking that she will support me but I regret having told her. Whenever there is a family conflict at home, my mother together with my elder sister will be against me, and they will say that I don’t listen, no wonder I am on ARV treatment, and they will say that in public”*.

4.3.2.2 Sub theme two: Delays as a result of Women’s denial of their HIV positive result

Denial of positive HIV status was also another factor that most women explained as a reason for delayed HIV testing of exposed infants. The women had not accepted that they were diagnosed with HIV and were not acknowledging the need to start ART. *“If I am to say the truth, I was tested for HIV during antenatal. They found me HIV positive and the doctors explained that I should start taking ARVs and they also said that my child will need to be tested when I start family planning to see if he has not acquired the virus. I couldn’t believe that I have HIV and I did not accept it”*. One of the respondents explained.

4.3.2.3 Sub theme three: Delays due to the effects of delivering at home

Home delivery was also among the reasons that the respondents explained. Much as the respondents were aware of the benefits of hospital delivery in accessing infant HIV testing services, they found themselves delivering at home. One of the respondents felt bad that she delayed accessing HIV testing services for her child because of home delivery and during the time she brought the child for testing, the child tested HIV positive. She expressed her concerns as follows: *“....for the second child, I went through this same program and he was discharged negative but for this one mmmh he is HIV positive and he is on ART treatment. (Quiet for some time). And mmh, I feel sad about this one. He is too young to be taking these drugs for the rest of*

his life. I feel that I wronged him. I delivered this child at home because my husband was away and I was living in the village and when labour started there was no one to take me to the hospital because it's too far..... but I feel I took things for granted."

4.3.2.4 Sub theme four: Delays due to Laziness of the women

Laziness of the women was also reported among the reasons for delay in HIV testing of the exposed infants. Some explained that there are other women who lack interest in their children as a result they take issues of infant testing lightly. One of the participants explained about her friend who has a child of seven months but the child has not been tested and the mother has not given any specific reason why she is failing to take the child for testing. She explained:

"I have a friend who was tested positive but she never protected the child and the child is not on any treatment up until now. Whenever I encourage her to go to the hospital, she will always say I will go there later and yet the child is still breastfeeding now and the child is seven months old. I failed to encourage my friend. I have been highlightening everything to her that my child is also exposed and I was given medication and now he is on Bactrim to protect him from the HIV but she always says that those are my own problems.

4.3.2.5 Sub theme five: Delays because of missed appointment dates

Other participants were also admitting to have forgotten the dates of appointments while others reported to have missed the appointment dates because they took issues of infant testing for granted. Others were also explaining that due to migration to and from neighboring countries (Mozambique and Zambia), they end up failing to have their infants tested on time as a result of the differences in testing policies in the countries. The women explained that sometimes they

migrate to neighboring countries to seek employment opportunities and this makes them fail to bring their exposed infants for HIV testing.

4.3.2.6 Sub theme six: Delays caused by health care worker factors

Health care worker factors were also among the contributing factors to delayed testing. Some health care workers were giving the clients a wrong schedule for infant HIV testing. Some women reported to have been informed by health workers to bring their children for HIV testing for the first time at one year. *“While I was pregnant, they tested me and found that I am HIV positive. Then they advised me that when my child is born, he will also need to have an HIV test one year after”*.

Others also reported of missing results which made it not possible to know the HIV status on time. *“I came with him for HIV testing at six weeks and they collected blood from his heel and they explained that I will hear the results on the next visit because the test is done in Lilongwe. On that day, I was not alone, I was with other women and when I came back and asked for the results, they were missing and they collected blood again during that time so these are the results”*.

One of the women also reported having brought the child for testing at six weeks and the doctors tested the child and gave her the results on the same day. On her appointment date, the doctors then informed her that the child has to be tested again because they made a mistake. Instead of testing for DNA- PCR they used rapid test which could give false results.

4.3.3 Theme three: Motivators to HIV testing of exposed infants

The participants were finally asked to give their recommendation on what they feel could be done to encourage HIV positive mothers to take their exposed infants for HIV testing as early as possible, mostly at six weeks of age. The sub themes that emerged under motivating factors

included home visit by health care workers, encouragement of women on hospital delivery, male involvement and use of force.

4.3.3.1 Sub theme one: Encouragement through home visiting by health care workers

Majority of the participants explained that mentor mothers can be conducting home visits so as to encourage the women not to miss their appointment dates for their exposed infants. Furthermore, some participants also explained that the mentor mothers and health surveillance assistants should never get tired but rather educate and encourage the women to take their exposed infants for HIV testing on time.

4.3.3.2 Sub theme two: Encouragement of women on hospital delivery by health workers

Some participants recommended the doctors to encourage women on hospital delivery to access EID services. They also further explained that the doctors can encourage women who reside far from the hospital to await labour and delivery in the waiting homes so as to ensure hospital delivery.

Furthermore, majority of the participants recommended that health care workers such as doctors, mentor mothers and health surveillance assistants should educate and encourage the women to bring their exposed infants on time.

4.3.3.3 Sub theme three: Giving women infant HIV testing appointment dates within ART management schedules

Some women recommended that doctors should consider giving appointment dates that fall within the recommended schedules for infant HIV testing. They explained that, for example if a woman has come to collect her ARVs and she is supplied with drugs that will take her

beyond the six weeks testing age of the exposed child, then the woman is very unlikely to come at six weeks but rather on the next appointment date for ARV collection. They considered that once they run out of drugs, they will be forced to come for refill as such they will bring the infant.

4.3.3.4 Sub theme four: Involving males during ANC and HIV testing.

Almost half of the respondents were also recommending male involvement and they explained that the women should be encouraged to bring their husbands when coming for HIV testing so that they can get the results and the advice together for a collective decision. They further explained that initial involvement would contribute to supportive HIV related infant care from the husband as the child grows

4.3.3.5 Subtheme five: Use of force to women to bring the infants for testing

Finally a few respondents stated that it is necessary to use force to ensure that exposed infants are tested at the recommended six weeks of age. One of the participants explained that; “*there is need to use force; whether they like it or not, use force because the rights of the child are violated*”

CHAPTER 5: DISCUSSION

5.1 Introduction

This study which explored factors contributing to the delay of HIV testing of exposed infants, has brought very important issues to consider in the implementation of early infant diagnosis of HIV. The study findings showed that while knowledge of HIV among women with HIV exposed infant is relatively good, there are still areas that need improvement. This study considers innovative ways of involving male partners in issues of EID, taking care of migration effects on infant HIV testing, appointment adherence, empowering women on the meaning of early infant HIV testing and devises workable client follow ups for their appointment dates. This chapter gives a discussion of these issues in detail.

5.2 Knowledge on HIV and AIDS

This study discovered that the women had adequate information regarding HIV and AIDS. Regardless of their level of education, the women were able to explain the need for early identification of HIV positive pregnant or lactating mothers, use of antiretroviral drugs in HIV positive pregnant women and their exposed infants including the schedules for HIV testing for these infants. The knowledge capacity was even much better to the women that were caring for the exposed infants for the second or third time. According to Shankar et.al, (2013), higher education attainment can play a significant role of increasing the capacity for better decision making regarding one's own health and it can also maximize individuals' ability to obtain and understand essential information. Capacity for decision making on their own health can also be extended to their views and how they care about their exposed infant. In a study that was conducted in Uganda on "Early diagnosis of HIV among Infants born to HIV-positive mothers on option B-plus in Kampala," Izudi (2017) found that the number of HIV exposed infants who

were tested for HIV was high among those women who completed secondary education and beyond as compared to those with primary and or without formal education with majority of them being timely tested. In his study, among 146 mothers that completed secondary education and beyond, 57 (38%) HIV exposed infants were not tested, 45 (30.4%) were tested outside the EID guidelines and 46 (31.1%) were tested per guidelines while among 55 women that completed only primary education, 44 (80%) HIV exposed infants were not tested, six (10.9%) were tested outside the EID guidelines and 5(9.1%) were tested per guidelines (Izudu, 2017). On the contrary, the women in this study were less educated and had attended only the primary level of education such that they were likened to have limited ability to obtain and understand essential health information; however, the study findings did not fully support this. Knowledge gap was only attributed to one participant who demonstrated significant lack of knowledge in care of exposed infants and schedules for HIV testing.

Furthermore, all the women in this study acquired the information about HIV and AIDS from the health care workers either at antenatal clinic, labour and delivery or during a postnatal visit. This shows the importance of health care workers as primary sources of information for mothers to bring their exposed infants for testing on time. In agreement with the finding, a study that was conducted in Nigeria on Perception about the ‘ Opt-Out strategy’ for HIV testing and counseling among pregnant women attending antenatal clinic in Ibadan found that about 48% of the participants mentioned the hospital as the first source of information about HIV (Balogun & Aoanje, 2016). On the contrary, a study that was also conducted in Nigeria on Knowledge and perception of HIV/AIDS among pregnant women attending antenatal clinic found that majority of the participants access HIV/AIDS knowledge from social media especially radio, television, and from friends and relatives.

5.3 Delaying factors.

Regardless of the fact that the women had knowledge on HIV and AIDS, it is evident in this study that having adequate knowledge does not guarantee their adherence to prescribed care for HIV exposed children. Unlike in Blantyre where lack of knowledge regarding early infant diagnosis of HIV was among the barriers affecting participation by HIV- infected women in care and treatment program for their infants (Donahue et al., 2012), the majority of the women in this study had knowledge on early infant diagnosis; however they did not bring their HIV exposed infants for HIV testing.

Fear was one of the striking factors that delayed issues of HIV testing and hindered compliance to medical advice. Women would prefer keeping the child with unknown status hoping that the child may not have contracted the virus and eventually be spared from its implication on his/her health and society status. This is in line with the findings of a study that was conducted in Blantyre on barriers affecting participation by HIV –infected women in care and treatment program for their infants (Donahue et al., 2012). The fear of the child being diagnosed of HIV could be related to insufficient knowledge on the advantages of having an HIV exposed child tested at the scheduled time. Women had the information on the schedules of HIV testing but may not appreciate the significance and advantages of doing so. Neither would they be aware of the disadvantages of the delay and its implications on the child's health in case the virus is passed on to him/her. It is important for a child who has acquired HIV to start ART without further delays to prevent giving room for opportunistic infections (MOH, 2016).

The social implications that were worrisome to the women included the fear of stigma and discrimination by close relatives as well as fear of marriage break-ups. It is worth noting on

the other hand that although stigma and discrimination by close relatives as well as marriage break-up were mentioned, each of these factors impacted only a few women. This however, explains the deficit of HIV knowledge at community level and gaps in the advice on the consequences of delaying testing of an HIV exposed child. There is need to address residual stigma and discrimination against HIV because it has a lot of negative effects in the delivery of care right from HIV testing, ART care, adherence to medical advice and access to other HIV related care and support. In a study on “Challenges facing early infant diagnosis of HIV among infants in Nigeria,” Adebimpe, (2013) states that many faces of stigma and discrimination against people living with HIV and AIDs may have pushed many infected clients into seeking religious and supernatural solutions.

This study also found that, within the context of marriage, husbands played a passive role of allowing women to access health care they deemed necessary for the exposed child. Men did not take part in decision making on issues pertaining to HIV testing of the exposed infant. The passive role contributed to the delay in testing because the women lacked that active support which can facilitate adherence to advice and schedules. There is enough evidence that men dominate in decision making in Africa and determine to a greater extent the health seeking behaviour of their families (Mosha et. al.,2013; Kabagenyi et. al., 2014; Flax et. al, 2017). Much as the women were allowed by their husbands to access HIV testing services for their exposed infants, the women recommended having their husbands available at the hospital and getting involved during HIV testing for joint decision making.

This study has also brought evidence that some women delayed to take their HIV exposed infants for testing because of denial of positive HIV results. The women had not accepted that they were diagnosed with HIV and were not acknowledging the need to start ART. This denial negatively influenced them; leading to depression and not to comply with any medical advice and schedules regarding the care for their HIV exposed children. Women often go into denial after hearing that they are HIV positive considering that HIV infection is not socially acceptable in most countries and women living with HIV and AIDS are labeled as adulterous, unpleasantly different from the public and threatening to the public (Saki, 2015). Findings from studies that were done in Malawi showed that many women were surprised by their HIV diagnosis; they questioned their results and sought a second HIV testing elsewhere (Katirayi, 2016; Hamera, 2013). Mothers also struggle to accept their own HIV status and therefore having difficulties to have their infants tested (Bobrow et al., 2016). This results in delayed HIV testing of the infant.

Home deliveries were also some of the factors that contributed to delay infant HIV testing. Much as the women appreciated hospital delivery as an entry point to access early infant HIV testing, some of them had delivered at home. Some even reported to have failed to bring their HIV exposed infants for testing as early as possible after delivery because of laziness. Regardless of the fact that the women considered the hospital facility to be at a longer distance, they expressed that failing to take their children for HIV testing as early as possible was out of negligence. Furthermore, some women also admitted to have missed appointment dates because they took for granted the issues of infant HIV testing. This is well conceptualized in the individual perception of disease susceptibility and severity as well as benefits for taking action.

According to the Health Belief Model, “people will take action to prevent illness if they regard themselves as susceptible to a condition (perceived susceptibility), if they believe it would have potentially serious consequences (perceived severity), if they believe that a particular course of action available to them would reduce the susceptibility or severity or lead to other positive outcomes (perceived benefits), and if they perceive few negative attributes related to the health action (perceived barriers)” (Jones et. al., 2015).

Women had also admitted having delayed bringing their HIV exposed infants for testing because they had forgotten the appointment dates. This is in line with the findings of a study which was conducted at Martin Preuss Centre in Lilongwe where a lot of infants were not in care because mothers and guardians were reported to be regularly forgetting the appointment dates (Ng’ambi, 2016). This is a missed opportunity for early infant HIV testing as well as access to appropriate medical care. In their recommendation, women however preferred continuous health education by health care workers and furthermore doctors to encourage them on hospital delivery. They also preferred home visits by mentor mothers to remind them of appointment dates for HIV testing for the exposed infant. In addition, some women also recommended doctors to consider giving appointment dates that fall within the recommended schedules for infant HIV testing so as to facilitate early HIV testing.

This study also found migration effects as a factor contributing to delayed HIV testing of exposed infants. Mchinji, being a boarder district, women also explained about migration to and from the neighboring countries (Zambia and Mozambique) as their reason for failing to have their infants tested on time. Women and or their spouses migrate in search for employment

opportunities and other benefits from the neighboring countries which have different policies regarding to care of exposed infants. This was found to be among the factors contributing to delay in HIV testing of the exposed infants in Mchinji.

Finally, the study has brought evidence that health care workers contribute to delay in HIV testing of exposed infants. Women reported of missing results of an initial timely collected sample, wrong HIV testing method carried out on the child and giving of inconvenient appointment dates as some of the factors. Some studies have shown long waiting time for the test results which could also possibly lead to missing of the results. Findings of a study that was conducted in Ethiopia on delay in early infant diagnosis and high loss to follow-up among infants born to HIV-infected women in Ethiopia showed that long waiting time of HIV test results was due to delays in sample collection, sample transport to the regional laboratory center, performance of the HIV test and return of the test result to the clinic and patient (Kebede et. al, 2014). In Malawi health facilities fail to have the EID results ready when women return for scheduled appointments (Bobrow et, al., 2016). A different finding from the other studies is that some infants who had delayed HIV testing were tested at six weeks using rapid test instead of DNA- PCR as a result the infants were re-tested on their next visit.

5.4 Conclusion

The findings from this study contribute to the existing literature on the factors contributing to delay in HIV testing of exposed infants. Firstly, it implies that there were other factors behind age that contributed to delay in HIV testing of exposed infants. Based on the findings of this study, it can be concluded that mothers and healthcare workers play a role in delaying infant HIV testing. There are several factors that are related to individual women, their

families and communities that affect early infant diagnosis of HIV. These factors determine individual actions towards accessing health services. Health care workers also contribute to the delay; however, there is room for change. Addressing the gaps identified in this study can potentially address delays in HIV testing of exposed infants in Mchinji.

5.6 Recommendations

This study has provided valuable evidence that male involvement is one of the factors that can improve timely HIV diagnosis of the HIV exposed infant. It is therefore recommended to involve partners on issues of HIV testing for their exposed infant. It is also recommendable that health systems improve on turnaround time of HIV testing results, adhere to appointment dates and make deliberate efforts to improve processes involved in the testing of HIV exposed infants. The women's fear of their infants testing results leaves serious questions on the nature of the counseling of these women. This study recommends that women who are HIV positive during pregnancy and throughout the continuum of maternal and child care need thorough and continuous counseling on the benefits of adhering to HIV testing appointments. This should be combined with active follow up of the women and their exposed infants and linkage to care.

5.7 Areas for further research.

Investigation of the extent to which lack of male involvement affects utilization of EID services by their partners in Mchinji.

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- Version 1: June 2019 *Delayed HIV Testing of Exposed Infants* Page | 52

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Appendices

Appendix A: Interview guide

CLIENT CODE..... DATE.....

Time started..... Time finished.....

SECTION A: DEMOGRAPHIC DATA

1. How old are you?
 - a) ≤ 20 years
 - b) Between 20-34 years
 - c) ≥ 35 years
2. How far did you go with your education?
 - a) Never attended school
 - b) Primary level
 - c) Secondary level
 - d) Tertiary level
3. What is your marital status?
 - a) Married
 - b) Single
 - c) Divorced
4. How many children do you have?
 - a. One
 - b. Two
 - c. More than two

5. What is your occupation?

- a) Housewife
- b) Peasant farmer
- c) Business lady
- d) Official employment

6. What is your religion?

- a) Islam
- b) Christian (specify denomination_____)
- c) Pagans

SECTION B: Knowledge about HIV/AIDS.

1. Suppose a pregnant or lactating mother has been tested HIV positive, what do you think are the chances that the baby can have HIV virus?
2. Can you explain what you have ever heard about HIV testing for infants?
3. How and where did you find the information about HIV testing for infants?
4. Have you ever taken part in caring for an HIV exposed infant?

5. SECTION C: Factors delaying HIV diagnosis of exposed infants

1. What do you think about HIV testing of exposed infants?
2. Why do you think some women might not be able to take their infants for HIV testing within the dates of appointment?
3. What do you think can be done to encourage women with HIV exposed infants to take their children for HIV testing?

Appendix B: Interview guide translated in Chichewa

KALOZERA WA ZOKAMBIRANA

Nambala ya otenga mbali mukafukufuku..... Tsiku.....

Nthawi yoyambila..... Nthawi yotsirizila.....

GAWO LOYAMBA: Mbiri ya moyo wanu

1. Kodi muli ndi zaka zingati?

- a. Zochepera 20
- b. Pakati pa 20-34
- c. Zoposera 35

2. Sukulu munalekezera pati?

- a. Sindinapiteko
- b. Pulayimale
- c. Sekondale
- d. Koleji

3. Kodi muli pa banja?

- a. Ndinakwatira
- b. Sindinakwatire
- c. Tinasiyana

4. Muli ndi ana angati?

- a. M'modzi
- b. Awiri
- c. Kuposera awiri

5. Mumagwira ntchito yanji?
 - a. Sindigwira ntchito
 - b. Ndine mlimi
 - c. Ndimapanga bizinesi
 - d. Ndimagwira ku ofesi

6. Mumapemphera chipembedzo chanji?
 - a. Chisilamu
 - b. Chikhirisitu (tchulani mpingo_____)
 - c. Sindipemphera

GAWO LACHIWIRI: Zomwe mukudziwapo pa nkhani ya HIV/AIDS.

1. Tiwerekeze mayi oyembekezera kapena oyamwitsa atayezetsa magazi ndikupezeka ndi kachilombo ka HIV, mukuganuzo kuti ndi mpata wansi woti mwana wake akhoza kutengera kachilombo?
2. Tafotokozani, zomwe munayamba mwamvapo pa nkhani yokhudzana ndi kuyeza kachilombo ka HIV kwa ana amakanda.
3. Kodi munadziwa bwansi za nkhani yokhudzana ndi kuyeza kachilombo ka HIV kwa ana amakanda?

GAWO LACHITATU: Zifukwa zimene zimasokoneza kuyeza kachilombo ka HIV kwa ana amakanda omwe abadwa kwa amayi amene ali ndi kachilomboka

1. Mumaganizapo bwanji pa nkhani yokhudzana ndi kuyeza kachilombo ka HIV kwa ana amene abadwa kwa mayi amene ali ndi kachilomboka?
2. Mukuganiza kuti ndi zifukwa zANJI zimene zimalpheretsa amayi ena kupita ndi ana awo a makanda kuti akayezedwe kachilombo ka HIV mu nthawi yomwe anauzidwa?
3. Kodi mukuganiza kuti pangakhale kusintha kotani pofuna kulimbikitsa amayi amene ali ndi kachilombo ka HIV kuti adzitengera ana awo a makanda kokayezetsa HIV?

Appendix C: Information Letter

Study Title: *Experience of mothers on delayed HIV testing of exposed infants at Mchinji District Hospital.* **Investigators:** Chiyanjano Mphatso (Kamuzu College of Nursing), Dr Mc. Nyando (Kamuzu College of Nursing) and Mbirimtengerenji (Kamuzu College of Nursing). **Contact details of study Principal Investigator:** Chiyanjano Mphatso, Kamuzu College of Nursing, P.O Box 415, Blantyre. Cell: 0881765528 or 0999482232. Email: mphatso2016chiyanjano@kcn.unima.mw.

I am Chiyanjano Mphatso a second year student at Kamuzu College of Nursing doing Master of Science in Child Health Nursing. As part of the school program, I am conducting a research project on “*Factors contributing to delay HIV testing and diagnosis of exposed infants at Mchinji District Hospital*”. The aim of the study is to determine the extent of delay in reporting for EID services and contributing factors among HIV positive women. I am therefore requesting for your participation in the study.

Your participation will involve answering questions from a questionnaire through an interview which is expected to take about 30 minutes. You will not be asked your name during the interview; instead numbers will be used to ensure confidentiality. The interviews will be audio recorded and a questionnaire will be filled to ensure accurate data is obtained, thereafter analyzing the data, the record will be erased. I also wish to inform you that your responses will be treated confidentially with only the researcher and those people directly involved in the research being privileged to access the information.

Furthermore, you may wish to know that the procedures in this study do not have any reasonably foreseen risks or discomfort to you, or your child however, in case you experience

Version 1: June 2019 *Delayed HIV Testing of Exposed Infants* Page | 65

any physical harm please forward your concerns to the researcher. I also wish to inform you that you will not have any direct benefits from the study for your participation; however, the study findings will help address delayed HIV testing of exposed infants.

Your participation is voluntary. You may choose to participate or not and you are free to withdraw at any time and this will not affect your access to health services at this facility. You will also be asked to sign for consent or put your thumb print on the consent form if you voluntarily agree to participate in this study.

Should you require any further information regarding the study or you have concerns related to the study, you are free to raise your concerns to the researcher on 0999482232 or you may raise your concerns to the College of Medicine Research and Ethics Committee (COMREC) through COMREC Secretariat, P/Bag 360, Chichiri, Blantyre 3, Telephone number 01 989 766.

Thank you for taking your time listening to this information.

Appendix D: Consent Form

Study Title: *Factors contributing to the delay in HIV testing and counseling of exposed infants at Mchinji District Hospital.* **Investigators:** Chiyanjano Mphatso (Kamuzu College of Nursing), Dr Mc. Nyando (Kamuzu College of Nursing) and Mbirimtengerenji (Kamuzu College of Nursing). **Contact details of study Principal Investigator:** Chiyanjano Mphatso, Kamuzu College of Nursing, P.O Box 415, Blantyre. Cell: 0881765528 or 0999482232. Email:mphatso2016chiyanjano@kcn.unima.mw.

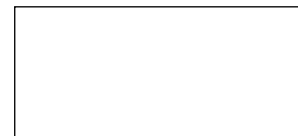
I have been informed about the study and I have an understanding about the aim of the study, and the procedures that will be involved in my participation. I understand that the information will be tape recorded for purposes of data accuracy and information will be kept confidential except to the researcher and those people who are directly concerned with the study.

I understand that I will have no any direct benefits for participating in the study. I also understand that I do not have to suffer any injury nor harm during the research process and I am aware that participation is voluntary and that I am free to withdraw from the study at any time without being penalized.

I therefore voluntarily agree to participate in the study.

Date..... Participant signature.....

Participant thumbprint



Date..... Signature of witness.....

Date..... Investigators signature.....

Appendix E: Information letter translated into Chichewa

Kalata yofotokoza za kutenga nawo gawo pa kafukufuku

Mutu wa kafukufuku: *Zifukwa zimene zimapangitsa kuti ana omwe abadwa kwa mayi yemwe ali ndi kachilombo ka HIV alandire mochedwa chithandizo choyezetsa magari”.*

Opangitsa kafukufuku: Chiyanjano Mphatso (Kamuzu College of Nursing), Dr MC. Nyando (Kamuzu College of Nursing) and Mbirimtengerenji (Kamuzu College of Nursing). **Mwini**

kafukufuku: Chiyanjano Mphatso, Kamuzu College of Nursing, P.O Box 415, Blantyre. Cell: 0881765528 or 0999482232. Email:mphatso2016chiyanjano@kcn.unima.mw.

Ine ndine Chiyanjano Mphatso, wophunzira za ukadaulo wa ana pa sukulu ya anamwino ya Kamuzu koleji, chaka chachiwiri. Ngati gawo limodzi la sukuluyi, ndikupanga kafukufuku yemwe mutu wake ndi “*Zifukwa zimene zimapangitsa kuti ana omwe abadwa kwa mayi yemwe ali ndi kachilombo ka HIV alandire mochedwa chithandizo choyezetsa magari”*. Cholinga cha kafukufukuyi ndi kuona zimene zimalepheretsa amayi kubweretsa ana awo kuchipatala mofulumira. Koterokupemphani ngati mungatengeko nawo gawo pa kafukufukuyi.

Mukutengapo mbali kwanu, mudzayenera kupereka mayankho a mafunso omwe mudzafunsidwe kwa mphindi pafupifupi 30. Simudzafunsidwa kupereka dzina lanu pamene mukuyankha mafunsowo ndipo mmalo mwa dzina lanu mudzapasidwa nambala pofuna kusunga chinsisi chanu. Mafunso onse adzafunsidwira malo a chinsisi pofuna kuti ena asamve nawo. Pofuna kutenga uthenga wolondola, zokambirana zathu zidzajambulidwa pa wailesi ndipo gawo lina lidzalembedwa pa mapapala a mafunso. Mayankho anu azasungidwa mwa chinsisi ndipo opangitsa kafukufuku yekha ndi anthu amene ali okhudzidwa ndi kafukufukuyi ndi amene akhale ndi mpata woona mayankho anu. Pamapeto pa kafukufukuyi zonse zidzataidwa.

Muyenera kudziwanso kuti mu ndondomeko za kafukufukuyi palibe kuopsya kwina kulikonse pa umoyo wanu kapena wa mwana wanu, koma ngati mungakumane ndi zovuta fokozzerani kwa oyendetsa kafukufukuyi. Dziwaninso kuti palibe phindu lirilonse limene mutapeze potenga nawo mbali mu kafukufukuyi koma mayankho anu adzathandiza kuunika njira zothandizira ana omwe abadwa kwa mayi yemwe ali ndi kachilombo ka HIV kuti aziyzedwa kachilombo ka HIV mofulumira. Dziwani kuti simukukakamizidwa kutenga mbali mukafukufukuyi ndipo mutha kusankha kuvomera kapena kukana komanso ndinu oloedwa kutuluka mukafukufukuyi nthawi iliyonse mungafune ndipo chisankho chanu sichisokoneza chithandizo chimene mukuyenera kulandira pachipatala pano munjira iliyonse. Ngati muvomereza kutengapo nawo mbali mu kafukufukuyi, mukufunsidwa kuti musayine kapena kudinda chala chanu pa kalata lovomereza kutenga nawo mbali mu kafukufukuyi mosakakamizidwa.

Ngati mungafune kudziwa zambiri kapena muli ndi madandaulo zokhuzana ndi kafukufukuyi, mukhale omasuka kupereka nkhawa zanu kwa oyendetsa kafukufukuyi pa 0999482232 kapena mukhoza kupereka nkhawa zanu ku komiti yowona za kafukufuku ya College of Medicine Research and Ethics Committee (COMREC) kudzera kwa COMREC Secretariat, P/Bag 360, Chichiri, Blantyre 3, Telefoni nambala 01 989 766.

Zikomo potengapo nthawi kumvetsera uthengawu.

Appendix F: Consent form translated in Chichewa

Kuvomereza kutenga nawo gawo mu kafukufuku.

Mutu wa kafukufuku: *Zifukwa zimene zimapangitsa kuti ana omwe abadwa kwa mayi yemwe ali ndi kachilombo ka HIV alandire mochedwa chithandizo choyezetsa magazi”.*

Opangitsa kafukufuku: Chiyanjano Mphatso (Kamuzu College of Nursing), Dr MC. Nyando (Kamuzu College of Nursing) and Mbirimtengerenji (Kamuzu College of Nursing). **Mwini**

kafukufuku: Chiyanjano Mphatso, Kamuzu College of Nursing, P.O Box 415, Blantyre. Cell: 0881765528 or 0999482232. Email:mphatso2016chiyanjano@kcn.unima.mw.

Ine ndafotokozeredwa bwino za kafukufukuyi ndipo ndamvetsetsa cholinga chake ndi ndondomeko zonse zokhudzana ndi kutengapo mbali kwanga. Ndamvetsetsa kuti mayankho anga adzajambulidwa pa wailesi pofuna kutola uthenga olondola ndipo zones zizasungidwa mwa chinsinsi.

Ndamvetsetsanso kuti palibe phindu lapadera lomwe ndidzapezepo mu kutengapo mbali kwanga mu kafukufukuyi. Ndamvetsetsanso kuti palibe vuto lirilonse lodziwika limene ndikuyenera kukumana nalo potenga mbali mu mukafukufukuyi, ndipo ndikudziwa kuti kutengapo mbali mu kafukufukuyi ndi mosakakamizidwa, ndipo ndirinso ndi ufulu kutuluka mu kafukufukuyi nthawi iriyonse popanda mulandu.

Mosakakamizidwa, ndikupereka chilolezo kuti nditengepo gawo mu kafukufukuyi.

Tsiku	Sayini ya wotengapo mbali.....	
Tsiku.....	Chidindo cha otengapo mbali	
Tsiku.....	Sayini ya wochitira umboni.....	
Tsiku	Saini opanga kafukufuku.....	

University of Malawi

Kamuzu College of Nursing

P/Bag 415, Blantyre

5/05/2017

Mphatso2016chiyanjano@kcn.unima.mw

The District Health Officer

Mchinji DHO

Box 36

Mchinji

Dear Madam,

REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT MCHINJI DISTRICT HOSPITAL

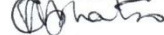
I am a student of Kamuzu College of Nursing pursuing Master of Science degree in Child Health Nursing. I am supposed to conduct research as part of the requirements for the award of the degree.

The research will focus on **Factors contributing to delay HIV testing of exposed infants at Mchinji District Hospital** which is also the topic of my research. The main objective of this research is to determine the extent of delay in reporting for early infant diagnosis and contributing factors among HIV positive women

The research findings will provide facts and evidence which will be useful for the improvement of turn up of exposed infants for early infant diagnosis of HIV as per recommended guidelines of Ministry of Health. If you need further clarifications do not hesitate to contact me on 0999442232 or 0881765528

I look forward to your approval

Yours faithfully



Chiyanjano Mphatso



APPROVED

