FACTORS INFLUENCING UTILIZATION OF PREVENTION OF MOTHER TO CHILD TRANSMISSION OF HIV SERVICES IN YOUNG ADULTS IN BALAKA DISTRICT

MSc (MIDWIFERY) THESIS

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By

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A thesis submitted to the Faculty of Nursing and Midwifery in partial fulfillment of the requirements for the degree of Master of Science (Midwifery).

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March, 2011

DECLARATION

I, the undersigned hereby declare that this thesis on factors influencing utilization of prevention of mother to child transmission of HIV services in Balaka, is my own original work which has not been submitted to any other institution in candidature for any other degree. Where other people's work has been used, acknowledgements have been made.

Sadandaula Rose Muheriwa

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Signature

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Date

CERTIFICATE OF APPROVAL / CERTIFICATION

The undersigned certify that this thesis represents the student's own work and effort and has been submitted with our approval.

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Second Supervisor

DEDICATION

To my late dad who did not live to witness completion of this thesis. His motivation and desire for my advancement is greatly appreciated.

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ABSTRACT

One of the most tragic consequences of Human Immunodeficiency Virus (HIV) infection in women is the transmission of the virus to their children. It is estimated that, during the year 2005, 17.5 million women and 2.3 million children worldwide were infected with HIV (UNAIDS, 2006). Ninety percent of these children acquired HIV through Mother to Child Transmission (UNAIDS, 2008). Transmission of HIV from mother to child can be reduced with Prevention of Mother to Child Transmission (PMTCT) of HIV services.

The purpose of this study was to explore factors that might have influenced utilization of PMTCT services in young female adults aged 15 to 24 years in Balaka district. The specific objectives were to: (i) identify the knowledge of the young adults that might have influenced utilization of PMTCT services, (ii) identify the beliefs of the young adults that might have influenced utilization of PMTCT services, (iii) describe the relationship between knowledge and utilization of PMTCT services in young adults, (iv) describe the relationship between attitude of young adults and utilization of PMTCT services, and (v) describe other contextual factors that might have influenced decisions on utilization of PMTCT services in young adults. This study used quantitative and qualitative methods. The sample size for quantitative component was 184 women, who had delivered in the past 18 months and had utilized PMTCT services. For the qualitative component, 12 participants from the quantitative sample were selected by purposive sampling where every 10^{th} participant was picked. A structured questionnaire was used to collect quantitative data and a semi structured interview guide was used to guide an in-depth interview. Descriptive statistics were computed using Statistical Package for Social Sciences (SPSS) version 16. Content analysis was used to analyze the qualitative data.

The results revealed that, overall the participants had general knowledge about PMTCT services. However, they lacked comprehensive knowledge about the services hence actual utilization of the services was poor. Statistically significant difference was found between knowledge and utilization of PMTCT services. The participants had positive beliefs and attitude towards PMTCT services, however not all positive attitudes translated into positive behavior. Lack of male support, inability of the midwives to provide comprehensive care to HIV infected mothers and their infants, and fear of stigma and discrimination were other factors that hindered utilization of PMTCT services.

It is recommended that community mobilization on prevention of mother to child transmission of HIV should be conducted in the district to promote awareness, reduce stigma and discrimination, and improve utilization of PMTCT services. Monitoring and evaluation activities and in-service education for health workers should be emphasized in order to enhance provision of comprehensive care to HIV positive pregnant women.

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AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal clinic
ARVs	Antiretrovirals
BCI	Behavioral Change Interventions
COMREC	College of Medicine Research and Ethics Committee
DC	District Commissioner
DHO	District Health Officer
EBF	Exclusive Breastfeeding
GoM	Government of Malawi
HAART	Highly Active Antiretroviral Therapy
HCT	HIV Counseling and Testing
HIV	Human Immunodeficiency Syndrome
MDG	Millennium Development Goal
MHCW	Ministry of Health and Child Welfare
MICS	Malawi Indicator Cluster Survey
MOH	Ministry of Health
MTCT	Mother to Child Transmission of HIV
NGO	Non Governmental Organization
NSO	National Statistical Office
NVP	Nevirapine
PMTCT	Prevention of Mother to Child Transmission of HIV
SD- NVP	Single Dose Nevirapine
SPSS	Statistical Package for Social Sciences
STIs	Sexually Transmitted Infections

TRA	Theory of Reasoned Action
UN	United Nations
UNAIDS	United Nations Programme on HIV/AIDS
UNC	University of North Carolina
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Emergency Fund
UNGSS	United Nations General Assembly Special Session
VCT	Voluntary Counseling and Testing
WHO	World Health Organization

CHAPTER ONE

Introduction

One tragic consequence of Human Immunodeficiency Virus (HIV) infection in women is the transmission of the virus to their children. According to United Nations Programme on HIV and AIDS (UNAIDS) estimates, during the year 2005, 17.5 million women worldwide were infected with HIV and 2.3 million people with HIV and AIDS were children younger than 15 years old (UNAIDS, 2006). Ninety percent of these children acquired HIV through mother to child transmission (MTCT) during pregnancy, labour, or through breastfeeding (UNAIDS, 2008), with about 2,000 new infant infections occurring every day (UNAIDS, 2008). In Malawi, during the year 2005, it was estimated that an average of 932, 000 persons of all ages were living with HIV and AIDS. Among these, 440, 000 were adult women while 83,000 were children below 15 years old (MoH, 2006).

Despite the mounting crisis, the situation is far from hopeless. Transmission of HIV from mother to child can be reduced with Prevention of Mother to Child Transmission (PMTCT) of HIV services. Utilization of these services reduces HIV infection in children by 40 to 70 percent which consequently helps to reduce child mortality. It also contributes to achieving Millennium Development Goals (MDGs) number 4 of reducing child mortality and number 6 of reducing HIV infection.

In 1999, the government of Malawi adopted the prevention of mother to child transmission of HIV initiative. In this initiative, the provision of single dose Nevirapine (SD NVP) to the mother at the onset of true labour and to the baby within 72 hours of delivery was found to be effective in reducing MTCT of HIV. The impact is better and closer to 70% when women do not breastfeed (MoH, 2006). Information about PMTCT services is being distributed in the country, however utilization is still poor

(Munthali, 2006). By the end of the year 2007, only 26% of HIV positive pregnant women in the country had utilized PMTCT services (UNICEF, 2008). The purpose of this study was to examine factors that influence utilization of PMTCT services in young female adults aged 15 to 24 years in Balaka district. This district was chosen because it is one of the districts with poor utilization of PMTCT services in Malawi, estimated at 19.2% (NSO & UNICEF, 2008). The 15 to 24 year old age group was chosen because it has a high prevalence rate of HIV infection which is estimated at 12.3% (MoH, 2008) and early childbearing rate estimated at 25.4% (NSO & UNICEF, 2008).

Background Information

Human Immunodeficiency Virus infection and AIDS are the major causes of illness and deaths among young people (UNICEF, 2008). The United Nations (UN) estimates that everyday 6, 000 young people aged 15-24 years become infected with HIV worldwide and females have a higher percentage of infection among young people in this age group (UNAIDS, 2008). Young women aged 15 to 24 years comprise 76% of all the young people estimated to be living with HIV and AIDS in Sub-Saharan Africa (Johnson, 2009). In Malawi, HIV prevalence among young people of this age group is estimated at 12.3% (MoH, 2008). It is reported that, out of 10,000 Malawians who contract HIV infection every year, 46% of the new infections are found among those 15 to 24 years old (UNICEF, 2008). The infection rate among women in this age group is currently estimated at 8.4% as compared to their male counterparts of the same age group in whom HIV infection rate is estimated at 2.4% (WHO, 2009).

According to MoH (2006), young people of both genders are vulnerable to HIV infection because of lack of information on sexuality and their immature physical development. They also lack skills to negotiate delaying sexual debut, to

reduce the number of partners, and to use a condom every time they have sex. In addition to that, young people start having sex at an early stage. Sexual debut before the age of 15 years among women aged 15-19 years is estimated at 14% in Malawi and 17.5% in Balaka (NSO & UNICEF, 2008). Furthermore, the young people have limited access to health services such as HIV Counselling and Testing (HCT) and treatment of Sexually Transmitted Infections (STIs). The vulnerability in females has further been attributed to many socio, cultural, and biological factors. The sociocultural factors include; lack of control over decision making and the need to obtain partner and parental permission to seek services, vulnerability to pressure from and infidelity of male counterparts, and early marriages (estimated at 33.3% in the country and 34.2% in Balaka). Early marriages often expose younger women to older men who may be HIV infected. Additionally, early marriages expose the younger women to trauma caused by sexual intercourse which increases susceptibility to HIV infection. The biological factors include; the large mucosal surface area in the vagina which makes females more vulnerable to HIV when having sex.

The implementation of PMTCT services in Malawi began through pilot projects. The first sites were; Embangweni, Thyolo, and Chiradzulu which were first introduced by UNICEF and Medecines Sans Frontiers in 2001. In the central region, the PMTCT programme was first introduced in Lilongwe by the University of North Carolina (UNC) in 2002 at Bwaila hospital, Area 18, Area 25, and Kawale health centers, and Mitundu rural hospital. These sites were officially launched in 2003 (Buhendwa, 2004). In Balaka district, the PMTCT programme was initiated in October, 2005. Out of the 21 health facilities in Balaka, PMTCT services are being offered at 16 sites, representing 76.2% coverage. Currently out of 544 antenatal clinics and maternity sites in Malawi, 207 (38%) antenatal clinics have integrated PMTCT services (MoH, 2007). According to the PMTCT guidelines and National HIV policy,

HCT should be obtained by all pregnant women attending health facilities and the prophylactic SD-NVP should be given free of charge to all HIV positive pregnant women to take at the onset of true labor, and to be given to their babies within 72 hours of birth. The guidelines also emphasize safe sex during pregnancy, timely use of skilled attendant, and facility based delivery (National AIDS Commission, 2003 & MoH, 2007).

While the expansion of PMTCT services is progressing well, there is poor utilization of the services (GoM, 2006). Malawi's five year plan for scaling up PMTCT (2006-2010) targets providing a comprehensive package of PMTCT services to 80% of all pregnant women by 2010. Currently, estimates are that only 26% of all pregnant women utilized PMTCT services by the end of the year 2007 (UNICEF, 2008). The Malawi Indicator Cluster Survey (MICS) 2006 report established that, among the 92% of pregnant women who received antenatal care from a health professional, only 63% were provided with information about HIV prevention during the antenatal visit, and out of the 63%, only 27% were tested for HIV during the visit and of these only 24 % received their results of the HIV test (NSO & UNICEF, 2008).

Similarly in Balaka, although HCT services are available for all pregnant women, from January to March 2009, out of 2,534 women who attended antenatal care, 953 antenatal women were provided with HCT services. Of these, 108 (11.3 %) women tested positive, but out of these women, only 59 (54.6 %) were given counseling on prevention of mother to child transmission of HIV, optional feeding practices, and were given NVP tablet to take at onset of true labor. Whilst at Kalembo, one of the health centers in Balaka rural, out of 845 women who attended antenatal clinic, 317 women were given HCT services. Of these, 42 (13.2%) women tested positive and only 12 (28.6%) were provided with PMTCT services, while 30 (71.4%) did not receive their HIV test results and were not counseled on PMTCT of HIV. Amongst the 15 to 24

years, statistics show that in 2006, only 24.6% of pregnant women utilized the PMTCT services in Balaka district (NSO & UNICEF, 2008).

This study focused on factors that influence young female adults aged 15 to 24 years to utilize PMTCT services in Balaka district. The study focused on young people aged 15 to 24 years because over half of new HIV infections in Malawi occur amongst this age group, indicating that influencing the behaviour of this age group is key to reducing new infections (NSO & UNICEF, 2008). Additionally, HIV infection rate is high, currently rated at 12.3% (MoH, 2008), as such incidence of MTCT might also be high in this age group; hence the need for PMTCT services to reach more young people and be sustainable as a preventive initiative (GoM, 2009).

Problem Statement

Statistics indicate that there is poor utilization of PMTCT services in Malawi including Balaka district. Recent data available indicate that in 2007, only 26% of pregnant women in Malawi (WHO, 2009) and 19.2% of pregnant women in Balaka (NSO & UNICEF, 2008) utilized the PMTCT services. Amongst the 15 to 24 years old in Balaka district, only 24.6% of the pregnant women utilized the PMTCT services (NSO & UNICEF, 2008). In Malawi, inadequate utilization of PMTCT services by women in 2005 resulted in 91, 000 children living with HIV (MoH, 2008). Child mortality due to HIV was high, estimated at 35.2% by age one, and 52.5% by two years of age (Mwapasa, 2004, Kafulafula, 2007, & WHO, 2010). Utilization of PMTCT services reduces HIV infection in children by 40 to 70 percent (MoH, 2006). Lack of utilization of PMTCT services by women indicates that new paediatric HIV infections will continue, children will continue to die, and MDG 4 which focuses on reducing child mortality will not be achieved; hence the need to conduct this study.

Significance of the Study

Knowing factors that influence utilization of PMTCT services by young female adults will help to identify gaps in maternal and child health care of young female adults in Balaka. The findings of this study will generate knowledge that will assist PMTCT programme managers nationwide to create appropriate guidelines that will help the young adults fully utilize the PMTCT services, especially in resource limited settings.

Objectives of the Study

Broad Objective

The broad objective of this study was to determine factors that influence the utilization of PMTCT services by young female adults aged 15 to 24 years in Balaka district.

Specific Objectives

The specific objectives of this study were to:

1. Identify the knowledge of the young female adults that might have influenced utilization of PMTCT services.
2. Identify the beliefs of the young female adults that might have influenced utilization of PMTCT services.
3. Describe the relationship between knowledge of PMTCT services and utilization of PMTCT services in young female adults.
4. Describe the relationship between attitude of young female adults and utilization of PMTCT services.
5. Describe contextual factors that might have influenced decisions on utilization of PMTCT services in young female adults.

In order to achieve these objectives, the Theory of Reasoned Action (TRA) was used to guide this study.

Overview of the Theory and its Application to the Study

The Theory of Reasoned Action was developed by Martin Fishbein in the early 1960s and was revised and expanded by Fishbein and Azjen in the 1970s and 1980s. The theory was further described by Stroebe in 2000, Hale, Householder, & Green in 2003, Miller in 2005, Polit & Beck, in 2006 and Lezin in 2007. The conceptual framework of TRA seeks to answer fundamental question of why people behave the way they do. The Theory of Reasoned Action provides guidance in examining the complex set of explanations that address the individual's behaviors and behavioral patterns. It provides a framework for understanding the relationship among person's attitudes, intentions, and behaviors (Polit & Beck, 2006). The theory is summarized in figure 1.

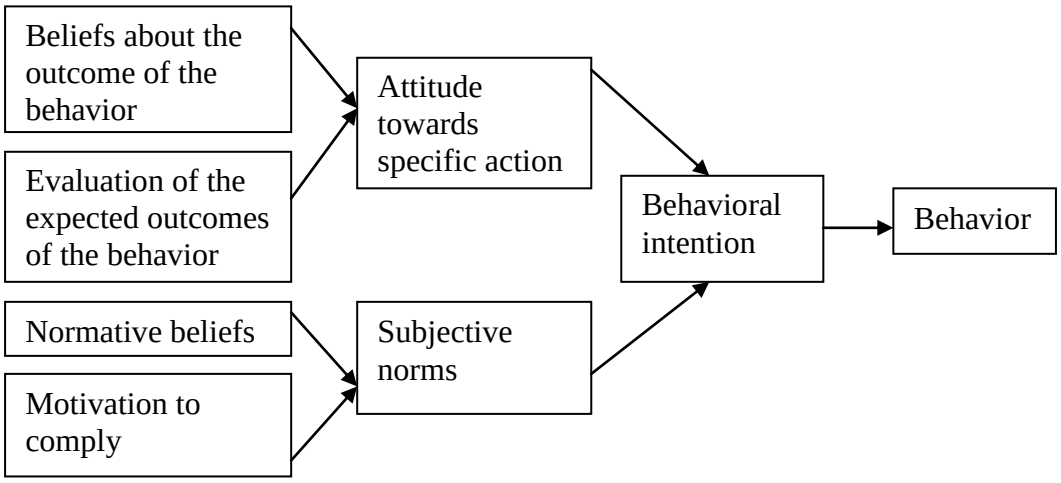

Figure1. The Theory of Reasoned Action: Adopted from Miller, (2005).

According to this theory, there is one determinant of behavior, namely, the person's intention to perform it. This intention is in itself viewed as a function of two determinants. First, the person's attitude towards performing the behavior, based on his or her beliefs about the consequences of performing the behavior; that is, his or her beliefs about the costs and benefits of performing the behavior. Second, the person's perception of the social (normative) pressure exerted upon him or her to perform the behavior (Miller, 2005). In short, in this theory, the individual's intention to perform a

behavior is a combination of attitudes towards performing the behavior and subjective norms.

Attitude

Attitude refers to a person's positive or negative feelings towards performing the defined behavior and is influenced by behavioral beliefs and evaluations of behavioral outcome (Lezin, 2007). People's attitude towards a particular behavior are influenced by their beliefs about the outcome of the behavior (that is, is the outcome likely or unlikely?) and their evaluation of the potential outcome (that is, is the outcome a good thing or a bad thing?). In this study, the young female adults were assessed on their attitude towards utilization of PMTCT services and their beliefs about the consequences of utilization of PMTCT services, including costs and benefits of utilizing PMTCT services and how these beliefs affected their decision making in utilizing PMTCT services.

Knowledge

In addition to beliefs, Diaz & Aragon (2001) identified that knowledge is another factor that influences attitude and behavior. For example knowledge about the risk factors and ways of enhancing health influences an individual's attitudes towards engaging in a certain behavior. Therefore in this study assessment of knowledge was added as a component that influences the young female adult's attitude and utilization of PMTCT services (see figure 2). Thus, in this study, the young female adults were assessed on knowledge about PMTCT and utilization or lack of utilization of PMTCT services. Within knowledge, the young female adults were assessed on the pre-existing information as regards to PMTCT services; that is, information on benefits, costs, and risks of utilizing PMTCT services and ways of enhancing their own health and that of the baby through utilization of PMTCT services. The young female adults were also

assessed to determine if their knowledge influenced their attitude towards utilization of PMTCT services.

Subjective norms

Subjective norms refer to a person's perception of other people's opinion regarding the defined behavior and are influenced by normative beliefs and one's motivation to comply (Hale, Householder & Green in 2003). Subjective norms are influenced by people's perception of the beliefs of those around them: parents, friends, colleagues, partners, and others. According to the TRA, individuals have a sense or belief about whether or not other individuals and groups would approve or disapprove of the behavior. But they also have to factor in how motivated they are to comply with their views (Miller, 2005). In short, subjective norms are influenced by normative beliefs which refers to a person's belief about how people who are important to them expect them to behave (Stroebe, 2000) and motivation to comply which refers to an individual's willingness to conform to particular norms (Stroebe, 2000). In this study, the young female adults were assessed of their perception of the significant others' views and how they influenced their utilization of PMTCT services. Data was collected on the young female adults' beliefs about the perception of their husbands' and significant referents' perception regarding utilization of PMTCT services and how these perceptions influenced their utilization of PMTCT services.

Behavior

Behavior in this study refers to utilization or non utilization of PMTCT services. It is the outcome or end result of all the components, such as; attitude and beliefs of outcome of utilization or non utilization of PMTCT services, knowledge about PMTCT services, and subjective norms. Therefore in this study, data was collected on whether the young female adults utilized the PMTCT services and the factors affecting utilization of PMTCT services. The young adults were also assessed

if their knowledge and attitude were related to utilization of PMTCT services. For the purposes of this research the conceptual framework was modified as in figure 2.

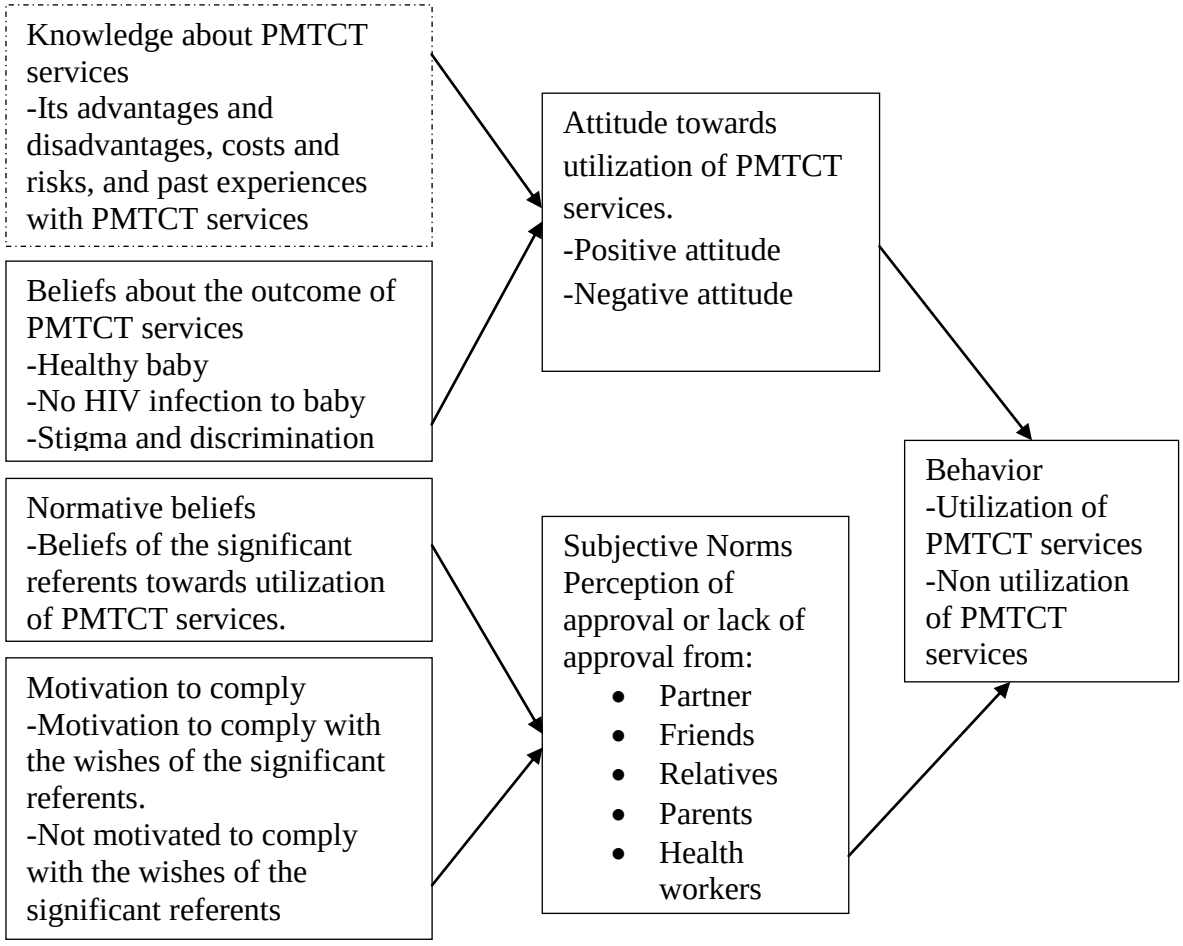

Figure 2: The proposed Theory of Reasoned Action as modified by the author from Miller (2005).

Operational Definitions

Attitude

Attitude refers to the postnatal female young adult's positive or negative feelings towards utilization of the PMTCT services and is influenced by beliefs and knowledge of the young adult (Lezin, 2007).

Belief

Belief refers to a psychological state in which an individual holds proposition or premise to be true. Beliefs are assumed truths (Lezin, 2007).

Knowledge

Refers to expertise and skills acquired by the postnatal young female adult through experience or education as regards to PMTCT services. It is also referred to as awareness or familiarity gained by experience of PMTCT services (Diaz & Aragon, 2001).

Mother to child transmission of HIV (MTCT)

This refers to transmission of HIV from a woman infected with HIV to her child during pregnancy, child birth, or breastfeeding. It is also referred to as vertical transmission (MoH, 2007).

Prevention of mother to child transmission of HIV (PMTCT)

Refers to specific interventions that identify pregnant women infected with HIV and provide them with effective interventions to reduce mother to child transmission of HIV (MoH, 2007).

PMTCT services

PMTCT services are specific interventions and guidelines initiated during pregnancy with an aim of preventing transmission of HIV from the mother to the child. They include; early and regular use of antenatal clinic plus HIV counseling and testing,

receipt of HIV test results, agreeing and adherence to ART, safe sex during pregnancy, timely use of skilled attendant, and facility based delivery (MoH, 2007).

Postnatal

Postnatal refers to period, zero to eighteen (18) months after birth of a child.

Utilization

Utilization refers to the state of having been made use of PMTCT services. It also means to find a profitable or practical use for PMTCT services.

Young female adult

A female between the ages 15 to 24 years.

CHAPTER TWO

Literature review

This chapter presents a review of literature related to factors that influence utilization of PMTCT services. Specifically the review covers; knowledge on PMTCT services , beliefs and attitude about utilization of PMTCT services, subjective norms and utilization of PMTCT services, utilization of PMTCT services, and other contextual factors that may influence utilization of PMTCT services.

Knowledge of Young Adults on Prevention of Mother to Child Transmission of HIV

One of the most important prerequisites for reducing the rate of mother to child transmission of HIV is the dissemination of accurate knowledge of how HIV is transmitted along with the strategies for preventing the transmission (NSO & UNICEF, 2008). It has been noted that accurate information is the first step towards raising awareness and providing people with the tools to protect them from infection (NSO & UNICEF, 2008). Research has revealed that young adults lack comprehensive knowledge on PMTCT of HIV (Bhuiya, 2004; Sibanda, Ncube & Madzima, 2004, and NSO &UNICEF, 2008). A study in Zimbabwe revealed that, only 43.7% of women aged 15 to 24 years and 45.6% men of the same age had comprehensive knowledge on PMTCT (Sibanda et al., 2004). In Bangladesh a study on utilization of PMTCT services among young adults revealed that a lack of knowledge in young adults results in a lack of utilization of PMTCT services (Bhuiya, 2004). Such results led to calls for comprehensive interventions to address the knowledge gap of the young adults (Bhuiya, 2004).

Sources of Knowledge of PMTCT on Young Adults

There are a variety of sources of knowledge for young people (Bhuiya, 2004 & Buyongo & Ategeka, 2005). A study in Uganda identified health workers and radio adverts as major sources of PMTCT of HIV information and knowledge (Buyongo &

Ategeka, 2005). Contrary to this finding, studies in Bangladelsh and Botswana reported that parents and close friends were the main sources of PMTCT information among young people (Bhuiya, 2004 & Nyablade & Field-Nguer, 2001).

Knowledge of PMTCT and Counseling

Studies have reported that, counseling has an important role in increasing knowledge and utilization of PMTCT services (Colton, 2005, Munthali, 2006 & Nguyen et al., 2008). Generally, counseling on HIV/AIDS and PMTCT is often not provided at health facilities (Munthali, 2006 & Nguyen et al., 2008). In the study done in Vietnam, among the 52 women, it was revealed that, 30% of HIV infected women did not receive any post-test counseling. In addition to that, the study revealed that often the HIV test result was given to the wrong people leading to lost opportunity to provide counseling (Nguyen et al., 2008). Even among those women who did receive counseling, the information provided was not sufficient to help them make decisions or cope with their problem (Nguyen et al., 2008). Studies on counseling and its influence on utilization of PMTCT services by young female adults have not been done in Balaka, hence the need to conduct this study.

Beliefs and Attitude about Utilization of PMTCT Services

Studies have demonstrated that the beliefs that individuals have regarding utilization of PMTCT services can impact the individual's utilization of the PMTCT services (Ayouba, et al., 2003, Leonard, Mane & Rutenberg, 2001 & Moore, 2003). In a study that was done in Botswana there was a wide spread belief that the first person who tested positive will be blamed for bringing HIV in the relationship. This belief led to unwillingness to accept HCT by many pregnant women (Leonard, Mane, & Rutenberg, 2001).

Similarly studies indicate that attitude towards PMTCT services determine utilization of the services by HIV positive pregnant women (Bhuiya, 2001, Buyongo &

Ategeka, 2005, and Nguyen, Oosterhoff, Ngoc, Wright, & Hardon, 2008). For example, in a study done in Uganda on utilization of PMTCT services, the majority (83%) of the participants who utilized PMTCT services demonstrated positive attitude towards utilization of PMTCT services (Buyongo & Ategeka, 2005). Likewise in the same study, the majority (94%) of HIV positive women who had negative attitude towards utilization of PMTCT services did not utilize the services and mother to child transmission rate was high in these women (Buyongo & Ategeka, 2005). However in a study done in India, Ukraine, and Zambia, stigma and discrimination by health workers was found to be one of the factors that contributed to poor utilization of PMTCT services by HIV positive pregnant women (Nguyen et al., 2008). In this study health workers blamed HIV positive pregnant women for becoming pregnant and suggested medical termination of pregnancy. Some HIV positive women reported being denied using the same gynecological coach as those believed to be HIV negative and this affected HIV positive mothers in that they were not examined thoroughly and the care given was inadequate (Nguyen et al., 2008). These studies show that utilization of PMTCT services could be affected by attitude and beliefs. However studies on beliefs and attitude towards utilization of PMTCT services by young adults have not been conducted in Balaka district, hence the need to conduct this study.

Subjective Norms and Utilization of PMTCT Services

Research has revealed varying results about decision making in women and young people about utilization of reproductive health (RH) and PMTCT services. A study conducted by Engeder and UNFPA in Brazil, on utilization of PMTCT services in women and adolescent girls living with HIV revealed that, women were predominantly the main decision makers when it came to utilization of PMTCT services (Engender & UNFPA, 2006). Contrary to this finding, a study conducted in Botswana and Zambia by Nyablade and Field-Nguer on women, communities, and the

prevention of mother to child transmission of HIV reported that, the pregnant woman's decision to participate in PMTCT programmes was influenced by partners, family, and community members (Nyablade & Field-Nguer, 2001). Another study on adolescent reproductive health from Bangladelsh showed that parents and close friends had a major influence on decision making among young people as far as RH and PMTCT services were concerned (Buiya, 2004).

Furthermore, a study done by Moses et al., in Lilongwe, Malawi to evaluate uptake of HIV testing in a programme of PMTCT revealed that, the women who refused to participate in PMTCT programme usually cited need to speak with their husbands before agreeing to a test as the main factor (Moses, et al., 2008). These studies support that, there are many factors that influence decision making in women (Nyablade & Field-Nguer, 2001, Buiya, 2004, Engender & UNFPA, 2006 & Moses et al., 2008). However no studies have been conducted to examine the influence of subjective norms on young adults and utilization of PMTCT services in Balaka.

Utilization of PMTCT services

Worldwide, more than two million HIV infected women give birth annually, but research has shown that only 11% of them receive PMTCT interventions (WHO, 2007). Utilization of PMTCT services by young female adults has not been evaluated in Balaka district, hence the need to conduct this study in Balaka district.

Impact of Non utilization of PMTCT services

Studies have revealed that, without PMTCT intervention there is a 25-50% risk of HIV transmission from HIV-infected mothers to newborns in developing countries and a 15-25% risk of HIV transmission from HIV infected mothers to newborn in Europe and USA (WHO, 2010). Several studies have shown that children born to HIV positive mothers who have not utilized the PMTCT services are approximately three to four times more likely to die than children born to HIV negative

mothers and HIV positive mothers who have utilized the PMTCT services (Hlatjwayo, 2010 & Shapiro et al., 2010). Cramplin, et al., in 2003 when PMTCT services were newly introduced in Malawi, used data from a longitudinal study in the country to measure child mortality to HIV positive women who did not utilize the PMTCT services versus HIV negative women and HIV positive women who utilized the PMTCT services. They found significantly different underfive mortality levels for HIV positive mothers who did not utilize the PMTCT services (46%) versus HIV positive mothers who utilized the PMTCT services (18%) and HIV negative mothers (16%) (Cramplin et al., 2003). This is a clear evidence for a correlation between mother and child mortality and lack of utilization of PMTCT services in high HIV prevalence settings.

Impact of Utilization of PMTCT services

Utilization of PMTCT services has been known to significantly reduce rates of mother-to-child transmission of HIV. In 2009, an estimated 370,000 children (220,000-520,000) contracted HIV during the perinatal and breastfeeding period, down from 500,000 (320,000-670,000) in 2001 (UNAIDS, 2010 & DIGNITAS, 2010). Globally deaths among children younger than 15 years of age are declining. The estimated 260,000 (150,000-360,000) children who died from AIDS–related illnesses in 2009 were 19% fewer than the estimated 320,000 (210,000- 420,000) who died in 2004 (UNAIDS, 2010). This trend reflects the steady expansion of services to prevent transmission of HIV to infants and an increase in access to treatment for children (UNAIDS, 2010).

In developed countries the rate of MTCT of HIV has declined substantially in the past years with the use of PMTCT services (Shapiro et al., 2010). Research has demonstrated that with the use of antiretroviral combinations, elective caesarean section delivery, and avoidance of breastfeeding, transmission rates of below 2% have

been reported in America and Europe (Shapiro et al., 2010). In developing countries, utilization of PMTCT services has been shown to be effective in reducing the transmission risk but their application in areas where breastfeeding is commonly practiced poses considerable challenges. More recent cohort studies in Côted' Ivoire and Mozambique indicate that when PMTCT interventions are given to HIV-infected pregnant women, irrespective of their CD4 count, mother to child transmission rates below 5% can be achieved at four weeks postpartum (Shapiro et al., 2010 & UNICEF/Ngashi, 2005).

Similarly, with use of PMTCT services, in Botswana, HIV test results from between November 2006 and February 2007 indicate that less than 4% of babies born to HIV positive mothers in Botswana were infected; a rate comparable with the USA and Western Europe (WHO/UNICEF/IATT, 2007). In Kenya, Songok, et al., (2003) used two-year HIV free survival as the effectiveness outcome of a Zidovudine (ZDV) based PMTCT programme. It was found that HIV–exposed infants whose mothers took short course ZDV had a significantly higher 24 months HIV survival (59%) than those whose mothers did not take the PMTCT regimen (30%, $p < 0.001$).

Studies in Malawi have revealed that before the Highly Active Antiretroviral Therapy (HAART) era and prior to the introduction of PMTCT services, child mortality due to HIV was high, estimated to be 35.2% by age one, and 52.5% by two years of age (Mwapasa, 2004, Kafulafula, 2007, & WHO, 2010). In 2008, after the introduction of PMTCT services, the child mortality due to HIV was estimated at 15% (Bowie & Mwase, 2009). It is believed that AIDS related mortality in children is likely to reduce further (Bowie & Mwase, 2009). Studies on impact of utilization or lack of PMTCT services have not been done in Balaka, hence the need to conduct this study.

Other Contextual Factors that May Influence Utilization of PMTCT Services

Other factors that influence utilization of PMTCT services have been reported.

They include; lack of access to PMTCT services, shortage of drugs and supplies, lack of male involvement in PMTCT services, poverty, infrastructure, and staffing (Colton, 2005, Nguyen et al., 2008, Nyablade 2001, Nyasulu, 2007, Chipeta, Ngwira & Chimwaza, 2009 & Kasenga et al., 2009). For example in Vietnam, a study to examine utilization of PMTCT services, in 52 postnatal HIV positive women, showed that only 23 (44%) mother-child pairs utilized PMTCT services (Nguyen et al., 2008). The poor utilization was attributed to inconsistent availability of antiretroviral therapy in health care facilities, lack of physical space for PMTCT counseling, and inadequate nurses in public health facilities limiting the quality of services. Even in the two PMTCT sites in the city, stock-out of ARVs every few weeks was observed (Nguyen et al., 2008). The situation is similar to those in other developing countries where utilization of PMTCT services by pregnant women is limited (WHO, 2007).

Male involvement, as reported in many research findings, has been inadequate in PMTCT communication initiatives (Nyablade & Field-Nguer, 2001, MOH, 2006 & WHO, 2007). Programmes have largely focused on encouraging women to come for PMTCT services but have often left out men who are critical decision-makers (Nyablade & Field-Nguer, 2001, MOH, 2006 & WHO, 2007). Research suggests that if men are not informed of the benefits of PMTCT and do not understand the risks to their children, they will not become a supportive force for PMTCT uptake and compliance (Central Board of Health, 2004). Studies have advocated male involvement in maternal health issues in order to increase utilization of PMTCT services. Identified barriers to male involvement in maternal health and PMTCT programmes include; lack of knowledge by males pertaining to the importance of maternal health care, shyness, and worry of being laughed at by fellow men (Colton, 2005, Nguyen et al., 2008, Nyablade 2001, Nyasulu 2007, Chipeta, Ngwira & Chimwaza, 2009, & Kasenga et al., 2009). Studies have therefore agreed on the need to conduct more research in order to address

barriers to male involvement in maternal health and PMTCT services (Colton, 2005, Nguyen et al., 2008, Nyablade 2001, Nyasulu 2007, Chipeta, Ngwira & Chimwaza, 2009, & Kasenga et al., 2009).

Poverty has been reported by many studies as one of the barriers to utilization of services (Colton, 2005, Munthali, 2006, WHO, 2007 & Nguyen et al., 2008). Replacement feeding and costs associated with PMTCT were found to be prohibitive for many women. Cessation of breastfeeding after six months has been found to be difficult for most women in the study areas when the families could not provide other foods for the baby (Nyablade et al., Field-Nguer, 2001, Colton, 2005, Munthali, 2006, WHO, 2007 & Nguyen et al., 2008). However, there has not been any study done in Balaka to evaluate the influence of contextual factors on utilization of PMTCT services by the young female adults.

Summary of Literature Review

The literature review reveals that there are a wide range of factors influencing women's utilization of PMTCT services. These factors include; knowledge of the women about PMTCT services, attitude and beliefs about PMTCT services, and other contextual factors which include; lack of male involvement in PMTCT services, stigma and discrimination, and poverty. Adequate literature specific to young adults and utilization of PMTCT services is lacking. Although some studies related to PMTCT have been done in Malawi and also in Balaka district, they have concentrated on adults, and focus on barriers to PMTCT uptake and not on factors influencing utilization of PMTCT services in young adults. Therefore a study on factors that influence utilization of PMTCT services in young female adults will assist in identifying the nature of factors that promote or hinder effective utilization of the services by young female adults and also to identify solutions to address those factors.

CHAPTER THREE

Methodology

This chapter provides information on the activities that were carried out to conduct the study. The following will be highlighted in this section; the research design, the setting, sampling and sample size, data collection, ethical considerations, data management and analysis.

Research Design

This descriptive study used triangulation of quantitative and qualitative methods to explore factors that influence utilization of PMTCT services in young female adults. Triangulation is the combined use of two or more methods, data sources, investigators or analysis methods in the study of the same phenomenon (Burns & Grove, 2009). The study used mixed methods to get complementary results. In this case the qualitative method helped to verify quantitative data and expand the understanding of the phenomenon of interest. The use of triangulation method helped to get different but complementary results. It also helped to obtain a holistic evaluation of the phenomenon.

Setting

The setting is the location where the information is gathered (Polit & Beck, 2008). The study was conducted in Balaka district in the southern region of Malawi. This district has a population of 316,748 with 151,637 males and 165,111 females and 23% (72,852) are women of child bearing age and 36.8% of the women have begun childbearing (NSO & UNICEF, 2008). The district shares a boundary with six other districts; Machinga to the East, Zomba to the South East, Blantyre to the South, Mwanza to the South West, Ntcheu to the West, and Mangochi to the North (refer to appendix A). This site was chosen because the district is characterized by high levels of HIV prevalence which is at 17.4% (MoH, 2008), early child bearing among young

women which is at 25.4% (NSO & UNICEF, 2008), and high infant and underfive mortality rates, estimated at 104 and 160 per 1,000 live births respectively (NSO & UNICEF, 2008). Research has revealed that 10% of infant and underfive child mortality rates in Sub Saharan Africa are caused by AIDS (Hlatjwayo, 2010). This called for the need to determine the utilization of PMTCT services by young female adults.

Specifically samples were drawn from; Balaka district hospital, Dream health centre, Chimatiro health post, Mbera health centre, Kalembo health centre, and Ulongwe health centre (refer to appendix B). Two health facilities, Balaka and Dream are located within Balaka Township while the remaining four health facilities are located in the rural area of Balaka district. Two health facilities, Dream and Ulongwe health centres, are part of Christian Health Association of Malawi (CHAM), while the remaining four health facilities, Balaka district hospital, Chimatiro, Mbela, and Kalembo, are government health facilities.

Target Population

Burns and Grove defined a population as all elements (individuals, objects, or substances) that meet certain criteria for inclusion in a given study (Burns & Grove, 2009). The target population of this study consisted of all young women aged 15 to 24 years of age who have delivered within the past 18 months, with known positive HIV status. The study population included women who delivered since initiation of the PMTCT programme. It was assumed that these women received PMTCT advice and services in one or all of the following settings; antenatal clinic, in the labor ward, post natal ward or clinic, or at the under five clinic. It was believed that with experience gained in any of these settings, women would adhere to the PMTCT programme practices and would be able to reflect on a variety of situations related to PMTCT including breastfeeding.

Inclusion and Exclusion Criteria

To be included in this study, women must have delivered within the past 18 months, were HIV positive, and willing to participate in the study. Additionally, the women were to be able to communicate either in English or Chichewa. The exclusion criteria were; women whose babies were over 18 months, were outside the age limit thus below 15 years and above 24 years, and/or could not communicate in Chichewa or English.

Sample and Sample size

A sample is a subset of the population that is selected for a particular study (Burns & Grove, 2009).The sample size for quantitative component of this study was 184 and the sample size for qualitative design was 12. To determine the sample size, the researcher utilized information from Balaka district hospital which is located within Balaka Town Assembly. According to literature review, there were 432 HIV positive women aged 15 to 24 years who delivered in 2008 at Balaka district hospital. Out of these women only 108 women utilized PMTCT services. This means that a proportion of 25 % had utilized PMTCT services. Therefore to determine the sample size of this study, first the infinite population was calculated based on 95% confidence interval. The equation for this interval estimate is:

$$n = \frac{Z^2\, p\,(1-p)}{e^2}$$

Where: n = sample size

Z = the Z value associated with levels of confidence, which is equal to 1.96

p = the proportion of HIV positive postnatal mothers within the age group of 15 to 24 years and those who utilized PMTCT services at Balaka district hospital.

That is: $\frac{108}{432} \times 100 = 25\%\ (0.25)$

e = Maximum standard error and is equal to 5% (0.05).

Therefore $n = \frac{1.96^2 \times (0.25)(1-0.25)}{0.05^2}$

$= \frac{3.8416 \times (0.25)(0.75)}{0.0025}$

$= \frac{0.7203}{0.0025}$

$= 288.12$

However in order to determine the sample size for this study, the finite population correction (fpc) factor was used with the following formula:

$$n = \frac{S}{1 + \frac{S}{\text{Population}}}$$

Where: S = the calculated sample size from the infinite population in this case 288

Population = number of HIV positive women aged 15 to 24 years who delivered in 2008 at Balaka district hospital and was equal to 432. However it was assumed that the number of deliveries might have increased by 15% in 2009 so in this case population was assumed to be 432 x 0.15 = 64.8.Therefore the population was calculated to be

432 + 64.8 = 496.8, this was equal to 497.

Therefore $n = \frac{288}{1 + \frac{288}{497}}$

$= \frac{288}{1.57947686}$

$= 182.34$

$= 182$

In order to determine the adequacy of this sample size, a statistician was consulted to verify the adequacy of the sample size.

Sampling

Sampling is the process for selecting a group of people with whom to conduct a study (Polit & Beck, 2008). Convenience sampling was used to obtain the sample for

the quantitative portion of this study. This technique was adopted because the researcher was seeking individuals with specific traits and first hand experience with utilization of PMTCT services. For the qualitative component of the research, 12 participants from those who participated in the quantitative component of the study were selected using purposive sampling, and every 10^{th} participant was picked. The participants were recruited from the underfive clinic, HIV and AIDS support groups, and follow up clinics in the six health facilities in Balaka. Selection of the participants was done in such a way that participants were approached by the researcher and one trained research assistant, and eligibility status was verified with the participants' health passport books. Eligible clients were informed about the details of the study inorder to obtain their consent (refer to appendix E). The participants were given chance to ask questions and thereafter they were asked to sign a consent form (refer to appendix E) to indicate their willingness.

Data Collection

A triangulation method using quantitative and qualitative approaches was adopted to collect data.

Quantitative Component

Quantitative data was obtained in a structured face to face interview. A structured questionnaire was used to collect data related to factors that influence utilization of PMTCT services (refer to appendix C). This structured questionnaire enabled the researcher to ensure consistency in asking questions. The questionnaire was divided into six sections. Section one comprised demographic and socioeconomic data including age, marital status, religion, education, and monthly income. Section two sought to determine relevant knowledge the young female adults had on PMTCT services. Items for this section included the following: what they had heard about PMTCT services, period of HIV transmission, and prevention of HIV transmission.

Section three sought to identify the attitude of young female adults as regards to PMTCT such as attitude on having an HIV test, disclosure of HIV status and taking NVP. Section four sought to assess utilization of PMTCT services such as whether the young adults took NVP at onset of labor and whether the baby was given NVP at birth or not. Section five sought to assess the young adults' subjective norms and their influence on utilization of PMTCT services and section six sought to assess the contextual factors that promote or hinder utilization of PMTCT services in Balaka district including decision making process in young female adults. Items for this section included; ability to disclose HIV status to partner and partner involvement in utilization of PMTCT services (see appendix C).

Eligible clients were informed about the details of the study in order to obtain their consent (refer to appendix E). The participants were informed that their participation was voluntary and that they could withdraw consent anytime. Participants were given chance to ask questions. Thereafter they were asked to sign a consent form (see appendix E) to indicate their willingness to participate in the study. This helped to ensure respect of the participants. Upon signing the consent form, the questionnaire was administered and this took almost 30 minutes. Interviews were conducted in the health facilities. Data was collected by the researcher and one trained research assistant during months of February and March of 2010. The research assistant was a qualified nurse midwife working at Dream health centre.

Qualitative Component

Data for the qualitative component of the study was collected using a semi structured interview guide (see appendix D). The guide contained questions on factors that influence utilization of PMTCT services in young female adults. In-depth interviews were conducted in Chichewa and the interviews were tape recorded. The interviews were conducted in the health facilities by the researcher. It took 30 to 45

minutes to conduct the in-depth interview.

Instrument Measurement

Content Validity

In order to ensure that the instrument measured what it intended to measure, research experts who included midwives and PMTCT providers, evaluated the instruments (that is questionnaire and interview guide). Questions were developed based on the Malawi National PMTCT guidelines (MoH, 2007) and the National PMTCT training package: participant manual (MoH, 2006). Also to ensure validity, a triangulation method was used. In triangulation, quantitative and qualitative techniques provided complementary information.

Reliability

Reliability assesses how consistently the measurement technique measures a concept (Burns & Grove, 2009). To ascertain reliability, the questionnaire was pre-tested on ten participants. The interview guide was also pre-tested on three informants from the same group. The participants on whom the instruments were pre-tested were recruited from Balaka district hospital. These participants were not involved in the main study to avoid bias and decrease the reliability. The results of the pre-test revealed that, some questions were overlapping each other and this made participants give similar responses. After the pre-test, changes were made accordingly to the questionnaire and the interview guide, and full study was conducted.

Ethical Consideration

Approval to conduct the study was first obtained from College of Medicine Research and Ethics Committee (COMREC) (refer to appendix F). After that, approval was obtained from the District Commissioner (DC), the District Health Officer of Balaka hospital, and the In-charges of the health centers in which the study was conducted (see appendices G,H,I,J,K,L,M and N). Anonymity and confidentiality of

the participants' responses was maintained throughout the study through the use of identification numbers instead of names. Additionally, participants were reassured that during publications or presentations, there will be no personal identification. The responses were stored in a locked cabinet, which was accessible to the researcher only.

Data Management and Analysis

Quantitative Data

Questionnaires were reviewed soon after interviews to ensure completeness of responses. In order to analyze the quantitative data, the Statistical Package for Social Sciences (SPSS) version 16 was used and descriptive statistics were computed. Selected variables that measure knowledge were cross tabulated with outcome variables which measured utilization of PMTCT services. Test of significant difference between categorical variables was done using Chi square test.

Qualitative Data

Qualitative data was tape recorded and transcribed verbatim before the next interview. Field notes were taken to capture elements of the setting and of participants' demeanor, emotional responses, and other contextual factors that would not have been captured on recording. The researcher did the transcribing herself to ensure that the transcription was accurate and complete. Data was translated into English and an independent person listened to the recorded interview and verified the translation to ensure correctness. The data analysis followed the directed content analysis approach as proposed by Hsieh and Shannon (2005). Each interview was read for several times in search for meaning and deeper understanding. Thereafter data was coded manually line by line. Notes were written in the margin about the underlying meaning and similar responses were grouped together to represent a category. From these categories, themes and sub themes were formed. An independent coder, experienced in the field of qualitative research assisted with data analysis.

CHAPTER FOUR

Findings

This section presents the demographic and socioeconomic information of the participants, followed by the results of the quantitative and qualitative components of the study.

Quantitative Data

Characteristics of the Participants

Table 1 provides a summary of the demographic characteristics of the participants.

Table 1

Demographic characteristics of the participants: (N=184)

Variable	Frequency	Percentage
Age of the participants		
15-19	15	8
20-24	169	92
Tribe of the respondents		
Chewa	40	21.7
Lomwe	41	22.3
Ngoni	33	17.9
Yao	55	29.9
Other	15	8.2
Language of the respondents		
Yao	62	33
Chewa	169	91
Lomwe	13	7
Ngoni	8	4
English	5	3
Other	4	2
Religion of the respondents		
CCAP	26	14
Church of Christ	13	7
Islam	53	29
Roman Catholic	48	26
Other	44	24
Marital Status		
Married	131	71.2
Divorced	27	14.7
Separated	6	3.3
Single	10	5.4
Widowed	10	5.4
Age of infants		
Up to 6 months	104	56.5
7-12 months	57	31
13-18 months	23	12.5

In this table, a total of 184 young postnatal HIV positive women participated in the study. Their ages ranged from 15 years to 24 years of age with a mean of 22 years.

Almost 30% (n=55) of the participants were Yao by tribe, 22%, (n=41) were Lomwes while another 22%, (n= 40) of the participants comprised the Chewas. The majority of the participants (91%, n=169) indicated that they speak Chichewa well and all participants were able to communicate in Chichewa; therefore, all interviews were conducted in Chichewa. The majority of the participants (71%, n=131), were Christians and most of them (71%, n=131) were married. The participants had infants whose ages ranged from 1 day old to 18 months with a mean of 7 months. The majority of the participants (56.5%, n=104) had infants who were six months old and below.

Socioeconomic characteristics of the participants.

Table 2 summarizes the socioeconomic characteristics of the participants. The findings from this table demonstrate that, 78% (n=143) of the participants were educated even though 72% (n=103) only attended up to primary school, meaning they were the ones who attended starndard 1 up to standard 7. The majority of the participants (54%, n=99) were housewives, 23% (n=43) were farmers while 18% (n=34) had no occupation.

Further the findings in table 2 indicate that, 47% of the participants (n=86) came from a distance of more than 5 km from the health facility and 64% of the participants (n=117) usually walk to the health facility. For those who go by transport to the health facility, 75% (n=50) indicated that their usual mode of transport was bicycle hire and the transport cost ranged from MK30 to MK500 with a mean of MK180.48. The estimated income per month for 64% (n=102) of participants ranged from MK501 to MK10, 000; two people had incomes of MK15, 000 while 13% of the respondents (n=24) failed to estimate their income. Most of the participants (55%, n=101) indicated that they get financial support from their husbands while 36% (n=66) support themselves and others (9%, n=17) depend on their parents and relatives for support.

Table 2

Socioeconomic characteristics of the respondents (N=184)

Variable	Frequency	Percentage
Education		
Educated	143	78
Not educated	41	22
Education Level		
Completed form 4	5	4
Completed primary school (completed standard 8)	20	14
Up to primary school (from standard 1 to 7)	103	72
Some secondary school (from form 1 to form 3)	13	9
Tertiary education	2	1
Occupation		
Business	7	4
Farmer	43	23
Housewife	99	54
Employed	1	1
None	34	18
Distance from the health facility		
Less than a kilometer	19	10
1-2 Kilometers	28	15
3-4 Kilometers	46	25
More than 5 kilometers	86	47
Don't know	5	3
Usual mode of transport to the health facility		
Walk	171	64
Bicycle hire	50	27
Bus	13	7
Other (own bicycle)	4	3
Amount paid per trip		
Up to Mk200.00	40	63
Mk201.00 to Mk400.00	23	37
Estimate of income per month		
Up to K500	75	41
K501 to K5,000	102	55
K5001 to K10,000	4	2
K10,001 to K15,000	3	2
Source of Support		
Husband/partner	101	55
Self	66	36
Parents	15	8
Other (In law and relative)	2	1

Attendance of Antenatal Clinic

The participants were asked if they attended antenatal clinic and who provided with antenatal care. The results indicate that all participants attended antenatal clinic. The majority of the participants (66%, n=121) started attending antenatal clinic in the second trimester, with a mean of 6 months, while 27% of the participants (n=50) started attending antenatal clinic in the third trimester, with others starting attending antenatal clinic as late as 9 months gestation. Only 7% of the participants (n=13) started attending antenatal clinic in the first trimester. Almost all participants (99.5%, n=183)

indicated that they received antenatal care from a midwife and only one participant indicated having received antenatal care from a doctor.

Knowledge of the Participants

In order to determine the knowledge of the participants, the researcher examined the general knowledge of the participants about MTCT of HIV and their knowledge about the PMTCT programme. Participants were asked if they were familiar with the PMTCT programme; what they had heard about the PMTCT programme; whether it was possible for an HIV positive pregnant woman to deliver an HIV negative baby; period when HIV can be passed from mother to child; the advantages of taking the medicines used in the PMTCT programme; impact of utilization and non utilization of PMTCT services; and what an HIV positive pregnant woman could do to prevent passing HIV to her child. The participants were also asked to indicate the advice they were given at the initial visit to the antenatal clinic when they were found HIV positive.

Knowledge of mother to child transmission of HIV.

The results demonstrate that all participants were familiar with issues concerning mother to child transmission of HIV. They all knew that utilization of PMTCT services helps to reduce transmission of HIV from an HIV infected mother to the child. All participants knew that lack of utilization of PMTCT services can result in transmission of HIV from an HIV infected mother to her child. Out of 184 participants, 96% (n=176) knew that HIV can be passed to the baby from the mother during breastfeeding. Only 51% (n=93) of the participants mentioned that HIV can be passed from the mother to the baby during pregnancy and 91% of the participants (n=167) knew that it was possible for an HIV positive woman to deliver an HIV negative baby. However only 4% (n=7) of the participants knew that it was possible for an HIV

positive woman who has received single dose Nevirapine or ARVs to still deliver an HIV positive baby.

When asked about the advantages of taking the medicine used for prevention of mother to child transmission, 64% (n=117) of the participants indicated that the medicine helps to lower the risk that an HIV positive mother will transmit the virus to the baby. Others (27%, n=50) indicated that the medicines help people to live longer, while 9% (n=17) indicated that the medicine helps to boost the immunity of the mother so that the mother becomes healthy.

Knowledge of the participants about the PMTCT programme and services.

Table 3 summarizes what participants had heard about the PMTCT programme. Participants were allowed to provide more than one response.

Table 3

What participants had heard about the PMTCT programme: (N=184)

What women have heard about PMTCT programme	*f*	*%*
PMTCT programme starts with HIV counseling and testing	83	45
They provide interventions for reducing transmission of HIV to the child	76	41
PMTCT programme encourages women to deliver at the health facility	91	51
PMTCT programe promotes exclusive breastfeeding for 6 months	160	87
The programme advocates no breastfeeding if women can afford replacement feeds	3	2
They provide medication (ARVs) to women and babies	19	10
They encourage having protected sex	13	7
The programme promotes abstinence	3	2
PMTCT programme advocates avoidance of pregnancy	2	1

The results in this table reveal that, 87% of the participants (n=160) reported that, they had heard that PMTCT programme promotes exclusive breastfeeding for 6 months. Only two participants (1%) reported to have heard about avoidance of pregnancy, and 2% (n=3) reported that they had heard that a woman may choose not to breastfeed if she can afford replacement feeds. None mentioned about abrupt weaning at 6 months.

With regard to what HIV positive mothers could do to prevent passing HIV from mother to the child, 73% (n=134) of the participants identified exclusive breastfeeding for six months as the main means of preventing passing HIV from mother to the child. Only 20% (n=36) recognized weaning at 6 months as a means to prevent passing HIV to the child, while 53% (n=97) of the participants indicated taking medicine (ARVs) as a means of preventing passing HIV to the child.

Advice given to the participants at initial visit at the antenatal clinic.

Having identified what they had heard about PMTCT programme, the participants were asked to identify the advice they were actually given during the antenatal period. Figure 3 illustrates what participants were advised during their initial visit at the the antenatal clinic. The participants were allowed to give more than one response. In this figure, 93% (n=172) of the participants said that they were advised to breastfeed their babies exclusively for six months. Only 4% (n=7) mentioned that they received advice on avoiding future pregnancies. However four participants (2%) reported that they were not given any specific advice on prevention of mother to child transmission of HIV.

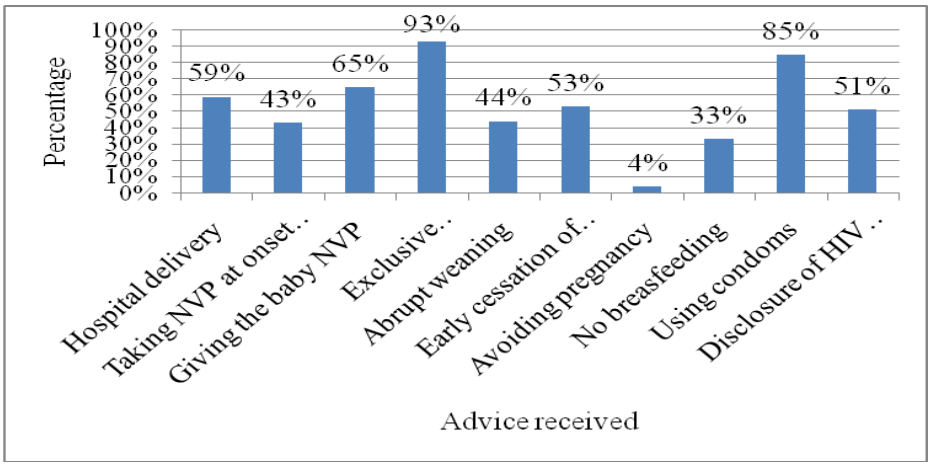

Figure 3: Advice given to the participants about PMTCT of HIV

Attitude of the Participants towards PMTCT Services

In order to identify the attitude of the participants towards PMTCT services, the participants were asked about their views and feelings about PMTCT guidelines. They were asked if they felt it was necessary for a pregnant woman to have an HIV test, disclose her HIV positive status to her partner, receive and take NVP at onset of labour or ARVs if her immunity is low, give the baby NVP after delivery and breastfeed exclusively for 6 months with an HIV positive status. They were also asked to indicate if they felt it was necessary for an HIV positive mother to breastfeed her child. In this case, attitude was measured by the participant's view of whether or not the guideline was necessary. Positive attitude meant that the participant indicated that the service was necessary while negative attitude meant the participant indicated that the service or guideline was not necessary.

Table 4 outlines the attitudes of the participants towards PMTCT services. The results demonstrate that all participants had positive attitude towards HIV counseling and testing, and breastfeeding exclusively with an HIV positive status. Only 4 participants (2%) reported negative attitude towards disclosure of a positive HIV status to partner.

Table 4

Attitude of the participants towards PMTCT guidelines: N=184

Attitude towards PMTCT guideline	No. of participants with positive attitude *f (%)*	No. of participants with negative attitude *f (%)*
Attitude towards HIV counseling and testing	184 (100%)	0 (0%)
Attitude towards disclosure of a positive HIV status to partner	180 (98%)	4 (2%)
Attitude towards taking ARVs or SD-NVP at onset of labour	182 (99%)	2(1%)
Attitude towards giving the baby NVP within 72 hours of delivery	182 (99%)	2 (1%)
Attitude towards exclusive breastfeeding for 6 months	1 84(100%)	0 (0%)

Actual Practices of the Participants (Utilization of the PMTCT Services)

In order to identify the practices of the participants, the participants were asked to indicate what they actually did to prevent mother to child transmission of HIV.

Figure 4 illustrates what participants did to prevent mother to child transmission of HIV.

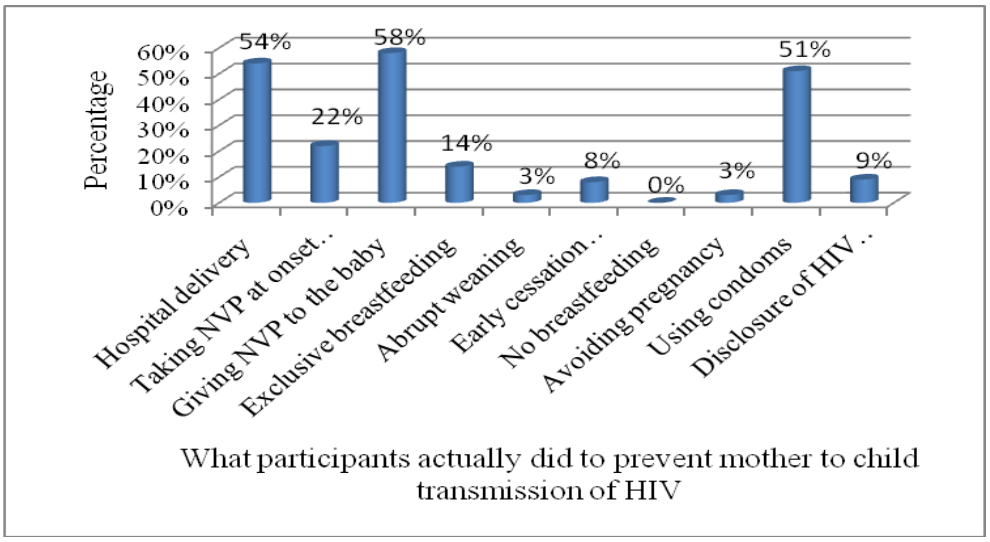

Figure 4: Actual practices of the participants (Utilization of PMTCT services).

The results in this figure demonstrate that, 58% (n=107) of participants reported that their infants were given Nevirapine within 72 hours of delivery, 8% of the participants (n=15) stopped breastfeeding their babies at six months, and only 3% (n=5) of the participants abruptly weaned their babies. None chose not to breastfeed her baby.

Relationship between Knowledge of PMTCT Services and Utilization of PMTCT Services

To identify the relationship between knowledge of PMTCT services and utilization of PMTCT services, the investigator compared what participants were advised about prevention of mother to child transmission of HIV (knowledge) and what they actually did (utilization). Table 5 presents a comparison of the number of people who received the advice on PMTCT of HIV and their actual practice.

Table 5

Relationship between knowledge (advice given) and utilization (actual practice) of PMTCT services: N=184

Advice on PMTCT guideline	Received the advice (knowledge) *f (%)*	Actually practiced the advice (utilization) *f (%)*
Taking NVP at onset of labour	80 (43%)	40 (50%)
Hospital delivery	109 (59%)	99 (91%)
Exclusive breastfeeding for 6 months	172 (93%)	26 (15%)
Abrupt weaning	81 (44%)	5 (6%)
Giving of NVP to the baby at birth	120 (65%)	107 (89%)
Early cessation of breastfeeding	97 (53%)	15 (15%)
Avoiding pregnancy	7 (4%)	5 (71%)
Disclosure of a positive HIV status to partner	94 (51%)	17 (18%)
No breastfeeding if the woman can afford replacement feeds	61 (33%)	0 (0%)
Using condoms during pregnancy	157 (85%)	93 (59%)

The results in this table revealed a huge discrepancy between knowledge and practice. Many received the advice but very few actually practiced what they were advised. For example, table 5 shows that 93% of participants received advice on exclusive breastfeeding for six months, yet only 15% of the participants reported that they exclusively breastfed their children for six months. The mean age of introducing supplementary food to the child among the participants was 5 months with others introducing feeds as early as when the baby was one month old. None of the 33% of participants who received advice that they may choose not to breastfeed if they can afford replacement feeds followed this guideline. All infants were breastfed.

Pearson Chi square analysis was conducted on selected variables summarized in table 5. The results revealed a statistically significant difference between knowledge and practice of the following variables: taking NVP at onset of labour (χ^2=49.981, df= 1, p=0.018); hospital delivery (χ^2=1.332, df= 1, p =0.049); exclusive breastfeeding for six months (χ^2=6.693, df= 1, P=0.010); abrupt weaning (χ^2=6.536, df= 1, p =0.000); giving the baby NVP at birth (χ^2=7.279, df= 1, p=0.045); disclosure of a

positive HIV status to partner (χ^2=13.804, df= 1, p=0.011); and using condoms during pregnancy (χ^2=28.431, df= 1, p=0.022).

Relationship between Attitude of the Young Adults towards PMTCT services and their Actual Practices

The researcher compared the attitude of the participants towards the PMTCT guidelines and what they actually did (their utilization rates). Table 6 compares the number of participants who had positive attitude towards PMTCT services and their actual practices in preventing mother to child transmission of HIV. The results in this table demonstrate that, all the participants had positive attitude towards HIV counseling and testing and they all had HIV counseling and testing done. However, only 15% of the participants who had positive attitude towards exclusive breastfeeding with an HIV positive status for 6 months, breastfed their babies exclusively for 6 months. Not all positive attitudes in this table translated into positive behavior.

Table 6

Relationship between Attitude of the Participants towards PMTCT guidelines and Utilization of the PMTCT Guidelines: N=184

Attitude towards the PMTCT guideline	No. of participants with positive attitude *f (%)*	No. of participants who actually complied with the PMTCT guideline *f (%)*
Attitude towards HIV counseling and testing	184 (100%)	184 (100%)
Attitude towards disclosure of a positive HIV status to partner	180 (98%)	17 (9%)
Attitude towards taking ARVs or SD-NVP at onset of labour	182 (99%)	40 (22%)
Attitude towards giving the baby NVP within 72 hours of delivery	182 (99%)	107 (59%)
Attitude towards exclusive breastfeeding for 6 months	184 (100%)	26 (15%)

Contextual Factors and How They Influence Utilization of PMTCT Services

This section identifies other factors that influence utilization of PMTCT services in young adults. In order to achieve this objective, the participants were asked to indicate whom they consulted before undergoing HIV counseling and testing, if they

were accompanied to the ANC or to the labour ward by their partners, the reaction of their partners after disclosure of an HIV status, and if their partners were tested or not. Findings revealed the following:

Consultation.

The majority of participants 85% (n=157) reported that they did not consult any one before getting tested. Out of the 15% (n=27) of the participants who said they consulted before getting tested, 33% (n=9) consulted their husbands and others consulted other people such as mother (11%, n=3) or close friend (15%, n=4) (see table 7).

Table 7

People consulted before having a blood test (n=27)

Person consulted	Frequency	Percentage
Husband	9	33
Close friends	4	15
Mother	3	11
Father	2	7
Mother/Father in-law	1	4
Brother/Sister in-law	1	4
Brother	2	7
Aunt	1	4
Boss of the husband	1	4
People in the support group	1	4
Reverend	1	4
Village headman	1	4

Table 8 outlines the reasons given by the participants as to why they consulted the people they identified.

Table 8

Reasons for consultation before having a blood test (n=27)

Response	Frequency	Percentage
Because he is my husband and the head of the family	9	33
Because he is the person I am staying with	4	15
Because I was having frequent illnesses	5	19
Because on my own I could not know the benefits	1	4
Because she is my best friend	2	7
Because there were quarrels and some people in our family were saying I was bewitched. They did not believe that I was HIV positive	2	7
She was telling me her secrets	1	4
To help me with decision making whether to go for testing or not	3	11

The results in this table indicate that 33% (n=9) of the participants consulted their husband because he is the head of the family, hence the need to know and give

consent. Some participants (11%, n=3) indicated that they wanted to be assisted with decision making.

When asked if the participants needed to get consent to be tested, 93% (n=171) of the participants said that they did not need to get consent from anyone. For the participants who indicated that they needed to get consent from someone before getting tested, 38% (n=5) of the participants said that they needed to obtain consent from the husband, 15% (n=2) indicated parents, 15% (n=2) mentioned relatives. The rest of the participants (32%, n=4) identified other people such as PMTCT counselor (16%), anyone who also got tested (8%), and the boss of the husband (8%).

External approval to utilize the PMTCT services.

The participants were asked to indicate all people whom they thought would approve or disapprove of their utilization of PMTCT services. Table 9 outlines the participants' feelings regarding who would approve or disapprove their utilization of PMTCT services. The results indicate that 34% (n=62) of the participants felt no one would approve utilization of PMTCT services, 26% of the participants (n=48) felt the husband would approve utilization of the PMTCT services while 19% (n=35) of the participants felt their mother would approve utilization of PMTCT services.

With regard to whom the participants felt would disapprove utilization of PMTCT services, the results in table 9 demonstrate that 38% (n=70) felt nobody would disapprove of utilization of PMTCT services, 11% (n=20) felt the husband would disapprove utilization of the PMTCT services, and 20% (n=37) felt their mother would disapprove utilization of the PMTCT services. However mothers were more likely to disapprove utilization of the PMTCT services (1 in every 5) as compared to husbands (1 in every 9).

Table 9

The people w*hom the participants felt would approve or disapprove utilization of PMTCT services* N=184

Character	Would approve utilization		Would disapprove utilization	
	f	%	*f*	%
Husband	48	26	20	11
Mother	35	19	37	20
Father	5	3	2	1
Close friend	9	5	11	6
Uncle	3	2	0	0
Mother/father in-law	4	2	1	0.5
Brother /sister in-law	2	1	3	2
Aunt	1	0.5	0	0
Brother	2	1	1	0.5
Sister	7	4	6	3
Grand parents	3	1	5	3
Mentor mothers	2	1	0	0
Boss of husband	1	0.5	0	0
Reverend	0	0	1	0.5
Neighbors	0	0	17	9
Other relatives	0	0	10	5
No body	62	34	70	38

Partner's Support and Influence on Utilization of PMTCT Services.

In order to identify partner's support in PMTCT services, participants were asked if they were accompanied by their partners to the antenatal clinic and to the labour ward during the time of labour and delivery. The participants who were escorted to the health facility were further asked to indicate if the presence of their partners influenced their decision to utilize the PMTCT services. Those who were not escorted were asked to indicate if they felt the presence of their partner could influence their decisions regarding utilization of the PMTCT services suppose the partner was present. Table 10 outlines the partners' accompaniment to the health facility and whether they influenced decision making. Only 23% of the participants (n=43) indicated that they were accompanied by their partners on initial visit to the ANC. Of these, 60% (n=26) felt that partner's presence influenced their decision making because they received counseling and got tested together. However, 40% of the participants (n=17) indicated that the partner's presence did not influence decision making because their partners

were already aware of their HIV positive status.

Table 10

Partner accompaniment and influence on the young adults' decision to utilize the PMTCT services: N=184

Escorted to the health facility by the partner	*f* (%)	Influenced decision to utilize the PMTCT services	Did not influence decisions to utilize PMTCT services
During Antenatal period (at initial visit).	43 (23%)	26 (60%)	17 (40%)
During labour and delivery	47 (26%)	27 (57%)	20 (43%)

For the 26 % (n=47) of the participants who were escorted to the health facility for labour and delivery, 57% (n=27) indicated that the presence of their partners during the time of labour and delivery positively influenced their decisions to utilize the PMTCT services. Out of these, 74% (n=20) of the participants reported being reminded to take their NVP and they were taken to the hospital in good time. The other 26% of the participants (n=7) said their husbands were able to answer some questions at the health facility on their behalf. However, 43% (n=20) of the participants felt the presence of their partners during the time of labour and delivery did not in any way influence their decisions to utilize the PMTCT services. The majority of these participants (75%, n=15) reported that their partners did not enter into the labour and delivery room so they were the ones making decisions. The other participants 25% (n=5), said that they did not discuss the issue with their partners.

Table 11 outlines participants who were not accompanied to the health facility and their feelings of whether their partners' presence would influence their decision to utilize the PMTCT services. The results revealed that 79% of the participants (n=112) who were not accompanied to the ANC indicated that they could not be influenced because they were able to make their own decisions. Only 21% (n=29) of the participants indicated that the presence of their partners could have positively influenced their decision to utilize the services. Of the participants who felt the

presence of their partners could have influenced their decision to utilize the PMTCT services, 79% (n=23) indicated that, if their partners were present, they could be encouraged to utilize the services. They could have received the counseling together and their partners could hear it for themselves and could understand especially on the use of condoms and feeding practices. However, 21% (n=6) of these participants said their husbands could have discouraged them from utilizing the PMTCT services. They could not have allowed them to be tested since they are very difficult husbands and they undermine the PMTCT services.

Table 11

Partner's lack of accompaniment to the health facility and young adults' perception of whether presence of partner could influence their decisions to utilize the PMTCT services: N=184

Not escorted to the health facility by the partner	*f* (%)	Could not influence decisions to utilize the PMTCT services	Could influence decisions to utilize the PMTCT services
During Antenatal period (at initial visit).	141 (77%)	112 (79%)	29 (21%)
During labour and delivery	137(74%)	103 (75%)	34 (25%)

The findings in table 11 also demonstrate that 74%, (n=137) of the participants in this study were not escorted to the labour ward for labour and delivery. When asked if the presence of their partners would influence their decisions to utilize the PMTCT services, 75% of the participants (n=103) indicated that they could not have been influenced. The reason cited was that, they had already made their decision to utilize the PMTCT services. They reported being able to make their own decisions because they were the ones suffering so they could just follow the hospital instructions to save their lives and that of their babies. However, 25% of the participants (n=34) indicated that the presence of their partners could influence their decisions regarding utilization of the PMTCT services. They indicated that, their partners could facilitate utilization of PMTCT services because they would remind them to take the pill, they would take

them to the hospital in good time since they would be the ones to ride the bicycle, and because the partners wanted to have an HIV negative baby.

Partner testing.

When asked about partner testing and if they shared their HIV test results, 12 % (n=17) of the participants indicated that their partners were tested and they all shared their HIV test results. The majority of the participants (78%, n=143) stated that their partners were not tested; while 13% (n=24) reported that they did not know if their partners were tested. Out of the 143 participants who indicated that their partners were not tested, 9% (n=13) indicated that they were divorced after they had disclosed their HIV status.

Summary of Results for Quantitative Component of the Study

This section has presented the results of the quantitative part of the study. The results have revealed that although many participants had adequate knowledge and positive beliefs about PMTCT services, adherence to PMTCT guidelines was low. In addition, the results revealed that the difference between knowledge and utilization of PMTCT services was statistically significant thus knowledge did not translate into positive behaviour. Generally the participants had positive attitude towards PMTCT services and guidelines. However, not all positive attitudes translated into positive behavior.

The results on contextual factors revealed that the majority of the participants did not consult to utilize the PMTCT services. The participants utilized the PMTCT services and guidelines at their own will. The husband and the mother were the significant people who were perceived that they would approve or disapprove utilization of the PMTCT services. The majority of the participants lacked partner's support.

Qualitative Data

This section presents the results from the qualitative part of this study. The overall objective of this part was to explore the young adults' beliefs and attitude that might have influenced utilization of PMTCT services as expressed in participants' own words. This part was also aimed at exploring the participants'overall experience in utilization of PMTCT services. Data was collected through in-depth interviews. Responses from the participants were read several times until patterns emerged. Related concepts were grouped into categories. Further analysis was done to identify themes.

The section presents an overview of the demographic characteristics of the participants in this part, overall experience of the participants regarding utilization of the PMTCT services, and the themes and subthemes that emerged from the analysis of the in-depth interviews. Excerpts from the interviews are used to illustrate the themes.

Demographic Characteristics of the Participants

Twelve (12) participants were selected from the larger quantitative sample of 184 participants to participate in a qualitative part of this study. These participants were selected using purposive sampling where every tenth (10^{th}) participant was selected. Table 12 presents the summary of demographic characteristics of the participants.

Table 12

Characteristics of the participants (n=12)

Characteristics of participants	Frequency
Marital status	
Married	9
Divorced	3
Educational level	
From standard 1 to 7	10
Not educated	2
Age of infants	
1-4 months	3
5-9 months	6
10-14 months	2
15-18 months	1

In this table, the majority of the participants were married and their level of education ranged from standard 1 up to standard 7.

Overall Experience of the Participants: Utilization of the PMTCT Services

HIV counseling and testing.

The in-depth interviews revealed that all participants in the qualitative part of the study received HIV counseling and testing. They were all knowledgeable about the PMTCT programme and they all participated in the PMTCT programme.

Giving of ARVs.

The results revealed that the majority of participants in this part got the ARVs or SD-NVP depending on the policy of the health facility. For instance, four (4) of the twelve participants who were interviewed from the private health facility (Dream health centre) were given ARVs regardless of the level of CD4 count while the rest of the participants were given SD-NVP to take at the onset of labour and they were put on ARVs only when the CD4 count was less that 350/mm^3.

Out of the nine (9) participants who delivered in the health facility, only six (6) participants reported that their infants received NVP after delivery. The reasons given for not receiving the NVP for the baby were that the drug was out of stock or the midwife forgot to give the baby the NVP.

Exclusive breastfeeding up to 6 months and early cessation of breastfeeding.

Out of the nine (9) participants who had children above 6 months, only one participant reported that she breastfed exclusively for 6 months. The rest of the participants reported that they introduced supplementary foods earlier by the fifth month. Those who were interviewed from the private health facility reported that they were given rice and were advised to introduce cooked rice water to the baby at five months, and were advised to wean their babies at nine months. The majority of the participants (11 of the 12 participants) reported having problems with early cessation of

breastfeeding because of stigma, discrimination, and poverty. The participants said they could not find enough and proper weaning foods for their babies.

Babies born HIV negative after the Niverapine.

The in-depth interviews also revealed that five participants had been in PMTCT programme with previous pregnancies. These participants reported that they were diagnosed HIVpositive during the previous pregnancy and this was their second time to be in the PMTCT programme. These participants reported that their babies tested HIV negative after taking NVP at birth. The participants were pleased with this development and they expressed the desire to have another pregnancy.

Emerging Themes

Major themes that emerged from the analysis of the qualitative data were: Participants' personal beliefs, societal beliefs, and partner's beliefs.

Participants' Personal Beliefs

Related to participant's personal beliefs, the sub themes that emerged were: Beliefs related to HIV counseling and testing, condom use, taking ARVs and NVP, and infant feeding practices.

Beliefs related to HIV counseling and testing.

With regard to HIV counseling and testing, the majority of the participants had positive beliefs and feelings towards HIV counseling and testing. They said they were motivated to go for testing because they wanted to know their status and to protect their babies. Some participants were motivated to go for testing because they were not feeling well, so they believed that if they were tested they would find out what was causing the problem. Some, after being counseled at the antenatal clinic indicated that they believed that HIV counseling and testing was helpful. However the majority of the participants said they were tested because HIV counseling and testing was mandatory in the antenatal clinics. One participant commented: "Nowadays there is no way you

can run away from having your blood tested, whether you like it or not, they will test your blood".

Beliefs about condom use.

All participants stated that they believed that the baby will not contract the virus if they use condoms. Although the majority had positive beliefs about condom use during pregnancy, most of them indicated that they did not use them during pregnancy because their husbands totally disapproved. One participant from Balaka described her situation as follows: "I knew that condoms protect the baby from contracting the virus and I was willing to use them; but my husband refused the condoms, so we did not use them. Sometimes he threw them away".

However the in-depth interviews revealed negative beliefs which were based on myths about condom use. For example it was believed that the condom can remain inside the woman and the participants were afraid that the same thing could happen to them. Other participants believed that the "strength" of the man reduces during sexual intercourse because of using condoms. Some participants reported that the use of condoms during pregnancy was out of question because they regarded the sperm as the real food for the growing fetus. One participant said: "We believe that a seed grows with watering. So the husband's sperm is the real food for the baby. For the baby to be born normal it is the food that the husband gives when you are having plain sex".

Beliefs about taking Nevirapine.

Many participants said they had positive beliefs about NVP because it protects the baby from contracting the virus. They said, they believed that when one takes NVP, she does not transmit the virus to the baby during delivery. However the majority of participants reported having some fears about NVP because they believed that when one takes this drug she can abort. Others reported to have been told that NVP makes women deliver a dead baby or become swollen after delivery. Some participants

reported that they took the drug because they had put all their trust in God and others reported that they proved that what people were saying about NVP was wrong. One participant said:

> I had fear because some of my friends were telling me that, when you take that drug, you will have a sudden death. But I did not experience all that. I and my baby got the drug and we are both alive and fine. I left everything in the hands of God.

Beliefs about infant feeding practices.

On feeding practices, majority of participants believed that when the child is exclusively breastfed and weaned at six months, the child does not contract the virus. Some participants in the study believed because they had previous experiences with the success of exclusive breastfeeding. One participant articulated her previous experience and gave evidence of the effectiveness of exclusive breastfeeding: "I believe that when you breastfeed the baby for six months without adding anything, the baby does not contract the virus. It's true. I breastfed exclusively and when I took my child for a blood test, she tested negative".

With early cessation of breastfeeding, the majority of participants reported that they found it difficult to follow this guideline because they had no money to buy weaning foods. One respondent said: "My beliefs and feelings are the same of following the programme that is being talked about; but lack of money is what has made me to breastfeed the baby up to this time".

In addition, the results indicate that majority of participants believed that, weaning the baby at an early stage is not good, it is ill treating the baby and the baby can become malnourished and die. Many participants pointed out that HIV positive mothers don't disclose to anyone if they have stopped breastfeeding their babies for fear of being subject of gossip and also fear of losing the baby. Participants reported

knowing people in the village whose children died after they followed the advice of weaning at six months: One participant said:

> On one hand this programme is good but on the other hand, is not, because when you stop breastfeeding the baby at 6 months and you don't have anything to feed the baby, you can lose the baby…I have seen this happening in our village. There are four people who have experienced this. They stopped breastfeeding their babies early, and within a short period of time their babies died.

Overall the results indicated that the participants' beliefs were closely related to acceptance and knowledge about HIV and AIDS condition, and the PMTCT programme. Those who had accepted their HIV status and were knowledgeable about the PMTCT programme believed that guidelines on feeding practices were helpful and beneficial and they were able to follow them. However, those who did not accept their HIV status and were less knowledgeable about the PMTCT programme did not believe in the stipulated feeding practices as a result they extended breastfeeding their children and practiced mixed feeding in the process.

Societal Beliefs about Utilization of PMTCT Services

A few participants reported that other people have positive beliefs about utilization of PMTCT services. The beliefs expressed were related to the outcome of the baby and feeding practices. The participants reported that people in the society believe that the introduction of the PMTCT programme is assistance from the government so that people should be delivering healthy and HIV free babies and that the lives of the children should be prolonged.

Although a few participants reported that some people had positive beliefs about utilizing the PMTCT services, the majority of participants reported that many people in Balaka have negative beliefs and attitudes about utilization of the PMTCT services. They reported that, utilization of the services was associated with stigma and

discrimination. Some participants indicated that some of the HIV positive women in the society are willing to follow the PMTCT guidelines but they are afraid that people in the society will discover that they are HIV positive and they will become a laughing matter. One participant reported her experience of societal stigma and discrimination:

> Even us, (meaning herself and other people who go to the PMTCT support group) people do laugh at us and they talk about us. When we go to the funeral or to the borehole to draw water they point at us telling each other that, that one has AIDS…They don't say we have HIV but they say we have AIDS and we will die soon. Even when I was coming here (meaning to the support group), they asked me "where are you going?", and before I even answered they said we know where you are going and they started laughing at me.

Societal beliefs related to blood testing for HIV.

Some reported to have been discouraged by the people in the society from going for a blood test saying that they were told that if they go for a blood test, and know their status, they will be disappointed all the time, they will be having frequent illnesses because they have known their status and they will die early.

Societal beliefs related to culture and religion.

Some participants reported witchcraft and religious beliefs related to utilization of the PMTCT services. They reported that, when people have been infected with HIV, they believe that somebody has bewitched them and consequently they don't utilize the PMTCT services. Other participants reported that early cessation of breastfeeding in the villages is associated with witchcraft. One participant commented:

> …like in our society when one decides to wean her baby at such an early age, she should make sure that people should not know, otherwise you invite witchcraft . They take advantage of the situation and they bewitch the child and if the child dies they say it is because of the early cessation of breastfeeding.

Some participants reported that people discourage their friends from utilizing the PMTCT services. They tell them that those who believe in God are not supposed to follow the PMTCT services. So participants reported that there are many people in the villages who are not utilizing the PMTCT services saying that they are believers. One participant reported:

> Many people are not following the programme because they say they are believers. They are saying that all those who believe in God are not supposed to join this programme. They are supposed to just believe in God that everything will be okay.

Although the participants narrated people's negative beliefs about utilization of PMTCT services, some of the participants reported that they were not affected by the negative beliefs and feelings of the society. They said they were not discouraged by anyone from joining the PMTCT programme. Most of the participants indicated that they were able to make their own decisions. One participant said: "I did not take the people's views into consideration because I do my own things, the way I know, according to what the doctor told me at the hospital". Some participants who failed to implement early cessation of breastfeeding indicated that it was because of poverty and not that they were afraid of other people.

Partner's Beliefs

It also emerged that very few participants indicated that their husbands had positive beliefs about HIV counseling and testing and utilization of PMTCT services. They accepted the situation and promoted utilization of PMTCT services. One participant indicated that she did not have any intention to get tested but it was her husband who was found HIV positive and encouraged her to have a blood test. She said:

> I had no wish to get tested but my husband was the one who persuaded me. He said "go and get tested. I was found HIV positive." I did not believe that. So when I got tested it's when I was found positive.

The participants whose husbands had positive beliefs reported that the main concern of their partners was the baby. They reported that their husbands believed that the baby would contract the virus so they encouraged the women to utilize the services.

However the majority of the participants indicated that their husbands had negative beliefs and attitude towards HCT and utilization of PMTCT services and they prohibited them from utilizing the services. The husbands refused their wives to get tested and the husbands themselves did not want to get tested. Three of the twelve participants reported that their husbands divorced them after they disclosed to them that they were found to be HIV positive. One participant shared this about her partner's beliefs:

> His beliefs and feelings were negative because as I was telling him about testing, he was supposed to encourage me and accept going for testing together as a couple…when I told him that I was found positive he just told me that, that's the end of our marriage.

Summary of Results for Qualitative Component of the Study

This section has presented the results of the qualitative component of the study. Three major categories of beliefs that emerged were: Participants' personal beliefs, societal beliefs, and partner's beliefs. The results indicate that, the majority of the participants had positive beliefs and attitude about utilization of PMTCT services. Those who had negative beliefs were the ones who had not accepted their HIV status. They also perceived the society to have had positive and negative beliefs about utilization of PMTCT services but the negative beliefs did not affect some of the young adults' decision to utilize the PMTCT services. The results also revealed that those

partners who had positive beliefs about utilization of PMTCT services promoted utilization of the PMTCT services and those who had negative beliefs hindered utilization of the services.

CHAPTER FIVE

Discussion

This chapter presents the discussion of the findings of the research study on factors that might have influenced utilization of PMTCT services by young adults. The discussion will highlight key findings based on the study objectives which were to: Identify the knowledge and beliefs of the young adults that might have influenced utilization of the PMTCT services; describe the relationship between knowledge and utilization of the PMTCT services; describe the relationship between attitude of the young female adults and utilization of the PMTCT services, and describe the contextual factors that might have influenced decisions on utilization of the PMTCT services.

The findings will be discussed consistent with the components of the Theory of Reasoned Action which states that behavior is a function, outcome, and end result of attitude and subjective norms. The theory also states that attitudes are influenced by an individual's knowledge and beliefs while subjective norms are the end result of an individual's normative beliefs and motivation to comply. With this regard, the discussion will be presented under the following subheadings: Knowledge of the young adults on PMTCT services, beliefs about PMTCT services, attitude towards PMTCT services, subjective norms, and behavior (utilization of the PMTCT services).

Knowledge of the young adults on PMTCT services

The findings of both quantitative and qualitative components of this study revealed that participants knew most aspects of MTCT of HIV, the PMTCT programme, and the services connected although there were some gaps in their knowledge. The participants knew the main goal of the PMTCT programme which is prevention of mother to child transmission of HIV. All participants knew that utilization of PMTCT services helps to reduce transmission of HIV from an HIV infected mother to the child and that lack of utilization of PMTCT services results in

transmission of HIV from an infected mother to her child. The participants knew the modes of MTCT and the majority of the participants knew that HIV can be passed to the baby through breastfeeding. In addition, the majority of the participants knew that exclusive breastfeeding and provision of ARVs or SD-NVP to the mother and to the baby are ways of preventing mother to child transmission of HIV. This is not surprising because currently the government is scalling up the PMTCT services in all health facilities. With this regard, PMTCT services have been packaged in obstetric care services and are routinely offered from the first contact with all pregnant women (MoH, 2009).

This result supports the MICS report of 2006, which revealed that 91% of mothers in Malawi are knowledgeable about the PMTCT services and they know that HIV can be transmitted from mother to child (NSO & UNICEF, 2008). This is a positive outcome because good knowledge about PMTCT services promotes utilization of PMTCT services (Kasenga, Hurting, & Emmelin, 2007 & Worku, 2007). Probably this explains why all participants in this study took part in the PMTCT programme.

With regard to the gaps, the quantitative results revealed that only half of the participants knew that HIV can be passed to the child during pregnancy, and very few participants in this study knew that avoiding pregnancy and abstinence are measures to prevent mother to child transmission of HIV. This result is similar to the findings of the study that was conducted in Uganda which revealed that although knowledge about mother to child transmission was high, estimated at 95%, only 58% of the participants knew that MTCT occurs during pregnancy (Buyungo & Ategeka, 2005). This is a concern because it shows that the participants are less knowledgeable about issues of primary prevention of HIV. Probably this explains why participants in the qualitative study reported to be in the PMTCT programme for the second time yet the PMTCT guidelines stipulate that HIV positive women should avoid further pregnancies. This

highlights the need for PMTCT campaigns and talks before each antenatal session to improve on the information on period of MTCT, and the need for the talks to be strengthened with the use of audio-visual aids to promote understanding of the information.

In addition, only 4%, (n=7) of the participants knew that it was possible for an HIV positive woman who has received single dose Nevirapine or who is on ARVs to still deliver an HIV positive baby. This was verified in the qualitative data when some participants indicated that a woman who has taken NVP or who is on ARVs can not pass the virus to her baby. Participants in the qualitative study narrated their experiences and witnessed that they had used these drugs before and their babies were tested negative.The implication of this is that participants feel that it's acceptable to become pregnant if the medicines are available. This explains why instead of discussing plans to avoid pregnancy, participants in the qualitative study discussed prior success with taking NVP and further verbalized the desire to have another pregnancy. Very few participants in this study discussed their plans to have a permanent family planning method to stop child bearing. This can have a negative impact on behavior change in that the young adults will not avoid the pregnancies as suggested in the WHO model for prevention of mother to child transmission of HIV-prong number two (WHO, 2001).

These results concur with the results of a study that was conducted in Zimbabwe; which revealed that, only 43.7% of the young women had comprehensive knowledge of PMTCT programme (Sibanda, et al., 2004). However this result differs from the MICS report which demonstrated adequate knowledge among women of 15 to 24 years (NSO & UNICEF, 2008). The implication of inadequate knowledge about the prevention of mother to child transmission is that it negatively affects the utilization rates of the PMTCT services (Kasenga, Hurting, & Emmelin, 2007 & Worku, 2007).

Therefore it is imperative that PMTCT messages should be comprehensive and should include strengths and weaknesses of the intervention including the chances that are there that an HIV positive woman who is on ARVs can still deliver an HIV positive baby. People should be told that a single dose of NVP administered to the woman at the onset of labour and to the baby within 72 hours of delivery reduces HIV transmission rates only by 38-50% (Lallemant et al., 2004 & Scarlatti, 2004). Perhaps this indicates the problems that the young adults have with retention of information. Therefore this suggests the need for the PMTCT messages to be geared towards the understanding of the young adults.

Beliefs about PMTCT Services

The beliefs of the participants were identified through an in-depth interview. In particular, the in-depth interview revealed the participants' beliefs related to HIV counseling and testing, condom use, and taking SD-NVP and ARVs.

Beliefs about HIV Counseling and Testing

The results on beliefs about HIV counseling and testing revealed that the majority of the participants had positive beliefs about HIV counseling and testing. This probably explains why all participants in the quantitative study indicated that they had positive attitude towards HIV counseling and testing and that they all got tested. The qualitative data revealed that participants became willing to be tested after being counseled about testing in the antenatal clinic. This agrees with the studies that have reported that counseling can play an important role in increasing access to PMTCT services (Nguyen, et al., 2008, Munthali, 2006 & Colton, 2005). This is why counseling should be emphasized in all health facilities in Balaka and in the entire nation.

However, the qualitative results revealed that some participants were tested not because they wanted, but because they were forced to have an HIV test. They indicated that HIV testing was mandatory as no one would be given the antenatal services

without having a blood test. This implies that women are not given adequate information during HCT for them to make an informed choice and they are not even allowed to make an informed decision. This demonstrates misunderstanding of opt out approach adopted by the the government of Malawi by the PMTCT service providers. The opt out approach implies that screening should occur after a woman is notified that HIV screening is recommended for all pregnant women and that she will receive an HIV test as part of the routine panel of prenatal tests unless she declines (Bajunirwe & Muzoora, 2005).

These findings suggest an urgent need to evaluate policy and practice of antenatal care and opt-out approach in particular. However health workers in government facilities should not lose sight of each woman's right to make informed decisions about her health care, including her decision to learn her HIV status. Where women are forced to have an HIV test or are tested without their informed consent, their basic human rights are severely compromised. Compulsory HIV testing, the most obvious threat to the right to informed consent, can constitute a deprivation of liberty and a violation of the right to security of person, recommended in the International guidelines on HIV/AIDS and Human Rights (UNAIDS & WHO 2004). This calls for PMTCT providers to be trained on this new approach to effectively communicate the new routine HIV testing approach and dispel the misconception that HCT is mandatory.

Beliefs about Condom Use

Regarding condom use during pregnancy, quantitative data revealed that majority of participants (85%) were advised on importance of using condoms during pregnancy yet only 59% of these participants used condoms when they were pregnant. This could be attributed to what qualitative data revealed that the majority of participants had negative beliefs and feelings about using condoms. Some participants

believed that a condom can remain inside the woman after sexual intercourse; others believed that sperm is real food for the growing baby, so using condoms would deprive the baby of its food, and others believed that they would not enjoy sexual intercourse if the man puts on a condom. This implies that myths and misconceptions about condom use still exist regardless of the efforts made by government and different nongovernmental organizations in dispelling these myths and misconceptions.

The beliefs about condoms are not surprising. A study conducted in Mulanje district in Malawi revealed some misconceptions about condom use including; that condoms interfere with sexual pleasure and that condoms cause irritation in the vagina or sores in the penis (Gama, 1999). Another study in Zambia among the youth found that only a few clients agreed to use condoms, claiming that condoms cause cancer, are not nice, they break during intercourse, they lead to permanent infertility, and they reduce sexual satisfaction (Mukuka & Slonim-Nevo, 2006). Misconceptions about condoms are common and can confuse people and thereby hinder HIV prevention efforts. These results suggest that preventive programs for this population possibly should focus on issues of sexuality, what makes one to enjoy sexual intercourse and on dispelling the misconceptions so that the young people have adequate and proper information about using condoms. This can help the young people develop positive beliefs that can promote utilization of condoms. Studies have demonstrated that the beliefs that individuals have on utilization of services motivate them to utilize those services (Leonard, Mane, & Rutenberg, 2001 & Moore, 2003).

Beliefs about Taking ARVs and Single Dose Nevirapine

With respect to taking ARVs and SD-NVP, the findings of this study revealed that the majority of the participants had positive beliefs and feelings about these drugs. They believed that these medicines could protect the baby from contracting the virus. This is a welcome development because positive beliefs about ARVs and SD-NVP are

associated with adherence to the medication (Kasenga, Hurting, & Emmelin, 2007 & Buyongo & Ategeka, 2005). A study in Tanzania revealed that most women came for antenatal care and utilized the PMTCT services because they believed and had confidence in the benefits of the services (Magoma, et al., 2010).

Nevertheless, the qualitative results revealed that the majority of participants had fear about the NVP because they believed that when one takes NVP, she can abort, can deliver a dead baby or can become swollen after delivery. This implies that people tend to exergerate the side effects of NVP and they keep on giving each other wrong information which can hinder uptake of NVP.Therefore it is crucial that efforts should be made to impart all HIV positive young adults with adequate information about drugs used in PMTCT programme inorder to enhance positive beliefs among the young adults and promote compliance to medication used in PMTCT programme.

Attitude of the Participants towards Prevention of Mother to Child transmission of HIV Services

The quantitative results indicate that the majority of the participants had positive attitude towards PMTCT services. For example, all participants felt that it was necessary for a pregnant woman to have an HIV test. The majority felt it was necessary for an HIV positive woman to breastfeed exclusively for 6 months, disclose her HIV positive status to the husband, receive and take NVP at the onset of labour, or start taking ARVs if her immunity is low, and give the baby NVP after delivery. The qualitative results also revealed the same. It was encouraging to discover that the majority of the participants had positive attitude towards the PMTCT services because a positive attitude towards PMTCT services has been associated with high uptake of these services (Ayouba et al, 2003 & Bhuiya, 2004). These results are similar to the findings of a study conducted in Uganda where the majority of the participants (83%) who utilized the PMTCT services, demonstrated a positive attitude towards utilization

of PMTCT services (Buyongo & Ategeka, 2005). It is therefore imperative that efforts should be made to ensure that all people with a negative attitude towards PMTCT services develop a positive attitude in order to promote utilization of PMTCT services.

Subjective Norms

As stated earlier on, the subjective norms refer to a person's perception of other people's opinion regarding the defined behavior (Miller, 2005). The quantitative and qualitative results revealed the participants' subjective norms as follows: Participants' perception of societal beliefs, participants' perception of the partner's beliefs, and the contextual factors.

Participants' Perception of the Societal Beliefs

The perception of the participants was that the society had both positive and negative beliefs about PMTCT services. It was indicated that women in Balaka believed that utilization of PMTCT services brings a positive outcome to the baby and that the baby can be born without the virus. They reported in a qualitative study that members of the community believed that introduction of the PMTCT programme is a government's strategy to ensure that people have healthy and HIV- free babies. This is a positive development because people with positive beliefs are likely to encourage others, especially the young adults, to utilize the services since positive beliefs have been associated with high uptake of PMTCT services (Buyongo & Ategeka, 2005).

Although the findings demonstrate that the society of Balaka had positive beliefs about the PMTCT services, qualitative data revealed that there were still some people in Balaka who had negative beliefs about PMTCT services. The results revealed that the society of Balaka believe that those people who know their HIV status, are on ARVs and are utilizing the PMTCT services will not live long because of the knowledge of their HIV status and because they are on ARVs. They added that their babies will not survive because of early weaning. The implication of this is that these

negative beliefs can hinder utilization of the PMTCT services. A study in Uganda found that the people who did not utilize the PMTCT services had negative beliefs about utilization of the PMTCT services (Stringer, Sinkala, Stout, Goldenberg, Acosta, & Chapman, 2003). Therefore efforts should be made to improve the societal beliefs in Balaka district.

Societal cultural and religious beliefs.

The in-depth interviews revealed some cultural and religious beliefs of the society related to utilization of the PMTCT services. The study revealed that, when a person has HIV related illness, the society believes that she has been bewitched and this impression deters utilization of PMTCT services. The study also revealed that religious beliefs in the society hinder implementation of interventions known to reduce mother to child transmission of HIV. People believe that those who believe in God are not supposed to stop breastfeeding their children at an early stage as recommended in WHO guidelines for feeding options (WHO &UNAIDS, 2003). This explains why utilization of the PMTCT services in the quantitative component of the study was low. For example, only 15% (n=15) of the participants weaned their children at 6 months. In this regard, it is clear that cultural and religious beliefs are hindering utilization of PMTCT services among the young adults in Balaka.

These findings are similar to the findings of the studies done in Malawi and Kenya where some PMTCT service providers and community workers cited a wide spread belief in witchcraft and in faith healing as a challenge to utilization of PMTCT services (Colton, 2005 & Munthali, 2006). Their studies reported that once people receive HIV positive results, some visit faith healers, who pray for them and later on claim that they are cured of HIV. As a result they do not seek follow up services and some throw away their NVP doses claiming that they are cured (Colton, 2005 & Munthali, 2006). It is clear that some religious beliefs, together with the belief that HIV

is associated with witchcraft, are posing a greatest challenge to the PMTCT delivery system. It is therefore essential that religious leaders be involved in PMTCT programmes. In addition, utilization of the PMTCT services should be a must for every HIV positive woman.

Perception of the Partner's Beliefs

The qualitative findings indicate that the participants had both positive and negative perceptions of the partner's beliefs. The qualitative data revealed that the partners of few participants had positive beliefs and feelings about utilization of PMTCT services. For example, some participants indicated that it was their partners who encouraged them to get tested. Although it was only a few partners who demonstrated positive beliefs about utilization of the PMTCT services, it is a welcome development because it shows that some men are concerned with maternal and neonatal health issues and particularly with PMTCT programmes.

Partner support was also identified in quantitative data when participants who were escorted to the health facility indicated that presence of their partners positively influenced their decision to utilize the PMTCT services. Male support has been found to increase utilization of the PMTCT services (Chipeta et al., 2009, Kasenga, et al., 2007, & Nyablade and Field-Nguer, 2001). Perhaps this can be attributed to the increased level of knowledge of mother to child transmission among men in Balaka which is currently estimated at 97.6% (NSO & UNICEF, 2008). This also demonstrates the positive outcome of the government's efforts in promoting male involvement since the issue of male involvement is on top of the government's agenda (MoH, 2009). This suggests the need for health workers to encourage males to continue participating in maternal and neonatal health issues in order to promote sustainability of male involvement in maternal and neonatal health issues and in PMTCT activities in particular.

Nevertheless the qualitative results revealed that there are still some men who have negative beliefs and feelings about utilization of PMTCT services. This is evidenced in quantitative component of the study whereby 9% (n=13) of the 143 participants who indicated that their partners were not tested, reported that they were divorced after disclosing their positive HIV status. This is a concern considering the fact that the government of Malawi is currently advocating for more partner support of people who are HIV positive. These results are similar to the results of the study conducted in Chiradzulu district which revealed that all mothers (N=9) in the study, had their families disrupted after they disclosed their HIV positive status. Their partners abandoned them and when some of them (44%) got remarried and disclosed their HIV status, the new partners also left (Njunga, 2008). This explains why some participants in the qualitative component of this study and others in a study conducted in Amhara region in Ethiopia avoided discussing with their husbands their HIV positive status and prevented utilization of PMTCT services (Worku, 2007). The women feared that they could be discriminated against and be abandoned.

Contextual Factors and How they Influence Utilization of PMTCT Services

In order to identify the contextual factors, the participants were asked to indicate if they consulted anybody in order to utilize the PMTCT services, if they were influenced by anybody to utilize the PMTCT services, and if they felt anybody would approve or disapprove utilization of PMTCT services.

Consultation.

The quantitative results revealed that the majority of the participants (85%) did not consult any one to get tested or to utilize the PMTCT services. In addition 93% of the participants indicated that they did not need to get consent from anybody to get tested. This implies that the participants were not influenced by anyone in order for them to utilize the PMTCT services. In addition, most of the young adults indicated

that the absence or presence of their partners during the time they started attending antenatal clinic or during the time of labour and delivery did not influence their decision to utilize the PMTCT services. The results revealed that the woman herself was critical when it came to making decisions to utilize the PMTCT services. This was also emphasized in the qualitative study when some participants indicated that negative societal or partner's beliefs did not in any way influence their decision to utilize the PMTCT services. These results contradict with the findings of the study that was done in Lilongwe which revealed that the women refused to participate in the PMTCT programme citing the need to consult their husbands (Moses, et al., 2008). Unlike the results of Lilongwe study, the results of this study revealed that it is upon the young adult to make use of the available messages that emphasize the importance of utilizing the PMTCT services.

With regard to who the young adults felt would approve or disapprove utilization of PMTCT services, the quantitative results indicate that the majority of the participants did not have anyone that they felt needed to approve or disapprove utilization of PMTCT services. However some participants felt the husband (26%, n=48) and the mother (19%, n=35) would approve utilization of the PMTCT and that the husband (11%, n=20) and the mother (20%, n=37) would disapprove utilization of the PMTCT services. Interestingly, the participants who felt that husband or mother would approve or disapprove utilization of the services indicated that those perceptions did not influence their decision on whether to utilize the PMTCT services. The participants indicated that they made their own decision to utilize the PMTCT services.

From these findings it is clear that utilization of PMTCT services largely depends on the young adult's decision. This finding is in agreement with the findings of the study that was conducted by Engeder and UNFPA in Brazil. This study revealed that women were predominantly the main decision makers when it came to utilization

of PMTCT services (Engender & UNFPA, 2006). This highlights the need to empower the young adults with proper education and counseling so that they can make proper decisions, because utilization of PMTCT services relies upon their decision.

Behaviour (Utilization of PMTCT services)

In this study, the behavior of the participants was measured based on their knowledge and attitude. Therefore, this section will be discussed under the following subheadings: Relationship between knowledge and utilization of the PMTCT services and relationship between attitude and utilization of PMTCT services.

Relationship between Knowledge of PMTCT Services and Utilization of PMTCT Services

As indicated earlier, the quantitative and qualitative results revealed that the participants were knowledgeable on almost all PMTCT guidelines except for issues of primary prevention of HIV such as avoiding pregnancy. However, adherence to PMTCT guidelines was poor. Thus utilization of the PMTCT services was low. This result is similar to the result of the study done in Uganda which revealed that, although the knowledge level of the participants was high (95%) only 14 % of the participants utilized the PMTCT services (Buyongu & Ategeka, 2005). Lack of utilization of PMTCT services results in a 25-50% risk of HIV transmission from an HIV infected mother to her child and increases child mortality (WHO, 2010), while utilization of PMTCT services is associated with high survival rates of HIV-exposed infants. This concurs with the findings of the study that was done in Kenya which found that HIV-exposed infants whose mothers utilized PMTCT services had a significantly higher 24 months HIV survival (59%) than those whose mothers did not utilize the PMTCT services (30%; $p < 0.001$). This calls for PMTCT programme planners to plan explicitly for how the targeted PMTCT services can have a broader primary impact.

Specifically adherence was poor with guidelines related to: feeding practices, using condoms during pregnancy, use of medication, and hospital delivery. Although adherence was better with hospital delivery as compared to other guidelines, the rate of utilization (91%) is still a concern because of the HIV positive status as the PMTCT guidelines recommend that every HIV positive pregnant woman should deliver in the health facility in order to achieve prevention of mother to child transmission of HIV (MoH, 2007).

Feeding practices.

The results of both quantitative and qualitative components of the study indicate that, although the majority of the participants knew that exclusive breastfeeding up to six months and weaning the baby at six months is a way of preventing MTCT of HIV, very few women in this study breastfed their children exclusively for six months. The mean age of introducing supplementary food to the child among the participants was 5 months with others introducing feeds as early as when the baby was one month old. Only 15% of the participants who had children above 6 months stopped breastfeeding their children at 6 months. The majority of the women extended the breastfeeding and practiced mixed feeding in the process. The participants in the qualitative study reported facing tremendous pressure against weaning their babies at six months in the community where they lived. For most mothers, adhering to a PMTCT guideline of early cessation of breastfeeding only

made them the subject of stigma and gossip.

The qualitative results revealed that stigma and discrimination were perceived by the majority of the participants in this study. The participants reported that people in the society looked down upon all those who are HIV positive. They gossip about them and laugh at them wherever they go. These results highlight that HIV and AIDS still remain a source of stigma despite government's efforts to reduce HIV- related stigma.

This explains why majority of the participants in the quantitative study did not adhere to the PMTCT interventions such as that of early cessation of breastfeeding as they were afraid of being known that they are HIV positive. Uptake and adherence to the PMTCT programme can be difficult for women whose society is stigmatizing and not supportive of their participation in the PMTCT programme. It has been well documented that African women face social constraints including stigma and discrimination that limit their power to make independent decisions regarding both own and their children's health care (Medley, Kennedy, Lunyolo, & Sweat, 2009, & Manhart, Dialmy, Ryan, & Mahjour, 2000). Thus, it is difficult for HIV-infected women to seek long-term treatment and care and to attend support programmes for both themselves and their infants without the community supporting them (Medley, Garcia-Moreno, McGill, & Maman, 2004). It is crucial that the government find concrete measures that reduce stigma and discrimination to ensure that utilization of PMTCT services is not affected. Efforts to minimize the stigma associated with HIV should be undertaken through education and empowerment of women as stigma and discrimination are often a result of lack of or incorrect knowledge.

The results of poor adherence to the guideline of exclusive breastfeeding for 6 months are not surprising because research in Malawi has demonstrated that, even though breastfeeding is practiced by almost all mothers (97%), exclusive breastfeeding (EBF) for the first 6 months of life is practiced by only 53% of mothers (MOH, 2007). These results are similar to the findings of the study that was conducted in Chiradzulu district which revealed that mothers introduced soft porridge at around three months and that all women in this study breastfed up to two years (Njunga, 2008). These results also concur with what research has revealed that even when HIV positive mothers go through infant feeding counseling, real care and feeding of the infant is ultimately influenced by circumstances beyond the HIV infected mother's direct control (Njunga,

2008, Leshabari, 2006 & Shapiro, 2003). The reasons for not adhering to the infant feeding guidelines include; socio economic conditions, expectations of partners, mothers in law, extended families, and the community.

According to the modified feeding methods as recommended by WHO, exclusive breastfeeding during the first months of life, and early and abrupt cessation of breastfeeding at 6 months should be practiced by all HIV positive mothers worldwide. Exclusive breastfeeding reduces the risk of HIV transmission (WHO, 2007). It is also recommended that HIV positive mothers use breastmilk substitutes when replacement feeding is acceptable, feasible, affordable, sustainable, and safe (WHO/UNICEF/IATT, 2007, WHO, 2007, & MoH, 2005). Exclusive breastfeeding means that, an infant receives breast milk only for 6 months. The baby should not be given water, formula milk, cereals, and other foods or fluids (MoH, 2007). After six months, mothers need assistance in making optional feeding choices that are feasible in their setting (WHO/UNICEF/IATT, 2007, WHO, 2007, & MoH, 2005). In most developing countries, exclusive breastfeeding is not the norm and promotional activities and support need to be put in place to help mothers adhere to exclusive breastfeeding practices (Bii, Otieno-Nyunya, Siika, & Rotich, 2008). In these countries, extended breastfeeding and mixed feeding are social norms, a fact that has enormous challenges for PMTCT programs. Research in these countries has revealed that women who choose to wean their babies at 6 months, or feed their babies with formula will often mix feed and extend breastfeeding due to social pressure and fear of stigma if their friends discovered their HIV status (Kasenga et al., 2009, Njunga, 2008, WHO, 2007, Leshabari, 2006, & Shapiro, 2003).

These studies document the complexity and difficulty among HIV positive mothers to stick firmly to any of the WHO recommended infant feeding guidelines. This implies that, rather than engaging only the individual mother and expecting that

she would single handedly navigate the societal pressure to mix feed or extend breastfeeding, PMTCT programs should engage community leaders as well as family members to build awareness on infant feeding practices for HIV positive mothers. This will ensure that when the mother chooses a recommended infant feeding regimen, she is able to go back home to a community and family that will support her intentions.

However the qualitative results of this study also revealed that some non governmental organizations such as Community of Sant' Egidio (where Dream health centre is affiliated) are encouraging the practice of mixed feeding and extended breastfeeding in women. This negatively impacts the efforts of the PMTCT programmes because mother to child transmission of HIV will not be reduced if HIV positive women extend breastfeeding and mixfeed in the process. Promotion and support of optimal infant feeding practices should be part of all programmes for the PMTCT of HIV (Kasenga et al., 2009); and it should be universal to all communities. It is unfortunate that women in poor settings have fewer choices when it comes to infant feeding as a majority of them do not even have enough food for themselves. Antenatal counselling for safer infant-feeding practices and postnatal support for the feeding option a woman selects may help ensure adequate nutrition of her child (WHO, 2004). All these need man power, financial, and logistical resources which are currently inadequate in most of the areas where such programmes are being implemented. In rural setting, additional measures should be applied to enable women be accustomed to infant feeding options (Leshabari, Blystad, & Moland, 2007 & Fadnes, Engbrektsen, Wamani, Wangisi, Tumwine, & Tylleskär, 2009).

Practice of condom use during pregnancy.

The results of both quantitative and qualitative components of the study revealed that the majority of the participants were knowledgeable on the guideline of using condoms but very few participants used condoms when they were pregnant. Poor

adherence to condom use is not surprising considering the fact the rate of condom use in the country is at 2% (NSO & UNICEF, 2008). Possibly this highlights the shortfall in the quality of PMTCT counseling sessions in the clinics. This concurs with Munthali, (2006) and Nguyen et al., (2008) who reported that adequate counseling on HIV and PMTCT is often not provided at health facilities. For example, in a study conducted in Vietnam, 30% of the women did not receive any post-test counseling about condom use as a result they were not aware of the importance of using condoms during pregnancy and they did not use them (Nguyen et al., 2008). This suggests the need for the health workers to provide comprehensive counseling to HIV positive women as studies have revealed that counseling has an important role in increasing knowledge and utilization of PMTCT services including condom use (Colton, 2005, Munthali, 2006 & Nguyen et al., 2008).

The qualitative results revealed that some women were unable to utilize the condoms because of myths and misconceptions. This supports what research had found that myths and misconceptions hinder utilization of the PMTCT services (Leonard, Mane, & Rutenberg, 2001 & Moore, 2003). Therefore, this suggests the need to put more efforts in finding ways of mitigating these myths and misconceptions.

It was also revealed in this study that other women did not use condoms when they were pregnant because their husbands did not want them and that others did not reveal their HIV status to their partners. This implies that even though Malawi government has embarked on promoting male involvement in maternal and child health issues (MoH, 2009), some men are still left out. This supports what studies have revealed that men are mostly left out in maternal and child health and in PMTCT issues in particular (Kasenga, Hurting & Emmelin, 2007 & Nyablade & Field–Nguer, 2001). Male involvement has been reported as inadequate in PMTCT communication initiatives (Nyablade & Field-Nguer, 2001, MOH, 2006, WHO, 2007, & Mbonye,

Hansen, Wamono & Magnusesen, 2010). Programmes have largely focused on encouraging women to participate in PMTCT services, but have omitted men who are critical decision makers. Research has suggested that, if men are not informed of the benefits of PMTCT and don't clearly understand the risks to their children, they will not become a supportive force for PMTCT uptake and compliance (Central board of health, 2004).

This fact has been supported by a study conducted in Chiradzulu where men were confronted with the issue of abandoning their wives upon disclosing HIV positive status. In this study, the men interviewed stated a keen interest of getting to know more on issues around PMTCT. They wished to know enough so they are able to explain things and assist their wives. Men explained that receiving knowledge about PMTCT early would help them to improve support given to their wives in adhering to a chosen infant feeding option (Njunga, 2008). Similarly, in a study done in Ethiopia, it was found that couple counseling and testing was favored by a large proportion of men, signifying that it will be an entry point for discussions about HIV in the family (Worku, 2007). Partner participation in VCT and couple counseling was found to increase success of PMTCT programmes (Worku, 2007). This implies that male involvement in PMTCT programmes is critical in promoting utilization of PMTCT services; therefore it has to be strengthened.

Use of medication.

The results of both quantitative and qualitative components of the study revealed that the majority of participants knew that MTCT of HIV can be prevented by giving Nevirapine to the mother and the baby, and by giving ARVs to those mothers whose CD4 count was low. Although many participants were knowledgeable about giving the baby NVP within 72 hours of delivery, not all infants received the drug. Reasons given were that the midwives forgot to give the babies the medicine (common

in most of the rural health facilities, where most of the women reported that they had to remind the midwives to give their babies NVP). This finding is concurrent with the results of the study conducted in Vietnam where it was found that, out of the 52 infants enrolled in the study, only 23% (n=12) of the infants received NVP and the reasons given were that the drug was out of stock. But unlike the midwives in the Vietnam study, the midwives in Balaka demonstrated failure in their duty of providing the medication to the babies. This calls for the health workers to be reminded that they have a moral obligation to discharge their duties with professionalism and follow the code of ethics as determined by their professional guidelines (Nurses and Midwives Council of Malawi, 2008).

With respect to the NVP for the mother, the quantitative results demonstrate that out of 81 participants who received advice on taking NVP at the onset of labour, 64 participants were given the NVP to take at the onset of labour because their CD4 count was high. However, only 40 participants (63% of the participants who were eligible for NVP) took the NVP. The reasons given by those who did not take the NVP were that they forgot to take the pill (80%, n=32) and that labour was quick (20%, n=8). One participant indicated that her NVP tablet was thrown away by her husband when he was cleaning the house. This was one of the participants who indicated in an in-depth interview that she did not disclose her HIV status and her involvement in PMTCT programme to her partner. This suggests that HIV positive mothers in Balaka are supposed to be encouraged to be responsible enough to disclose their HIV status to their partners in order to promote adherence to the medication and the interventions stipulated in PMTCT programme. Studies have revealed that inadequate male partner engagement and participation in PMTCT services, prevents successful implementation of PMTCT programme (Temmerman, Quaghebeur, Mwanyumba, & Mandaliya, 2003 & UNICEF/Ngashi, 2005).

The results of this study indicate that, although knowledge of medication used in PMTCT programme was high, the actual taking of medication was low. From these findings it is obvious as revealed in the qualitative study that utilization of medication provided in PMTCT programme was dependent on a number of factors including: Availability of the drugs at the health facility; the midwives' ability to remember to adminster the drug, willingness of the woman to disclose her HIV status to her partner, and maternal viral load.

The quantitative results of this study indicate that 120 participants (65% of the total sample) did not take the SD-NVP; instead they were put on continuous ARVs because according to the guidelines some were not eligible for single dose NVP (MoH, 2007). However, 59% (n=108) of the participants in this study were enrolled from Dream health centre. The qualitative data revealed that the policy of this facility dictates that, all HIV positive pregnant women are started on continous ARVs regardless of their viral load. This was found to be different from the policy in the government health facilities and other CHAM facilities where women were put on ARVs when CD4 count was less than 350/mm^3. Since 2006, in Malawi the Dream program is proposing Highly Active Antiretroviral Therapy (HAART) to the HIV positive pregnant women to prevent MTCT of HIV. This programme has been found to be safe for both mother and the child, effective in PMTCT and feasible in resource limited settings where caesarean section and formula feeding cannot be widely accessed by the clients (Palombi, et al., 2007). Whether Malawi as a country should adopt this, is an area that needs research.

Delivery at the health facility.

The results revealed that participants knew that an HIV positive woman is supposed to deliver at the health facility so that she can be assisted to have an HIV negative baby. However, out of the 109 participants who indicated that they received

advice on hospital delivery, only 91% of the participants delivered in the health facility. Comparing to other PMTCT guidelines, this is the only area where adherence to PMTCT guidelines was good. This indicates that the rate of skilled attendant at delivery is higher among the people who received advice since the rate of skilled attendant at delivery is estimated at 54% in the country (NSO & UNICEF, 2008). This result supports the findings of the study that was conducted in Tanzania which revealed that there is a high association between knowledge of hospital delivery and utilization of a health facility for delivery services (Magoma, Requejo, Campbell, Cousens & Fillip, 2010). However considering that all infants were supposed to receive NVP after delivery, there was need for all women to deliver at the health facility.

Nevertheless, comparing to the total sample size of 184, the results indicate that only 54% of the participants in this study delivered at the health facility. This demonstrates that there is no improvement in the rate of skilled attendant at delivery from the MICS report of 2006 which also revealed that skilled attendant at delivery is at 54% (NSO & UNICEF, 2008). This is very discouraging considering the fact that government is now emphasizing on the skilled attendance at birth, and has even changed the roles of the traditional birth attendants (MoH, 2009). This implies that, despite the government's efforts to emphasize on skilled attendance at birth, behavior change is very difficult among women of child bearing age. Therefore the results of this study denote that other than knowledge of PMTCT services, there are other factors that influence utilization of the health facility.

Relationship between Attitude and Utilization of PMTCT Services

The quantitative results indicate that only a positive attitude towards HIV counseling and testing translated into positive behavior. This is probably because HIV counseling and testing is being routinely offered to pregnant women in the antenatal clinics (MoH, 2009). However the results further revealed that, not all positive attitude

translated into positive behavior. For example; although many participants had a positive attitude towards exclusive breastfeeding for 6 months, disclosure of an HIV positive status to their partners, and taking NVP at onset of labour, very few participants actually breastfed exclusively for 6 months, disclosed their HIV status and took NVP at onset of labour. This result contradicts with what Ayouba et al., (2003), Bhuiya, (2004), and Buyogo & Ategeka, (2005) reported that attitude towards utilization of PMTCT services determine utilization of PMTCT services by HIV positive mothers. The result also contradicts with the results of a study conducted in Uganda which revealed that the majority of the participants who utilized the PMTCT services had a positive attitude (Buyongo & Atengeka, 2005). However the qualitative results revealed that apart from attitude of an individual towards PMTCT services, utilization of PMTCT services is also influenced by other factors such as, availability of resources.

The Study and the Theory of Reasoned Action

Attitudes and Utilization of PMTCT services

According to the TRA, individuals' attitude towards a behavior is influenced by their knowledge and beliefs about the defined behavior. This notion has been supported in this study considering the fact that generally the participants had good knowledge, positive beliefs, and a positive attitude towards PMTCT guidelines; and in other guidelines, a positive attitude influenced a positive behavior. Similarly where participants had gaps in knowledge such as knowledge about condom use, and a negative belief about the behavior like that of condom use, their attitude was affected and their behavior was also negatively affected. In this case the study results partly support the assumption that an individual's attitude influences her behavior.

However, the study partly contradicts with the notion that attitude influences behavior because in this study, some of the participant's positive attitude towards

utilization of PMTCT guidelines did not positively influence utilization of PMTCT services. This implies that utilization of PMTCT services was not under complete influence of the attitude of the participants. However the qualitative data suggests that apart from attitude, there are other factors that play a role for an individual to engage in a particular behavior.

Subjective norms and Behavior (Utilization of PMTCT Services)

The TRA states that an individual's subjective norms influence one's behavior. Subjective norms which refer to a person's perception of other people's opinion regarding a defined behavior is influenced by a person's belief of how people important to her expect her to behave (normative beliefs) and an individual's willingness to conform to particular norms (motivational to comply) (Lezin, 2007). This assumption is partly supported in the qualitative component of this study. The results indicate that participants were able to identify the positive and negative beliefs of the society and their partners. This indicates that participants perceived how their partners and their society expected them to behave. In addition, the quantitative results revealed that the participants perceived that other people in their society would approve or disapprove utilization of the PMTCT services. For instance some participants felt the partner and mother were likely to approve utilization of PMTCT services and others felt the same partner and mother were more likely to disapprove utilization of PMTCT services. The results indicate that the participant's subjective norms were influenced by the participant's societal and partner's beliefs. Positive beliefs about PMTCT services, made the participants perceive that others would approve utilization of PMTCT services, while negative beliefs about utilization of the PMTCT services made the participants feel others would disapprove utilization.

The results of both quantitative and qualitative components of the study demonstrate that the participants also had to factor in how motivated they were to

comply with the wishes of the society, culture, religion, and the partner. Some of the participants in this study reported that they utilized the PMTCT services at their own will not that they were influenced by anyone or by the perception that somebody would approve utilization of the PMTCT services. Most of them mentioned in the qualitative study that they were able to make their own decisions depending on what they felt was beneficial to their lives and the lives of their babies. Therefore the results of this study support the assumption of the TRA that motivation to comply with the wishes of the significant referents influence an individual's subjective norms.

However the results of both the quantitative and qualitative components of this study indicate that utilization of the PMTCT services by the participants was not influenced by their subjective norms. The participants strongly indicated that their perception of the societal and partner's beliefs and their perception of approval or lack of approval to utilize the PMTCT services did not influence their decision to utilize these services. In this case, the results contradict with the assumption that an individual's behavior is influenced by an individual's subjective norms. Most of them reported that they did not consult anybody before getting tested and others said they did not have anyone in mind that they felt would approve or disapprove utilization of the PMTCT services. These results suggest that it is an individual's motivation to comply that influences behavior.

Summary of the Discussion

This study has discussed some positive findings and enormous problems that raise serious concerns regarding utilization of PMTCT services in young female adults in Balaka. Positive findings include that in general the young adults had adequate knowledge about mother to child transmission of HIV and PMTCT guidelines. They had positive beliefs and attitude towards utilization of PMTCT services, and they were not influenced by anybody in order for them to utilize the PMTCT services.

Negative findings include that the young adults did not have comprehensive information about PMTCT services. Particularly information about primary prevention of HIV infection in women such as abstinence and prevention of unintended pregnancies are not emphasized in the PMTCT messages in Balaka district. In addition, utilization of PMTCT messages was low among the participants. Further, not all positive attitudes translated into positive behavior. Other findings of concern are the lack of male support in PMTCT services, lack of disclosure of HIV status to partners, poverty, and failure of the health workers in providing their duties, and stigma and discrimination of the community towards HIV positive mothers. These negatively affected utilization of PMTCT services in one way or the other.

Limitations of the study

This study has focused on the young adults aged 15-24 years, those who were in the postnatal period. The results do not reflect women outside this age group. Also the study focused on HIV positive women only and those already in PMTCT programme. These participants would have already been motivated. These results may not reflect the knowledge, beliefs, attitude, perceptions, and practices of those people who have not been enrolled into the PMTCT programme and those who are HIV negative. It would be ideal to also enroll those who are HIV positive but have not yet been put into the programme and also those who are HIV negative. This would give a wider understanding of factors that influence utilization of PMTCT services.

Conclusion

This research reveals that there is a wide range of factors that influence utilization of PMTCT services in young adults. These factors include: knowledge, beliefs, attitude, and sociocultural factors. However, inadequate counseling presents a particular concern. Serious concern has been expressed with regard to how well the issue of utilization of PMTCT services in young adults should be handled.

Comprehensive HIV education needs to reach more young people and be sustainable as a prevention initiative as currently the majority of HIV infections in Malawi occur amongst this group. To increase access to PMTCT services among women, especially the young, poor, and least educated, there is a need to empower and reinforce their abilities to make decisions on health seeking, and also to empower men to support their spouses to make good decisions. Other barriers such as fear of having an HIV test and fear of stigma and discrimination should be addressed through appropriate counseling of the young adults.

Culture and traditions have a profound influence on people's lives. In this study, the cultural norms for prolonged breastfeeding and mixed feeding interfered with the adherence to requirements of the prevention of mother to child transmission of HIV programs and challenged the recommended exclusive feeding regimens. The individual woman's decisions to comply with the recommended infant feeding were challenged by a culture and society where people intervened in each others' child rearing activities on a day to day basis. In the end very few, managed to comply with the infant feeding options prescribed by the program. This study argues that a program like PMTCT may simply not deliver unless it is fundamentally responsive to the socio-cultural and economic factors that influence adherence. The success of PMTCT programs will simply depend on its ability to integrate beliefs, values, and practices of different cultural settings into the program design.

Recommendations

The findings pose a great challenge to PMTCT programme planners, policy makers, health and social workers, and midwives in particular. The following recommendations are made:

Educating the Young Adults

With regard to lack of comprehensive knowledge especially about primary

prevention of HIV in women, the young adults require direct health education from health care providers on prevention of mother to child transmission. Emphasis should be on primary prevention of HIV and prevention of unintended pregnancies because these are the most effective ways to reduce the proportion of infants infected by HIV. These two measures can decrease the proportion of infants infected by HIV by 35% to 45% (MOH, 2007). It is recommended that education should not only focus on women with HIV, but also their partners, parents, and the entire community including parents-to-be who do not know their HIV status or who know they are HIV-negative. This is in line with the National HIV and AIDS Policy which recommends that all people should have equal access to culturally sound and age-appropriate HIV and AIDS information and education programmes; which shall include free and accurate information regarding mother to child transmission, breastfeeding, treatment, nutrition, change of life style, safer sex and the importance of respect for and non-discrimination against people living with HIV and AIDS (National AIDS Commission, 2003). Educating the young adults can help to promote understanding of the concept of PMTCT and help to increase the knowledge level of the entire community and promote utilization of PMTCT services.

Strentherning the Role of Home Visiting by Community Nurses and Midwives

In Malawi, although community health nurses are available, home visting by nurses is almost non-existent. Thus the only teaching that most young adults have is from the hospital which in most cases is inadequate. It is therefore suggested that community health nurses should intensify their role of home visiting so that they should be able to go to the community and be able to provide the community with comprehensive information about HIV and PMTCT services. The advantage of home visiting is that it provides private time for asking questions (Perry, Hockenberry, Lowdermilk & Wilson, 2010). This can help to reduce the myths and misconceptions

that have spread in the district that hinder utilization of some of the PMTCT services. Consequently this can help to improve utilization of the PMTCT services by the young adults.

Emphasizing Behaviour Change Interventions

Considering that the main problem of the young adults is compliance to PMTCT services and guidelines, it is recommended that the health workers in Balaka district emphasize on behaviour change interventions. Behaviour Change Intervention (BCI) is the backbone of the primary prevention of mother-to-child transmission of HIV. It refers to an approach used to support an individual's ability to adopt and maintain new behaviours (MoH, 2007). Therefore health workers should ensure that their PMTCT messages emphasize on behaviour change. The aim of this is to modify the practices of the young adults regarding utilization of PMTCT service in Balaka district. Therefore the health workers need to base their communication strategies on the existing knowledge, attitude, and practices among the young adults. In addition, healthcare workers in Balaka should conduct research to explore the factors that hinder the adoption of these behaviours and at the same time look for factors that motivate the young adults to adopt these behaviours.

Improving the Advocacy Role

The health workers through the office of the District Health Officer (DHO) and the District Commissioner (DC) should advocate for increased political, civic, and social commitment and will, to provide the resources needed to engage in behavioural change interventions by ensuring that appropriate policies are put in place. This is in line with the multisectoral approach advocated by the Malawi government (MoH, 2009). It is recommended that the health workers should work with political leaders, NGOs, and civic leaders in Balaka to identify some of the barriers that could be addressed by changes in policy or regulations. This can include issues of stigma and

discrimination, improving access to safe infant feeding options for HIV-infected women, and increasing availability of ARVs and support services for HIV infected women and HIV exposed infants.

Community Mobilization

Since the results of this study have revealed that individuals, frequently intervene in each other's child rearing activities, and that there is a wider spread of stigma and discrimination in Balaka, it is recommended that the health workers in Balaka district should conduct community mobilization on the problem of lack of utilization of the PMTCT services. This will help to promote wider participation of the community and to use social networks to encourage community support, education, and action (Howard-Grabman & Snetro, 2006). This would include disseminating messages about HIV awareness and stigma reduction, support for optimum infant feeding choices, and change of harmful traditional and cultural practices. Community mobilization should also include creating social or religious support groups where religious beliefs that negatively affect utilization of PMTCT services would be discussed and resolved. Links and referral systems should be strengthened between community members, health workers and health centres in order to promote communication and sustainability of the interventions.

Conducting in-service education

It is recommended that, the Balaka DHO management team should conduct an in-service training to PMTCT providers and HIV counsellors to encourage them to provide comprehensive messages about PMTCT services and to impart them with the skills on how they can influence behaviour change in young adults for them to comply with the PMTCT guidelines. The in-service education should also include ethical and professional issues inorder to remind the PMTCT providers to do what is morally and professionally right to HIV positive mothers and their infants. This will help to change

the attitude of these PMTCT providers towards the HIV positive mothers and will help them to be committed in providing comprehensive care and to ensure that they never forget to give medication to the infants.

In addition, it is recommended that the Balaka DHO management should undertake behaviour change communication campaigns on good client management; targeting the health workers in the health facilities. This can act as a wake up call to all the health workers and the midwives and they can be reminded on how best they should take care of HIV positive women and their infants.

Acknowledging Male Participation

Since the findings reveal that some males are supporting utilization of PMTCT services, it is recommended that the health workers in Balaka district and the PMTCT programme planners should identify measures to publicly acknowledge these men and encourage them to continue participating in maternal and neonatal health issues and in PMTCT programme. This can help to motivate more males to support PMTCT activities and promote sustainability of male involvement in maternal and neonatal health issues and in PMTCT activities as advocated by the government of Malawi (MoH, 2009).

However, the low rate of HIV testing among male partners remains a major challenge for the PMTCT programme in Balaka. Innovative approaches to promote male involvement are urgently needed. The PMTCT programme managers in Balaka should address gender-based issues, make antenatal clinics more male-friendly, promote couple counselling and HIV testing, and enhance Information Education Communication (IEC) activities to promote HCT.

Strengthening Monitoring and Evaluation Activities

Since the results reveal that the information and care provided to the young adults is not comprehensive, it is also recommended that the Balaka DHO management

team should strengthen monitoring and evaluation activities to ensure that midwives especially in the rural areas are delivering their duties according to the standards of practice stipulated by the Nurses and Midwives Council of Malawi. The management should also conduct exit interviews in order to get feedback from the services users. This can be one way of evaluating the quality of PMTCT services. Monitoring and evaluation activities are essential to assess the success of district response to HIV and AIDS and guide future strategies and interventions in PMTCT (MoH, 2003). Strengtherning these activities will also help to reinforce utilization of the already existing policies and guidelines on PMTCT services hence promoting provision of comprehensive care to HIV positive women and their infants.

Areas for further study

Replication of this study at a larger scale should be done to further explore factors that influence utilization of the PMTCT services in young adults in Balaka and the entire nation. A study should also be carried out to identify the nature of support required by the young adults to ensure utilization of PMTCT services. Additional research should also be conducted to determine the feasibility of male involvement in PMTCT services and how best to involve the males in PMTCT services.

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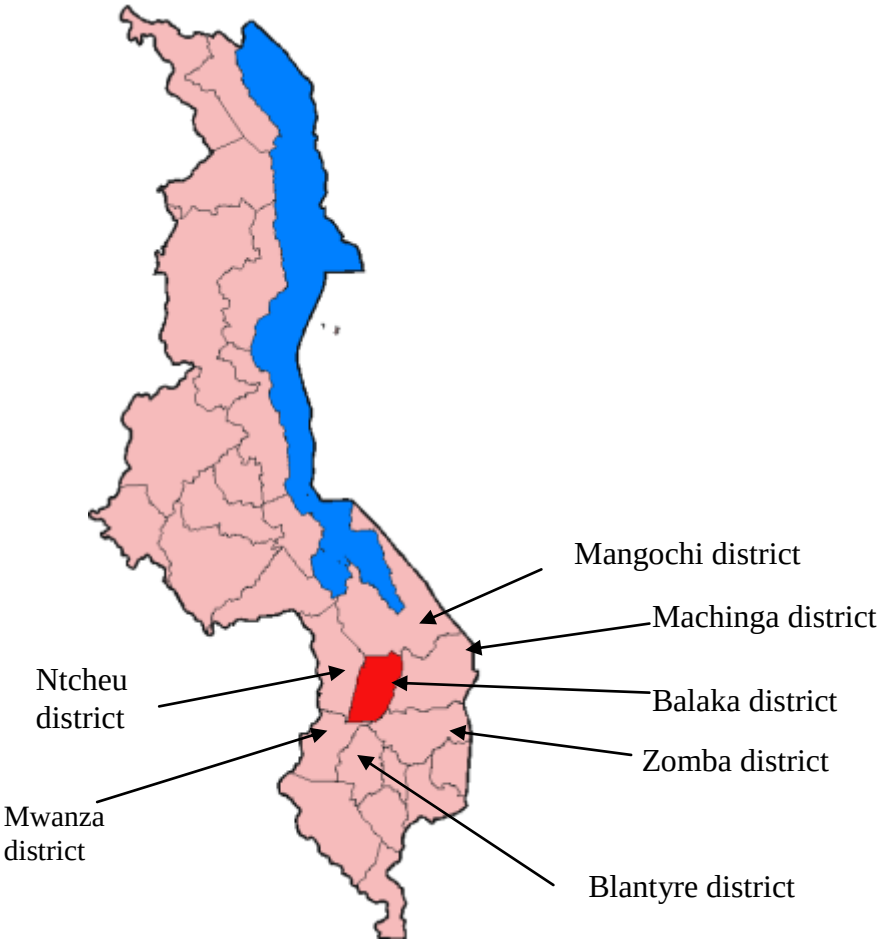
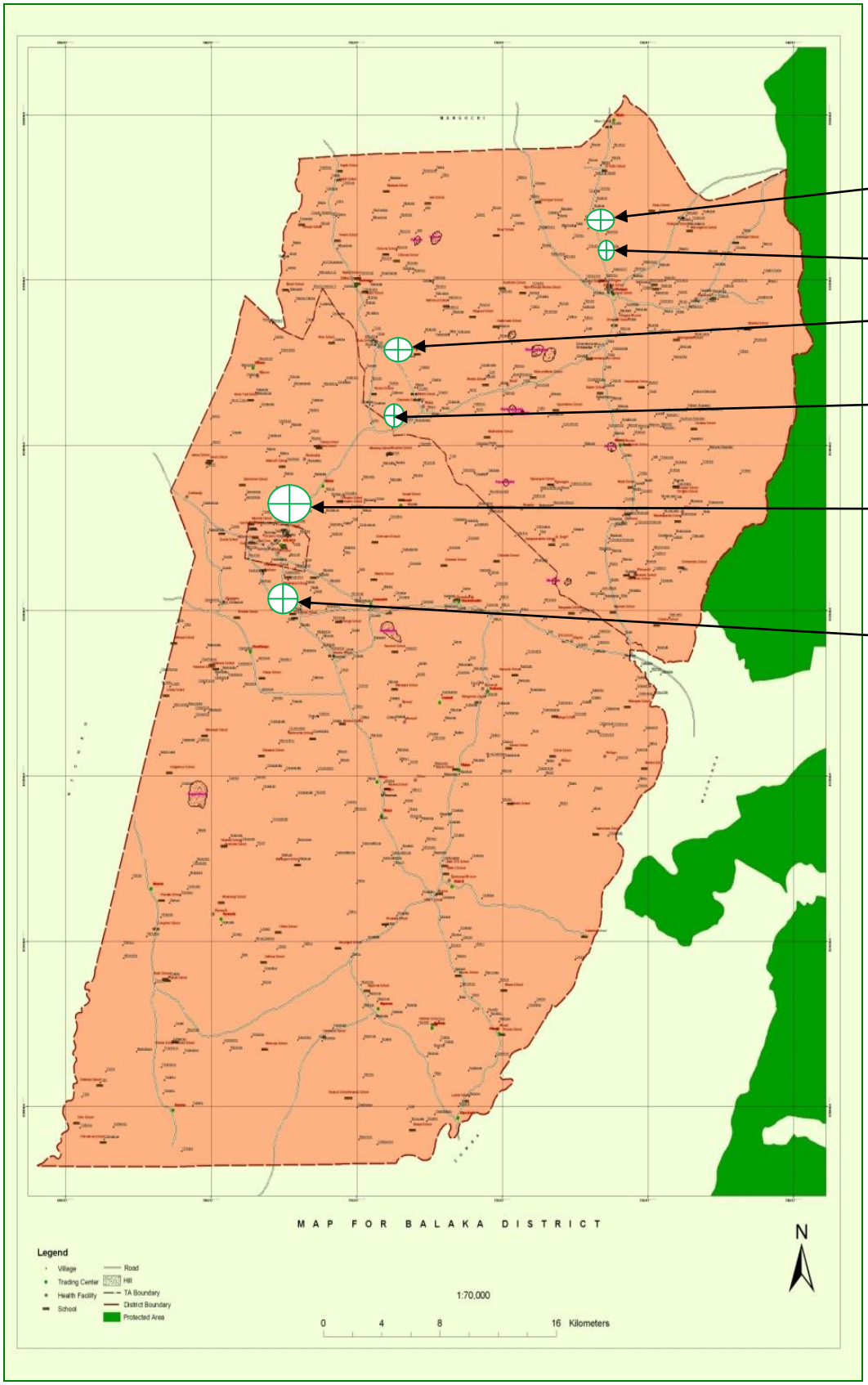
APPENDIX A: MAP OF MALAWI SHOWING BALAKA DISTRICT AND THE NEIBOURING DISTRICTS.



APPENDIX B: MAP OF BALAKA DISTRICT SHOWING DATA COLLECTION SITES



APPENDIX C: QUESTIONNAIRE

Factors that influence utilization of PMTCT guidelines in young female adults

Date of interview ☐☐/☐☐ Day, Month)

Time of interview ☐☐:☐☐ (24 hour time)

Interviewer name _____

Interviewer number ☐☐☐

Respondent ID ☐☐☐

Site code ☐☐

SECTION A: DEMOGRAPHIC AND SOCIOECONOMIC DATA

Now I would like to ask you some questions about your background.

Q. No.	Question	Possible responses and codes	Skip
A.1.	How old are you	…….	
A.2.	What tribe do you belong to?	Yao…….....1 Chewa……..2 Lomwe…….....3 Tumbuka…….....4 Ngoni……..…....5 Sena……..6 Tonga……..…....7 Senga……..….8 Other (specify)…….....9	
A.3.	What languages can you speak well enough to have a conversation?	Yao…….....1 Chewa…….....1 Lomwe…….....1 Tumbuka…….....1 Ngoni……1 Sena……...1 Tonga……...…1 Senga……1 English……..1 Other (specify)……...……1	
A.4.	What is your religion?	Roman Catholic……..…..1 Islam……2 CCAP……..…..3 Baptist…….....4 Anglican……..…..5 Pentecostal……..…..6 Seventh Day Adventist…….....7 Jehovah's Witness…….....8 Church of Christ……..…..9 Other (specify)…….....10	
A.5.	What is your marital status?	Married…….....1 Divorced……...…….....2 Separated……...3 Widowed……..4 Single…….5 Other (specify)……...5	
A.6.	Have you ever attended school?	Yes……1 No…….....2	→ *Skip to A.8.*

A.7.	What is the highest level of your education?	Some primary school……1 Completed primary school……2 Some secondary school……..3 Completed form 4……..4 Tertiary ……5	
A.8.	What is your occupation? *(If multiple circle for the main occupation)*	Teacher……..1 Nurse……2 Accountant……3 Police……4 Business…….....5 Bar / inn worker…….....6 Housewife……..7 Farmer……8 Student……...9 None……...10 Other (specify)……...11	
A.9.	How old is your baby?	…… *If more than 18 months, in eligible*	→ *Stop*
A.10.	How far is your home to the health facility?	Less than a kilometer……..…1 1-2 kilometres……..……2 3-4 kilometres……...3 More than 5 kilometres……4 Other (specify)…….5	
A.12.	What is your usual mode of transport to the health facility? (*Probe for the usual mode of transport if more than one*)	Walk……1 Bus……2 Taxi……...3 Own car……4 Hired car……...5 Bicycle hire……..6 Other (specify)…….…7 ……..	
A.13.	How much money do you get per month	……	
A.14.	Where do you get money to support yourself and the baby?	Self……...1 Husband/partner……...2 Parents……..3 Other (specify)…….….4	

SECTION B: KNOWLEDGE ON PMTCT SERVICES

The government has introduced interventions that it (the government) thinks would help to reduce incidences of passing HIV from an HIV positive mother to her baby. Now, I would like to ask you some questions related to what you know about PMTCT services.

.1.	Have you ever heard of PMTCT?	Yes……1 No…….....2	→*Skip to B.4.*
B.2.	If yes, from whom did you hear this message? (*Circle all that apply*)	At the ANC…….....1 Health workers…….…….....1 Neighbors……..…..1 Mother……...…....1 Father…….....1 In-laws……..…..1 Relatives……..…...1 Close friend……..……..1 Radio……..……1 Other (specify)……...1	
B.3.	What have you heard about PMTCT?	Interventions to reduce MTCT…….....1 HIV testing and counseling……...…1 Safer delivery practices…….....1 Safe infant feeding practices…….....1 No breastfeeding in HIV……....1 Other (specify) ……...…...1 Don't know……...…….....1	
B.4.	Is it possible for an HIV positive pregnant woman to bear an HIV negative child	Yes……...……1 No…….……2 Don't know…….....88	
B.5.	When can an HIV infected mother pass the virus to the baby?	During pregnancy……..……...…1 During delivery……...……...1 During breastfeeding……1 Don't know…….....…1 Other (specify)…….....…1	
B.6.	What can an HIV positive young pregnant woman do to prevent passing HIV to the baby?	Avoiding pregnancy…….....…1 Starting antenatal care…….....…1 Taking ARVs or NVP for prophylaxis at on set of labor….....1 Giving the baby NVP within 72 hours after delivery……..……...…1 Not breastfeeding the baby……...……1 Practicing exclusive breastfeeding……..1 Practicing mixed feeding……...…...…1 Other (specify)……...1	
B.7.	In this area where can a pregnant woman access PMTCT services	Balaka district hospital…….……1 Government health centre.……....1 CHAM health centre…….....1 NGO health facility……...…1 Other (specify)……...1 Don't know……...……1	

B.8.	Tell me how the medicines that are offered in PMTCT programme work. (*Circle all that apply)*	Provide complete cure for HIVinfection and AIDS……..1 Help people with HIV to live longer….1 Lower the risk that an HIV positive mother will transmit the virus to her child……...1 Lower the risk that HIV positive women can transmit the virus to their partners..1 Other (specify)……...1 Don't know……...……1	

SECTION C: ATTITUDES OF YOUNG ADULTS ON PMTCT SERVICES

Now I would like to know your feelings about PMTCT services.

C.1.	The MOH recommends that every pregnant woman should be tested for HIV and given NVP if she is found to be HIV positive or be started on ART if her CD4 count is low. I would like to ask your opinion on certain topics related to PMTCT. I. Do you think it is necessary for a pregnant woman to: • Have an HIV test • Tell her husband or partner if she tested positive • Receive NVP tablet when tested positive? • Give the baby NVP after delivery? II. Do you think drugs used in PMTCT provide complete cure to HIV in mother and baby? III. Is it necessary for HCT to be mandatory? a. If yes, why? b. If no, why not	Yes……..No……Don't know 1……2……..88 1……2……..88 1……2……..88 1……2……..88 1……2……..88 1……2……..88 a…… …… …… b…… …….. ……..	

C.2	Do you think it is necessary for an HIV positive woman to utilize PMTCT services?	Yes……..1 No……...2 Don't know……...88	.
C.3.	Give reasons for your answer?	…… …… ……	

SECTION D: UTILIZATION OF PMTCT SERVICES

Now I would like to know what you have gone through as far as utilization of PMTCT services is concerned.

D.1 .	Did you attend antenatal clinic when you were pregnant?	Yes…….....1 No……..……2	→*Skip to D.3*
D.2	If no, Why not?	Poor midwives' attitudes…….....1 ANC very far away ……....…1 See no need……..…....1 Other (specify)……...…....1	
D.3.	How many months pregnant were you when you first attended antenatal clinic?	…….	
D.4.	From whom did you receive antenatal care?	A Midwife……..……....1 A Doctor……..……...1 A Traditional birth attendant……..……1 A Health surveillance assistant……..1 Other (specify)……...1	
D.5.	After you tested positive were you given any advice on how you can prevent MTCT of HIV	Yes……....1 No…….…2 I have forgotten…….…3 Other (specify)……..4 …… ……	
D.6.	What kind of advice were you given on PMTCT of HIV? (*Circle all that apply*)	No breastfeeding if can afford……..1 Use of condoms……1 Exclusive breasfeeding up to 6months.1 Abrupt weaning……1 Hospital delivery……..1 Ceasarian section is in PMTCT……1 To take NVP at onset of labor……..1 To give baby NVP after delivery……..1 To start taking Bactrim……1 To start taking ZDV……..1 Disclosure of HIV status to husband or partner……...1 Other (specify)…….....1 ……	

D.7.	Of all the advice you were given which ones were you able follow? (*Circle all that apply)*	No breastfeeding if can afford……...1 Use of condoms……1 Exclusive breasfeeding up to 6months..1 Abrupt weaning……1 Hospital delivery……...1 Ceasarian section is in PMTCT…….1 To take NVP at onset of labor……...1 To give baby NVP after delivery……...1 To start taking Bactrim……..1 To start taking ZDV…….....1 Disclosure of HIV status to husband or partner……...1 Other (specify)……..1 ……..	
D.8.	Which ones did you not follow? (*Circle all that apply)*	No breastfeeding if can afford……...1 Use of condoms……1 Exclusive breasfeeding up to 6months..1 Abrupt weaning……1 Hospital delivery……...1 Ceasarian section is in PMTCT……1 To take NVP at onset of labor……...1 To give baby NVP after delivery……...1 To start taking Bactrim……1 To start taking ZDV……...1 Disclosure of HIV status to husband or partner……1 Other (specify)……...1	
D.9.	After learning your HIV test result, did you personally make any changes to your sexual behavior?	Yes……1 No…….2 Refuse to answer……...3	→ *If 2 and 3 skip to D. 11*
D.10.	What changes did you make to your sexual behavior? (Circle all that apply)	Abstaining……1 Reduced number of sexual partners…..1 Started using condoms……..1 Ended risky relationships……..1 Divorced……1 Got married……1 Other (specify)……..……1	
D.11.	Did your husband /partner get tested of HIV	Yes……1 No……..2 Don't know……..…88	→ *Skip to D. 13*
D.12.	Did he share his HIV test result with you?	Yes ……1 No……...2	

D.13.	When you tested postive, did you receive the following:	Bactrim……..….1 Nevirapine (NVP)…….….1 ARVs…….….1 Nothing…….….1	
D.14.	If no, why?	I was not given…….…..1 They were not there……...2 I did not want…….....3 Needed to consult partner……..……4 Other (specify)……..….5 …….	
D.15.	Did you tell your husband or partner about your HIV test result?	Yes…….…...1 No…….……2	
D.16	If no, whom did youtell about your HIV test result	Mother……...1 Father……1 Relative……..1 Closefriend……1 Noone else……..1 Other specify…….….1	→*Skip to D.21*
D.17.	What encouraged you to tell your husband your HIV test result?	To gain his support……....1 That he can also get tested…….....1 That he should know my status….....1 Other (specify)……..…....1 …….	
D.18.	When you told your husband or partner about your HIV positive result, what was his reaction	Supportive…….....1 Understanding…….…..1 Did not believe…….....1 He beaten me…..……...…1 Sad and depressed……..……..1 Other (specify)…….....1	
D.19.	Who else did you tell about the HIV result? (*Circle all that apply*)	Mother…….……1 Father……....1 Relative……..…..1 Close friend…….....1 Church elder……...…...1 No one else…..……...…...1 Other (specify)……...1	→*Skip to D.22*
D.20.	Why did you tell that person	I trust him/her…….…...1 I knew she/he could keep the matter confidential……...2 She/he is my best friend……....3 Other (specify)…….….4	→*All of these skip to D.22*
D.21.	Why is it that you didn't tell anyone about your HIV test result?	Saw no need…….....1 I didn't trust any one……2 I just didn't want……...3 Other (specify)……..4 ……	

D.22.	Where did you deliver your baby?	At health facility……..…....1 At home……..……..2 At traditional birth attendant…….…....3 On the way to hospital……..4 Other (specify)……..……....5	
D.23.	What made you deliver at that place? (*Circle all that apply*)	To get PMTCT services……...…..1 Health providers are good……....1 I had no transport money……..…....1 It was too late to get to hospital…..…...1 Poor attitudes of staff at hospital…...…1 To serve the life of my baby……...…1 To get adequate care……..……1 Other (specify)……..…....1	
D.24.	Did you take NVP tablet at onset of labor?	Yes…….1 No……..2	→*Skip to D.26*
D.25.	If no why?	I forgot to take the tablet……...1 I was not sure it was true labor……..…..2 I did not want……....3 I was not told……..4 Other (specify)……...…5	
D.26	Was your baby given NVP after delivery?	Yes ……1 No……..2 Don't know……3	→*Skip to D.28*
D.27.	When was the baby given NVP?	……	
D.28.	Did you ever breastfeed your baby?	Yes……..….1 No……...2	→*Skip to D.30*
D.29.	Are you breastfeeding your baby now?	Yes……..1 No……...2	
D.30	What other food is the baby taking?	…… ……	→ *If nothing, skip to E.1*
D.31.	How many months was your baby when you introduced other feeds to the baby?	…….	

D.32.	How old was your baby when you stopped him/her from breast feeding?	Age in months……..……..…1 Still breast feding……..…2	
D.33.	How was weaning done, abruptly or slowly?	Abrupt……..…….1 Slowly……..…….2	

SECTION E: SUBJECTIVE NORMS AND THEIR INFLUENCE ON UTILIZATION OF PMTCT GUIDELINES.

Now I would like to know how other people assisted you in making decision about utilization of PMTCT guidelines.

E.1.	Before you got tested, whom did you consult to have an HIV test?	Husband/partner……..…….…...1 Mother…….....….1 Father……..…..1 Close friend……..1 Uncle…….....1 Reverend/church elder……..…..1 VG headman……...…1 Mother /Father in-law…..……..…...1 Brother /Sister in-law……...1 None……1 Other (specify)……..… …….. ……..	→*Skip to E.3*
E.2.	Why did you consult that person?	…….... …… …… …… …… ……	
E.3.	Did you need to get consent from someone before getting tested?	Yes…….……...1 No……..……...2	→*Skip to E.5*
E.4.	If yes, who should give consent?	Husband……..……1 Mother……..…….....1 Father……..…1 Close friend……...…….....1 Uncle…….....1 Reverend/church elder…….....1 No body……..……...1 Mother /Father in-law……..…….....1 Brother /Sister in-law……..…….....1 Other (specify)……....……..1	

E.5.	Before taking the advice on PMTCT services, whom, if any did you have in mind that would approve your decision?	Husband/partner……..…….....1 Mother…….....…..1 Father…….…...1 Close friend…….…..1 Uncle…….....1 Reverend/church elder……..…...1 VG headman…….....…1 Mother /Father in-law…..……..…....1 Brother /Sister in-law……....1 None……..…1 Other (specify)……..…1	
E.6.	Before taking any advice on PMTCT services, whom if any did you have in mind that would have disapprove your decision to utilize the PMTCT services? *(Circle all that apply)*	Husband……1 Mother…….....1 Father…….....1 Close friend……..…….....1 Uncle…….....1 Reverend/church elder…….....1 No body…….....1 Mother /Father in-law…….....1 Brother /Sister in-law…….....1 Other (specify)……...1	

SECTION F: OTHER CONTEXUAL FACTORS THAT INFLUENCE UTILIZATION OF PMTCT GUIDELINES

Now I would like to know some other factors that influenced utilization of PMTCT guidelines

F.1.	Did your husband accompany you to the antenatal clinic during pregnancy of this baby?	Yes…….……..…1 No…….…..2	→*Skip to F.4*
F.2.	Do you feel his presence at the antanatal clinic influenced your decision on utilization of PMTCT services?	Yes…….……1 No……...……2 Don't know……88	
F.3.	Give reasons to your answer	…… …… ……	→*Skip to F.6*

F.4.	If your partner was present at the antanatal clinic, do you think his presence would inflence your decision to utilize PMTCT guidelines or not?	Yes…….1 No……..2 Don't know……..88	
F.5.	Give reasons to your answer	…… …… ……	
F.6.	Did your husband accompany you to the labor ward during the time of delivery of this baby	Yes……..…1 No……..2	→*Skip to F.9*
F.7.	Do you think the presence of your partner during labor and delivery influenced your decision on utilization of PMTCT services?	Yes…….…….1 No……...……2 Don't know……88	
F.8.	Give reasons to your answer	…… …… ……	→*Skip to F.11.*
F.9.	If your husband/ partner was present during labor and delivery, do you think his presence would influence your decision on utilization of PMTCT services?	Yes……..…1 No……..2 Don't know……88	
F.10.	Give reasons to your answer	…… …… ……	
F.11.	What did you like most about PMTCT services	…….. …….. ……..	
F.12.	What did you dislike most about PMTCT services?	…… ……	
F.13.	Can you recommend PMTCT services to your friend in your village or community?	Yes……1 No…….2	
F.14.	Give reasons to your answer	…… …… ……	

APPENDIX D: INTERVIEW QUESTIONING GUIDE FOR INFORMANTS

Interview questioning guide for informants

Now I would like you to tell me what you know about PMTCT, your feelings about PMTCT and what you have done or gone through when you were pregnant, during labor and delivery and during postnatal period in relation to PMTCT. I would also like to have your views on factors that can promote or hinder utilization of PMTCT services and how best PMTCT services can be made accessible to the young adults.

A. Tell me what you know about PMTCT

1. What have you ever heard about PMTCT?

Probes:

- What do people say are the advantages of using PMTCT services
- What do people say are the disadvantages of using PMTCT services

B. I would like to know your beliefs about PMTCT guidelines**.**

1. What are the people's beliefs about PMTCT?
2. How were the other people's beliefs important to you?
3. When you were pregnant, before starting attending ANC, What were your beliefs about PMTCT services?

Probes:

What were your beliefs about:

- Having an HIV test,
- Condom use during pregnancy
- NVP drugs

What do people say about PMTCT services?

What were the feelings of your partner about having an HIV test and PMTCT services

What are your feelings now about utilization of PMTCT services

C. Now I would like to know what you have gone through during pregnancy, labor and delivery and during postnatal as far as PMTCT is concerned.

1. Did you say you attended antenatal care?

Probe:

- What motivated you to attend antenatal care

- How was the decision to attend antenatal clinic made?

2. Tell me your experiences about HIV counseling and testing.

Probes:

- Did you understand the information you were given?
- Were you given chance to ask questions?
- How was your privacy and confidentiality maintained?

D. Now I would like you to tell me what you think would influence the young adult like you to utilize or to refuse utilizing PMTCT guidelines?

1. From your experience, what do you think can:
   - Motivate the young adults to utilize the PMTCT services
   - Demotivate the young adult to utilize the PMTCT services

Probes:

2. Who do you think has an influence on young adult's decision to utilize the PMTCT services?
3. Who has more influence on the young adult's decision to utilize the PMTCT services?
4. Why is this so?

E. What do you think can be done to improve utilization of PMTCT services by the young adults?

F. Is there anything else you want to tell me about PMTCT?

MAFUNSO

Zomwe zingapangise mayi wa chichepere kuti agwiritse ntchito ndondomeko ya boma yochepetsa mpata woti mayi amene ali ndi kachilombo ka HIV apatsire mwana wake kachiromboka

Tsiku lofunsa mafunso ☐☐ / ☐☐ (day, month)

Nthawi yofunsa mafunso ☐☐ : ☐☐ (24 hour time)

Dzina la ofunsa mafunso _____

Nambala ya ofunsa mafunso ☐☐☐

Nambala ya oyankha mafunso ☐☐☐

Nambala ya malo ofunsira mafunso ☐☐

GAWO LOYAMBA: MBIRI YA OYANKHA MAFUNSO

Tsopano ndikufunsani mafunso okhuza mbiri yanu

Nambala	Funso	Mayankho	Kudumpha
A.1.	Muli ndi zaka zingati	……	
A.2.	Ndinu a mtudu wanji?	Yao…….....1 Chewa…….....2 Lomwe…….....3 Tumbuka…….....4 Ngoni…….....…..5 Sena…….....6 Tonga……...…..7 Senga…….... .…8 Zina (tchulani)…….... ...9	
A.3.	Kodi ndi zilankhulo ziti zimene mukhoza kuyankhula bwinobwino?	Yao…….....1 Chewa…….....1 Lomwe…….....1 Tumbuka…….....1 Ngoni…….....1 Sena……..1 Tonga……...…1 Senga……..…1 Chingerezi..……..1 Zina (thulani)……....……...1	
A.4.	Ndinu a chipembezo chanji?	Katolika……..…..1 Chisilamu…….2 CCAP……...……..…..3 Bapatisiti…….....4 Angliani……..…..5 Pentecosite……..…..6 Seventh Day Adventist…...…….....7 Mboni za Yehova…….....8 Church of Christ...……..…..9 Zina (tchulani)……...……. 10	
A.5.	Kodi muli pa banja?	Wa pa banja…….....1 Ukwati unatha..……...……....2 Tinanyanyalisana..…… ....3 Mwamuna Anamwalira…...……4 Wosakwatiwa……5 Zina (tchulani)…...……....6 …….	
A.6.	Kodi munayamba mwayimbapo sukulu	Inde…..……1 Ayi……..…….....2	→ Pitani ku *A.8.*

A.7.	Sukuluyo mudalekeza pati?	Pulayimale, pang'ono……1 Ndidamaliza pulayimale…….2 Pang'ono sekondale school……...3 Ndidamaliza form 4…….……..4 Koleji.. ……..…….5	
A.8.	Kodi mumagwira ntchito yanji? *(Fufuzani ntchito yeni yeni)*	Mphunzitsi…..……..1 Namwino……...…….2 Wowerengera za chuma ……3 Wosungisa bata pa malo…….4 Bizinesi…….…….....5 Wogwira ntchito malo omwera mowa...6 Mayi wa panyumba…..……..7 Ulimi……..…….……8 Wa pa sukulu...……...9 Sindili pa ntchito...……...10 Zina (tchulani)…...……...11	
A.9.	Mwana wanu ndi wa mkulu bwanji?	……. *Ngati wapitilira miyezi 18, mayiyo ndi wosayenera mukafukufuku*	→ *Imani*
A.10.	Mumayenda mtunda wa utali bwanji kuchoka kunyumba kwanu kukafika ku chipatala?	Osakwana mameta chikwi……...…...…1 Mameta chikwi chimodzi-ziwiri……2 Mameta zikwi zitatu-zinayi……...3 Kupyola mameta zikwi zisanu...……4 Zina (tchulani)…...…….5	
A.11.	Ndinjira yanji ya mayendedwe yomwe mumagwiritsa ntchito nthawi zonse popita ku chipatala? (*Fufuzani njira yeni yeni ya mayendedwe)*	Kuyenda pansi……...……1 Galimoto yonyamula anthu……2 Takisii……..……...3 Galimoto ya kunyumba ……4 Galimoto ya hayala…….……...5 Njinga ya hayala……...……..6 Zina (tchulani)…….…….….7	
A.12.	Pa ulendo umodzi, mumalipira ndalama zingati?	……..	
A.13.	Mumapeza ndalama zingati pa mwezi?	……	
A.14.	Kodi mumapeza kuti chithandizo cha inu ndi ndi mwana wanu?	Ndekha……...1 Amunanga……...……...2 Makolo anga…….……..3 Kwina (tchulani)……4	

GAWO LA CHIWIRI: ZOMWE OYANKHA MAFUNSO AKUDZIWA PA ZANDONDOMEKO YOCHEPETSA KUFALA KWA HIV KUCHOKERA KWA MAYI KUPITA KWA MWANA

Boma linakhazikitsa ndondomeko yochepetsa kufala kwa HIV kuchokera kwa mayi yemwe ali ndi kachiromboka kupita kwa mwana. Tsopano ndikufunsani mafunso okhuza ndondomeko yotetezera ana kuti asatengere HIV kuchokera kwa mayi.

B.1.	Munamvapo zotani za ndondomeko yotetezera mwana kutengera HIV kwa mayi wake?	Eya……....1 Ayi……..……....2	→*Pitani ku B.4.*
B.2.	Munamva kuchokera kwa ndani?	Kusikero……..1 Ogwira ntchito ku chipatala……...…1 Oyandikana nawo nyumba……..…1 Amayi anga……..……..……1 Abambo anga……..…….....1 Alamu…….……..……..…1 Achibale…….……..……....1 Mnzanga wa pamtima……..…..….1 Pa wayilesi…….……..…1 Kwina (tchulani)…….1 …… …… ……	
B.3.	Munamva zotani za ndondomekoyi?	Njira yotetezera mayi kupatsira mwana HIV……..1 Uphungu ndi kuyezetsa magazi……...1 Kuchira koteteza mwana……..……...1 Kudyetsa mwana koyenera……..…....1 Osayamwitsa mwana ngati uli ndi HIV……..1 Zina (tchulani) …….....1 Sindikudziwa……...1 …… …… …… …… ……..	
B.4.	Kodi ndi zotheka kuti mayi yemwe ali ndi HIV abereke mwana amene alibe kachirombo ka HIV?	Inde……..…1 Ayi…….…..2 Sindikudziwa……..88	
B.5.	Kodi ndi nthawi iti imene mwana angatengere HIV kwa mayi ake?	Pamene mayi ali oyembekezera…….1 Nthawi yochira..……....…....1 Poyamwitsa……...……..……...1 Sidzikudziwa…….……..…..…..1 Zina (tchulani).……..…..…...1 …… …… …… …… …… ……	

B.6.	Kodi mayi woyembekezera yemwe ali ndi ka chirombo ka HIV angatani kuti asapatsire mwana ka chirombo ka HIV?	Apewe kutenga mimba..……...…1 Ayambe sikelo ya amayi a pakati……..1 Amwe mankhwala oteteza kupatsira mwana HIV a NVP……....1 Kumupatsanso mwanayo akabadwa Mankhwalawa……...……. …..1 Asamuyamwitse mwanayo……...…….1 Ayamwitse mwakathithi…….…...1 Aphatikize kuyamwitsa ndi zakudya zina…….…1 Zina (zicthuleni)…….……1 …….	
B.7.	Kodi kudela lino, amayi oyembekezera angakapeze kuti njira zotetezera mwana kuti asatengere kachirombo ka HIV kuchokera kwa mayi ake?	Chipatala cha Balaka……..1 Zipatala zazing'ono za boma…….1 Zipatala za mishoni……....1 Zipatala za mabungwe omwe si aboma…….……1 Kwina (kutchuleni).……...1 Sindikudziwa……...……..1	
B.8.	Kodi mankhwala amene akuperekedwa kuti mwana asatengere HIV wa amagwira ntchito bwanji?	Amachiza matenda a HIV/ AIDS…….1 Amathandiza anthu kukhala ndi moyo wautali……1 Amachepetsa kuopsa mpata woti mayi apatsire mwana wake HIV…….1 Amateteza abambo kutengera HIV kwa akazi awo……1 Zina (tchulani)……1 Sindikudziwa……..1	

GAWO LA CHITATU: MAGANIZO A AMAYI ACHICHEPERE PA NDONDOMEKO YOCHOPETSA KUFALA KWA HIV KUCHOKERA KWA MAYI KUPITA KWA MWANA.

Tsopano ndikufuna kudziwa maganizo anu pa ndondomeko yochepetsa kufala kwa HIV kuchokera kwa mayi kupita kwa mwana.

C.1.	Boma lidakhazikitsa ndondomeko yoti amayi onse oyembekezera ayezedwe magazi a HIV ndi kupatsidwa mankhwala a NVP kapena kuyambitsidwa mankhwala a AIDS ngati chitetezo chawo chatsika. Ndikufuna kudziwa maganizo anu pa ndondomeko imeneyi. Kodi mukuganiza kuti ndi zoyenera kuti mayi oyembekezera: • Ayezedwe magazi owona ngati ali ndi HIV • Awuze mwamuna wake kuti ali ndi HIV • Alandire ndikumwa mankhwalawa ngati ali ndi HIV • Apatse mankhwalawa mwana wake akabadwa II. Kodi mankhwala a mundondomekoyi amachiziratu mayi ndi mwana ku ka chirombo ka HIV? III. Kodi ndi zoyenera kuti kuyeza magaziku kuchitike kwa mayi aliyense amene ndi oyembekezera, afune kapena asafune a. Ngati inde, chifukwa chiyani? b. Ngati ayi, chifukwa chiyani zisakhale choncho	Inde…….Ayi……Sindikudziwa 1……2…….88 1……2…….88 1……2…….88 1……2…….88 1……2……..88 1……2…….88 a …… ……. ……. b…… …….. ……..	
C.2	Kodi ndikoyenera kuti mayi amene ali ndi HIV ayamwitse mwana wake?	Eya……...1 Ayi……2 Sindikudziwa……..88	
C.3.	Perekani chifukwa pa yankho lanu.	…… …… ……...	

GAWO LA CHINAYI: KAGWIRITSIDWE NTCHITO KA NDONDOMEKO YOCHEPETSA KUFALA KWA HIV KUCHOKERA KWA MAYI KUPITA KWA MWANA

Tsopano ndikufuna kudziwa zomwe mwakomana nazo zokhuza ndondomeko yochepetsa kufala kwa HIV kuchokera kwa mayi kupita kwa mwana.

D.1 .	Panthawi imene munali oyembekezera, munkapita ku sikelo ya amayi oyembekezera?	Inde……..……...1 Ayi……..……2	→*Pitani ku D.3*
D.2	Ngati ayi, chifukwa chani?	Kuopa makhalidwe oyipa a anamwino…….……..1 Kunali kutali……..…….……1 Zinali zosafunikira……..…....1 Zina (Zitchuleni)…….…..……..1	
D.3.	Munali oyembekezera kwa miyezi ingati pamene mumakayamba sikelo	……..	
D.4.	Kusikelo chithandizo munalandira kuchokera kwa ndani?	Anamwino..……...……...1 A dokotala……...…….…1 Azamba……...…….…1 Azaumoyo……...……...…..1 Zina (zitchuleni)…….....1	
D.5.	Mutapezaka ndi ka chirombo, munapatsidwa uphungu wa mmene mungachepetsere kufalitsa ka chiromboka kwa mwana?	Eya…….……...1 Ayi…….……2 Ndayiwala…….……3 Zina (tchulani)…..…….4	
D.6.	Munalandira uphungu wanji? *(zunguzani monse moyenerera)*	Osayamwitsa ngati ndikotheka..……..1 Kugwiritsa ntchito makondomu……1 Kuyamwitsa mwa kathithi kwa miyezi 6..1 Kusiyitsa kuyamwa modzidzimutsa……1 Kuchilira ku chipatala…..……..1 Kuchira ndi mpeni…….1 Kumwa NVP matenda akayamba..……...1 Kupatsa mwana NVP akabadwa…..……..1 Kuyamba kumwa Bakitilimu...……..…1 Kuyamba kumwa ZDV……..1 Kufunika kowaululira abambo ngati mayi ali ndi kachirombo ka HIV……1 Zina (tchulani)…….…….1	

D.7.	Pa uphungu onse mudalandirawu, ndi ziti zomwe mudakwanitsa kutsatira? *(zunguzani zonse zoyenera)*	Osayamwitsa ngati ndikotheka...……...1 Kugwiritsa ntchito makondomu……1 Kuyamwitsa mwa kathithi kwa miyezi 6...1 Kusiyitsa kuyamwa modzidzimutsa.…….1 Kuchilira ku chipatala…..……...1 Kuchira ndi mpeni……..1 Kumwa NVP matenda akayamba..……....1 Kupatsa mwana NVP akabadwa…..……...1 Kuyamba kumwa Bakitilimu...……..1 Kuyamba kumwa ZDV……..…1 Kudziwitsa abambo akunyumba……....1 Zina (tchulani)…….……..1	
D.8.	Nanga ndi ziti zomwe zinapezeka kuti zinali zovuta kwa inu kuti mutsatire?	Osayamwitsa ngati ndikotheka...……..1 Kugwiritsa ntchito makondomu……1 Kuyamwitsa mwa kathithi kwa miyezi 6..1 Kusiyitsa kuyamwa modzidzimutsa……..…….……1 Kuchilira ku chipatala…..……...1 Kuchira ndi mpeni……..…1 Kumwa NVP matenda akayamba..……...1 Kupatsa mwana NVP akabadwa…….…..…1 Kuyamba kumwa Bakitilimu...……..…1 Kuyamba kumwa ZDV……...…...1 Zina (tchulani)…….……..1 ……. …….	
D.9.	Mutamva zotsatira za magazi anu, inuyo panokha munayamba mwasinthapo khalidwe lanu logonana?	Eya…….……...1 Ayi…….……2 Osafuna kuyankha…..……3	*→Ngati 2 ndi 3 pitani ku D.11*
D.10.	Khalidwe lanu logonana linasintha bwanji?	Ndinayamba kudziletsa……..1 Kuchepetsa anthu ogonana nawo……...2 Ndinayamba kugwiritsa ntchito makondomu……3 Kuthetsa maubwenzi achisawawa……..4 Kuthetsa ukwati…….……5 Ndinakwatiwa……6 Zina (tchulani)……...…..…7	
D.11.	Kodi amuna anu anayezetsa magazi awo kuona ngati ali ndi kachirombo ka HIV	Eya…….……...1 Ayi…….……2 Sindikudziwa……88	*→ pitani ku D.13*
D.12.	Nanga amuna anuwo ankuuzani zotsatira za magazi awo?	Eya…….……...1 Ayi…….……2	

D.13.	Mutapezeka ndi kachirombo, mulandira izi:	Bakitilimu……1 Nevirapini (NVP)……1 ARvs……1 Other (specify)……...1	
D.14.	Ngati ayi, chifukwa chani?	Sanandipatse……...1 Kunalibe……...2 Sindinafune……3 Ndinayenera kukafunsa amuna anga…....4 Zina (tchulani)……..5	
D.15.	Kodi amuna anu munawauza zotsatira za magazi anu?	Eya……...1 Ayi……2	→*Pitani ku D.14*
D.16	Ngati ayi, munauza ndani za zotsatira za magaizi anu?	Mayi anga……..1 Bambo anga..……1 Wachibale……..1 Mnzanga wa pamtima……1 Palibe……1 Wina (mtchuleni)..……1	→*Pitani ku D.21*
D.17	Ndi chiyani chimene chinakulimbikitsani kuti muuze amuna anu?	Kuti ndipeze chithandizo……...1 Kuti nawonso akayezetse……..…..... ..1 Kuti adziwe mmene ndiliri……..... ..1 Zina (tchulani)……..……1	
D.18.	Mutawauza amuna anu, nkhaniyi anayilandira bwanji?	Anandilimbikitsa…….....1 Anamvetsetsa……..1 Sanakhulupirire…...…….....1 Anandimenya…....……..…1 Anakhumudwa……..……...1 Zina (tchulani)…….....1	
D.19.	Wina ndani amene munamuuza za zotsatira za magazi anu? *(Zunguzani monse oyenera)*	Amayi anga……..……....1 Bambo anga…...……....1 Wachibale ……...…..1 Mzanga wa pamtima…….…….....1 Akulu a mpingo…….……...…1 Palibe…….……...…1 Ena (atchuleni)…….…….....1	→*Pitani ku D.22*
D.20.	Chifukwa chiyani munauza munthu amene mwamutchulayu?	Ndimamukhulupirira...……..1 Ndimadziwa kuti andisungira chinsinsi……..……...2 Ndimnzanga wa pamtima...……...3 Zina (tchulani)……..	
D.21.	Chifukwa chiyani simunauze wina aliyense za zotsatira za magazi anu?	Sikunali kofunikira kutero……....1 Sindinakhulupirire wina aliyense..…….....2 Sindinafune……..…….3 Zina (tchulani)……...……....4	
D.22.	Kodi mwana wanuyu munakachirira kuti?	Kuchipatala……...……...…....1 Pakhomo..……...……..2 Kwa a zamba……..…….....3 Panjira ndikupita ku chipatala...……4 Kwina (Kutchuleni)……...5	

D.23.	Chifukwa chiyani munachilira ku malo amene mwatchulawa? (*Zunguzani monse moyenerera*)	Kutsatira ndondomekoyi……..1 Ogwira ntchito ku chipatalaku ndi abwino……...1 Ndinalibe ndalama zoyendera…..…….....1 Nthawi inali itatha kuti ndikafike ku chipatala……...……...1 Kuthawa makhalidwe oyipa a ogwira ntchito ku chipatala……...……1 Kuti nditeteze moyo wa mwana wanga…….……...…1 Kuti ndikalandire chithandizo chokwanira.....……1 Zina (tchulani)…...……1	
D.24.	Munamwa mankhwala a NVP matenda atayamba?	Eya……...……...…...1 Ayi...…….....…….…….....2	→*Pitani ku D.26*
D.25.	Ngati ayi, chifukwa chani?	Ndinayiwala……..…….…...1 Ndimaona ngati matendasanayambitsitse.2 Sindinafune…..……....3 Sindinauzidwe…….……..4 Zina (tchulani)…….……...…5	
D.26.	Nanga mwana wanu atabadwa analandira mankhwala a NVP?	Eya……...……...…...1 Ayi...…….....…….…….....2	→*Pitani ku D.28*
D.27.	Analandira patapita nthawi yaitali bwanji?	……	
D.28	Munayamba mwayamwitsapo mwana wanuyu?	Eya……..……...….1 Ayi...……..…….....2	→*Pitani ku D.30*
D.29	Kodi mukuyamwitsa mwana wanu pakali pano?	Eya… ……1 Ayi...…….....…2	
D.30	Ndi zakudya ziti zina zomwe mwanayu akudya?	…… …….	→*Nngati palibe kapena2, pitani ku E.1.*
D.31	Mwana wanu anali ndi miyezi ingati pamane munamuyambitsa zakudya zowonjezera pa mkaka wa mmawere?	…….	
D.32	Mwana wanu anali wa miyezi zingati pamene munamusiyitsa kuyamwa?	Miyezi (*tchulani nambala*)..……..……1 Adakayamwabe…..……2	

D.33	Kodi mwana wanu munamusiyitsa kuyamwa mwadzidzi kapena mwa pang'ono pang'ono?	Mwadidzidzi..……..…..…….1 Mwapang'onopang'ono.……..…….…2	

GAWO LA CHISANU: ZA MMENE ANTHU OFUNIKA MMOYO WA MAYI CHICHEPERE ANGAPANGITSIRE KUTI MAYIYU ATSATIRE KAPENA ASATSATIRE NDONDOMEKO YOCHEPETSA KUFALA KWA KA CHIROMBO KA HIV KUCHOKERA KWA MAYI KUPITA KWA MWANA.

Tsopano ndikufuna kudziwa mmene anthu ena ofunika mmoyo mwanu anakuthandizira kuti mutsatire kapena musatsatire ndondomeko yochepetsa kufala kwa HIV kuchokera kwa mayi kupita kwa mwana.

E.1.	Munakafunsira mzeru kwa ndani kuti mukayezetse magazi anu za kachirombo ka HIV	Mwamuna wanga..……..……....1 Amayi anga…….……...…..1 Bambo anga…..……...1 Mnzanga wa pa mtima……..…1 Malume…….…….....1 Akulu a mpingo…….....1 Amfumu……...…1 Apongozi…….…..……..…...1 Alamu…….....1 Palibe…..……...…1 Ena (atchuleni)……...…1	→*Pitani ku E.3*
E.2.	Chifukwa chiyani munakafunsa nzeru kwa munthu amene mwatchulayu?	…… …… ……	
E.3.	Kodi munayenera kuyamba mwapempha chilorezo kwa munthu wina kuti muyezedwe magazi anu?	Eya…….…..…...1 Ayi……..……...2	*Pitani ku E.5*
E.4.	Ngati inde, amene akuyenera kupereka chilorezo chimenechi ndi ndani?	Mwamuna wanga...……...……....1 Amayi anga…….……...…..1 Bambo anga…..……...1 Mnzanga wa pa mtima……..…1 Malume…….…….....1 Akulu a mpingo……...……...…..1 Amfumu……...…1 Apongozi…….…..……..…...1 Alamu…….…...1 Palibe…..……...…1 Ena (atchuleni)……...…1	

E.5.	Musanaganize zotsatira uphungu ndi ndondomeko yochepetsa kufala kwa HIV kuchokera kwa mayi kupita kwa mwana, ndi ndani ngati analipo amene mumaganiza kuti angakuvomerezeni kutsatira ndondomekoyi	Mwamuna wanga...……..……....1 Amayi anga…….……...…..1 Bambo anga…..…….…...1 Mnzanga wa pa mtima…….…1 Malume…….…….....1 Akulu a mpingo……...….1 Amfumu…….....1 Apongozi…….…….…..1 Alamu……...1 Palibe…..……..1 Ena (atchuleni)……...…1 ……..	
E.6.	Musanaganize zotsatira uphunguwu, ndi ndondomekoyi, ndi ndani ngati analipo amene mumaganiza kuti angakukanizeni kutsatira ndondomekoyi	Mwamuna wanga...……...……....1 Amayi anga…….……...…..1 Bambo anga…..…….…...1 Mnzanga wa pa mtima…….…1 Malume…….…….....1 Akulu a mpingo……...…...…...1 Amfumu……...…1 Apongozi…….…….…...1 Alamu……....1 Palibe…..……...…1 Ena (atchuleni)……...…1 ……	

GAWO LA CHISANU NDI CHIMODZI: ZINTHU ZINA ZOMWE ZINGAPANGITSE MAYI WACHICHEPERE KUTI AGWIRITSE NTCHITO NDONDOMEKO ZOCHEPETSA KUFALA KWA HIV KUCHOKERA KWA MAYI KUPITA KWA MWANA.

Ndi zinthu zina zomwe zingapangitse mayi wachichepere kuti agwiritse ntchito ndondomeko yochepetsa kufala kwa HIV kuchokera kwa mayi kupita kwa mwana.

F.1.	Kodi amuna anu anakuperekezanipo kusikero pamene munali woyembekezera?	Eya…..…..……..…1 Ayi…...…….…..2	*→Pitani ku F.4.*
F.2.	Kodi mukuganiza kuti kupezeka kwa amuna anu ku sikelo kunakhuza maganizo anu pakutsatira ndondomeko yochepetsa kufala kwa HIV kuchokera kwa mayi kupita kwa mwana?	Eya…….……..……1 Ayi…….……..2 Sindikudziwa.……88	
F.3	Perekani zifukwa pa yankho lanu	…….. …..……..……	*→Pitani ku F.6.*

F.4.	Kodi amuna anu akadakhalapo, pa nthawi imene mumayendera sikelo ya amayi apakati, mukuganiza kuti kupezeka kwawo kukadakhuza maganizo anu pa ndondomekoyi?	Eya……..…1 Ayi……..2 Sindikudziwa..……..88	
F.5	Perekani zifukwa pa yankho lanu	……..	
F.6.	Kodi amuna anu anakuperekezani ku chipatala pamene mumakachira mwana wanuyu?	Eya……..…1 Ayi……..2	→*Pitani ku F.9.*
F.7.	Kodi mukuganiza kuti kupezeka kwa amuna anu ku pa nthawi yomwe mumakachira mwana wanuyu, kunakhuza maganizo anu pa ndondomekoyi?	Eya…….……....1 Ayi……...2 Sindikudziwa...……..88	
F.8.	Perekani zifukwa pa yankho lanu	…….. ……. ……..	→*Pitani ku F.11.*
F.9.	Kodi amuna anu akadakhalapo, pa nthawi imene mumakachira mwana wanuyu, mukuganiza kuti kupezeka kwawo kukadakhuza maganizo anu pa ndondomekoyi?	Eya……..…1 Ayi……..2 Sindikudziwa...……..88	
F.10.	Perekani zifukwa pa yankho lanu	……. …….	
F.11.	Kumbali ya ndondomekoyi, ndichiyani chomwe chinakusangalatsani kwambiri?	…… …… ……	
F.12.	Nanga ndi chiyani chokhuza ndondomekoyi chomwe sichinakusangalaseni?	…… …… …… ……	
F.13.	Kodi inuyo mungamuvomereze mzanu kuti agwiritse ntchito ndondomeko imeneyi?	Inde……....……1 Ayi ……...……..…….2	
F.14	Perekani zifukwa pa yankho lanu	…… ……	

CHIKALATA CHOTSOGOLERA MAFUNSO

Tsopano ndifuna mundiuze zomwe mukudziwa, maganizo anu ndi zomwe mwakomana nazo zokhuza ndondomeko yochepetsa kufala kwa kachirombo ka HIV kuchokera kwa mayi kupita kwa mwana. Ndifunanso kudziwa maganizo anu pa zinthu zomwe zingapangitse kuti mayi wa chichepere agwiritse kapena asagwiritse ntchito ndondomekoyi.

A.Tandiuzani zomwe mukudziwa zokhuza ndondomeko yochepetsa kufala kwa HIV kuchokera kwa mayi kupita kwa mwana?

1. Munamva po zotani zokhuza ndondomekoyi?

Kufufuza mwakuya:

- Kodi anthu amati chiyani za ndondomekoyi ?

B. Tsopano ndikufuna kudziwa maganizo anu pa za ndondomekoyi?

1. Kodi zikhulupirilo za anthu ndi zotani pa khani zokhuza ndondomekoyi?
2. Nanga zikhulupiriro za anthuzi zinali zofunikira bwanji kwa inuyo?
3. Pamene munali ndi pakati, musanayambe sikelo, kodi maligaliro ndi zikhulupiriro zanu zinali zotani pa:
   - Za kuyezesa magazi kuona ngati muli ndi ka chirombo ka HIV
   - Kugwiritsa ntchito makondomu pa nthawi imene mayi ali woyembekezera.
   - Mankhwala a NVP
4. Nanga maganizo amuna anu anali otani pa zakuyezetsa magazi ndi ndondomeko yoteteza kufala kwa kachirombo ka HIV kuchokera kwa mayi kupita kwa mwana?
5. Nanga panopo malingaliro ndi zikhulupiriro zanu ndizotani pa za ndondomeko imeneyi?

C. Tsopano ndikufuna kudziwa zomwe mwakomana nazo pamene munali woyembekezera, yomwe mumakachira ndipo pamene munachira.

1. Kodi pamene munali oyembekezera, munkapita ku sikelo ya amayi a pakati?

Kufufuza mwakuya:

- Kodi chinakupatsani chidwi ndi chani kuti mukayambe sikelo ya amayi oyembekezera
- Nanga ganizo lokayamba sikelo ya amayi apakati linafika bwanji?

2. Munakomana ndizotani pamene mumalandira uphungu, kuyezesa magazi ndikulandira zotsatira za magazi anu?

Kufufuza mwakuya:

- Munamvetsetsa bwino bwino uthenga womwe mumapatsidwawo?
- Munapatsidwako mwayi ofunsa mafunso?
- Nanaga chinsisi chanu anakusungirani bwanji?

D. Tsopano ndifuna kuti mundiuze zomwe mukuganiza kuti zingapangitse mayi wa chichepere kuti agwiritse kapena asagwiritse ntchito ndondomeko yochepetsa kufala kwa HIV kuchokera kwa mayi kupita kwa mwana.

1. Kutengera pa zomwe munakomana nazo, kodi mukuganiza kuti ndi zinthu ziti zomwe zingapangitse mayi wachichepere kuti:

- Atsatire ndondomekoyi?
- Asatsatire ndondomekoyi

Kufufuza mwakuya

- Mukuganiza kuti ndi ndani amene angapangise kuti munthu atsatire ndondomekoyi kapena ayi?
- Mwa anthu amenewa, amene agapangitse kwenikweni kuti munthu atsatire ndondomeko imeneyi ndi ndani?
- Angapangise bwanji?
- Nanga amene angapangise kwenikweni kuti mayi wachichepere asatsatire njirazi ndindani?
- Nanga anga pangise bwanji

2. Nanga mukuganiza kuti chingachitike ndichiyani kuti amayi ambiri achicheperewa azigwiritsa ntchito ndondomeko imeneyi mokwanira?

3. Chilipo china chilichonse chokhuzana ndi ndondomekoyi, chomwe mungafune kuti mundiuze chokhuza ndondomekoyi?

APPENDIX E: PARTICIPANT INFORMATION SHEET

A study on factors that influence utilization of prevention of mother to child transmission of HIV guidelines in young female adults in balaka district.

Introduction

You are being invited to take part in a research study on HIV services for pregnant women to reduce transmission of HIV to their babies. This study is being done in partial fulfillment for the award of a Master of Science in Midwifery by Sadandaula Rose Muheriwa. Before you decide to participate in the study, it is important for you to understand why the research is being done and what it will involve, the possible risks and benefits, how your privacy will be protected and what researchers are going to ask you to do.

The purpose of this study is to explore factors that influence utilization of PMTCT services in young female adults of the ages 15 to 24 years, those who have delivered a baby within the past 9 months in Balaka, to talk about their experiences in relation to PMTCT. You have been chosen to take part in the study because your age falls within the inclusion criteria of this study and also because you delivered a baby in the past 18 months. About 182 women will take part in the study.

Participation in this study is voluntary. If you refuse to take part, your decision will be accepted. You can withdraw participation from the study at any point. Refusal to take part in this study will not affect your care at this hospital. If you decide to take part in the study, you will be asked to sign a consent form or put a thumb print on the consent form to show that you have understood this information and that you agree to participate in the study. A copy of the information sheet will be given to you, but you are not forced to take it since there is a risk that some people may see it and discover that you have entered a study, a thing you may not like. If you decide to take this form, keep it safe and in it you will find contact information incase you need additional inforamtion about the study. You will still be free to withdraw from the study at any time and without giving a reason.

What will I be asked to do if I take part in the study?

If you decide to take part in the study, you will be interviewed on your knowledge, beliefs, attitudes and behaviors or practices related to PMTCT services. You may be interviewed for the second time to get further information about the study and also in order to verify the data in the first interviews.

How will confidentiality be maintained and my privacy be protected?

All matters concerning you will be private and confidential. You will not be known by your name in this study, instead you will be given an identification number. However the consent form since it will contain your signature it will be filed and kept separate from other documents and it will be kept in a locked drawer that will be accessible to the researcher only. The responses will be stored in a locked cabinet which will be accessible to the researcher and members of the research committee. Data analysis will express group information and not individual identification or responses. In addition to that, all responses will be destroyed after data analysis. Any presentations or publications about this research will not identify names but will be reported in an aggregate form.

What are the risks of this study?

There are no known risks associated with taking part in this study. Only that you may feel uncomfortable discussing issues concerning HIV and AIDS, but be asured that confidentiality wil be maintained. Researchers will keep safe study related information and they will take steps to conceal your identity and prevent you from being identified. Feel free to refuse to answer any question that you don't want to answer. In addition, the study has been reviewed and approved by College of Medicine Research Ethics committee in Blantyre whose task is to make sure that study participants are protected from harm.

How will I benefit from the study?

There are no direct benefits to you if you decide to participate in the interviews. However the knowledge gained from this study will help to address questions critical to individuals, couples, district and national efforts to achieve healthy child bearing in a high fertility and high HIV prevalence setting. It is hoped that the information learned from this research will be used to improve programmes to help control transmission of HIV and AIDS to babies.

Will I be compensated or pay anything for participating in this study?

You will not be paid anything or be compensated for participating in the study. Except transport money amounting to MK 200.00.

What happens if I choose not to join the study or withdraw from the study?

There is no penalty if you choose not to participate in the study. You are free to withdraw from the study any time without giving any reason. You are also free to refuse to answer any question.

Who do I contact if I have questions about the study, my rights and welfare?

If you have additional questions pertaining to your participation in the study, or if you have any questions about your rights as a research participant, or concerns or complaints about this study, please do not hesitate to contact Sadandaula Rose Muheriwa and the chairman of the ethics committee on the following addresses:

Kamuzu College of Nursing
P.O. Box 415,
BLANTYRE

The Chairman
College of Medicine Research Ethics Committee
Private Bag 360,
Chichiri
BLANTYRE 3.

Cell: 0884 551 877 or 0995 460 500 Tel: 01 871 911

CONSENT FORM

- I confirm that I have understood the information sheet for this study ☐
- I understand that I am not obliged to take part in the study, and that I am free to stop participating in the study at any time, without giving a reason. ☐
- I understand that there is no direct benefit to me personally and that I will not be compensated beyond MK200.00 equivalent to bus fare as a result of taking part in this study. ☐
- I have had the opportunity to ask questions about the study and any questions that I have asked have been answered to my satisfaction. ☐
- I voluntarily agree to take part in this study. ☐

……	……	…….
Name of Participant	Date	Signature
…….	…….	…….
Name of consenting person	Date	Signature
……	…….	……
Witness	Date	Signature

KALATA YA UTHENGA WA KAFUKUFUKU OFUNA KUONA ZIFUKWA ZOMWE ZINGAPANGISE KUTI AMAYI A CHICHEPERE AGWIRITSE NTCHITO KAPENA ASAGWIRITSE NTCHITO NDONDOMEKO YA BOMA YOCHEPETSA KUFALA KWA KACHIROMBO KA HIV KUCHOKERA KWA MAYI KUPITA KWA MWANA M'BOMA LA BALAKA.

Mau oyamba

Mukupemphedwa kutenga nawo mbali mukafukufuku wofuna kuona zifukwa zomwe zingapangise amayi achichepere kuti agwiritse ntchito kapena asgwiritse ntchito ndondomeko zotetezera mayi kupatsira mwana wake ka chirombo ka HIV. Akupanga kafukufuku ameneyi ndi a mayi Sadandaula Rose Muheriwa omwe akuphunzira za uzamba ku sukulu ya ukachenjede ya anamwino ku Blantyre yomwe pa chingerezi amayitchula kuti Kamuzu College of Nursing. Musanapange chisankho cholowa mu kafukufukuyu ndi bwino kuti mumvetse tsatanetsatane wa kafukufukuyu; cholinga chake, ubwino ndi zovuta zake, mmene tidzatetezere nkhani zokhuza inu ndi zomwe mudzapemphedwa kuchita pamene muli mukafukufukuyu.

Cholinga cha kafukufukutu ndi kufuna kudziwa zifukwa zimene zingapangitse kuti amayi a chichepere agwiritse ntchito ndondomeko yochepetsa mpata woti mayi amene ali ndi ka chirombo ka HIV apatsire mwana wake. Kafukufukuyu akufuna amayi omwe ali a zaka zoyambira 15 mpaka 24 omwe abereka mwana mmiyezi 18 yapitayi kuti atiuze maganizo awo pa zomwe akomana nazo pa ndondomeko yochepetsa kufala kwa kachirombo ka HIV kuchokera kwa mayi kupita kwa mwana. Amayi osachepera 182 ndi omwe atenge nawo mbali mukafukufukuyu. Inu mwansankhidwa chifukwa zaka zanu zili mugulu lomwe tikufuna komanso mwangobereka kmene mwana mmiyezi 18 yapitayi.

Simuli okakamizidwa kutenga nawo mbali mu kafufukuyu. Ngati muganiza kuti musatenge nawo mbali mukafukufukuyu, maganizo anuwa adzavomerezedwa. Mungathe kusiya kutenga nawo mbali mukafuku fukuyu nthawi ina iliyonse ndipo izi sizidzakhuza chithandizo chomwe mumalandira pa chipatala pano. Koma ngati mungaganize zotenga nawo mbali mukafukufukuyu, mudzapemphedwa kuti musayinire kapena ku dinda ndi chala pamaso pa mboni. Mudzapatsidwa chikalata china kuti mukasunge koma simuli okakamizidwa kutenga chikalatachi chifukwa pali kuopsya koti wina akhoza kuchiona ndikuzindikira kuti mudatenga nawo mbali mukafukufuku, zomwe sizingakhale zosangalatsa kwa inuyo. Ngati muvomereza kusunga chikalatachi, chonde chisungeni mosamala chifukwa mkatimu muli maina a

wanthu omwe mungawapeze patakhala kuti pali zinthu zina zofunika, komanso muli mayankho a ma funso amene mungakhale nawo okhuza kafukufukuyu. Chonde dziwani kuti simuli okakamizidwa kutenga nawo mbali mu kafukufukuyu. Mutha kusiyanso kafukufukuyu nthawi iliyonse mungafune popanda kupereka chifukwa.

Ndidzafunsidwa kupanga chiyani ngati nditenga nawo mbali mu kafukufukuyu?

Ngati mwaganiza zotenga nawo mbali mukafukufukuyu, mudzafunsidwa mafunso pa zomwe mukudziwa , malingaliro anu komanso zomwe mumachita zokhuza ndondomeko yochochepetsa mwayi wa mayi kupatsira mwana ka chirombo ka HIV. Mukhoza kudzasankhidwa kuti mudzalongosore kachiwiri mwakathithi pa zomwe mwakhala mukukomana nazo.

Kodi chinsinsi changa chidzasungidwa bwanji?

Uthenga onse umene tikutenga panthawi yofunsa mafunso ndi wachinsinsi Simudzadziwika ndi dzina lanu, mudzadziwika ndi nambala. Ngati zotsatira za kafukufukuyu zidzasindikizidwe inuyo simudzadziwika ndi dzina lanu, zotsatira za kafukufukuzi zidzasindikizidwa mu chigulugulu. Mayankho anu adzasungidwa mu kabati yotseka ndi makiyi omwe azidzasungidwa ndi mkulu wa kafukufukuyu, ndipo pepala lomwe mutasayine losonyeza kuvomereza kulowa kafukufukuyu lidzasungidwa palokha mkabati yotseka ndi makiyi.

Kodi pali kuopsya kotani potenga nawo mbali mukafukufukuyu?

Kafukufukuyu alibe zoopsa zodetsa nkhawa. Kungoti mwina mukhoza kudzasowa mtendere kukamba nkhani zogonana ndi zokhuza matenda a Edzi koma ogwira ntchito mukafukufukuyu adzayesesa kusunga nkhani zanu zonse mwachinsinsi. Kafukufukuyinso waunikiridwa bwino ndi a bungwe loona ufulu wa chibadwidwe wa anthu otenga nawo mbali mukafukufuku la Sukulu ya ukachenjede ya udokotala la College of Medicine, kufuna kuona kuti anthu otenga nawo mbali mukafukufuku ndiotetezedwa.

Kodi pali phindu lanji potenga nawo mbali mukafukufukuyu?

Palibe phindu lililonse lomwe mungapeze ngati muganiza zolowa nawo mukafukufukuyu, koma zotsatira zakafukufukuyu zidzathandiza dera lino la Balaka komanso dziko lonse la Malawi kupeza njira zabwino zothandizira amayi a chichepere kuchepetsa mwayi opatsira ana awo ka chirombo ka HIV.

Kodi ndidzalipidwa kapena kulipira potenga nawo mbali mukafukufukuyu?

Simudzalipira kena kalikonse potenga nawo mbali mukafukufukuyu. Komanso inuyo simudzalipidwa potenga nawo mbali mukafukufukuyu. Koma ndalama yanu

yokwerera idzabwezedwa yonse pa mtengo wa MK200.00.

Chingachitike ndi chiyani ngati sindivomera kutenga nawo mbali mu kafukufukuyu?

Kutenga nawo mbali mukafukufukuyu ndikodzipereka kwa inu nokha. Mutha kakana osatenga nawo mbali kapena kusiya nthawi ina iliyonse palibe chomwe chingachitike. Muli ndi ufulu kukana kuyankha mafunso ena.

Ndingatani nditakhala ndi mafunso okhuza ufulu wanga wachibadwidwe komanso kakhalidwe kanga mukafukufukuyu?

Mutakhala ndi mafunso kapena madandaulo monga wotenga nawo mbali mukafukufukuyu lumikizanani ndi a mayi a Sadandaula Rose Muheriwa ndi wa pampando wa bungwe loyang'anira za ufulu wa anthu otenga nawo mbali mukafukufuku pa keyala ndi nambala za lamya izi:

Kamuzu College of Nursing,
P.O. Box, 415,
BLANTYRE.

Wapampando
College of Medicine Research Ethics Committee
Private Bag 360,
Chichiri
BLANTYRE 3.

Cell: 0884 551 877 kapena 0995 460 500 Tel: 01 871 911

CHILOLEZO CHA KUTENGA NAWO MBALI MU KAFUKUFUKU WA AMAYI ACHICHEPERE OFUNA KUFFUFUZA ZOMWE ZINGAPANDITSE AMAYIWA KUTI AGWIRITSE NTCHITO KAPENA AYI NDONDOMEKO YOCHEPETSA KUFALA KWA KACHIROMBO KA HIV KUCHOKERA KWA MAYI KUPITA KWA MWANA WAKE.

- Ndikutsimikiza kuti andiwerengera ndi kundilongosolera zimene zili mchikalata chimenechi ndipo ndamvetsetsa. ☐
- Ndamvetsetsa kuti sindikuumirizidwa kutenga nawo mbali mukafukufukuyu
- ndipo kuti ndili ndi ufulu kusiya kutenga nawo mbali mkafukufukuyu popanda
- kupereka chifukwa china chilichonse. ☐
- Ndamvetsetsa kuti sindipeza phindu lirilonse mkafukufukuyu ndipo
- sindipasidwa chinthu china chilichonse kupatula ndalama zokwerera basi
- yokwana MK 200.00. ☐
- Ndinali ndi mwayi wofunsa mafunso wokhuzana ndi kafukufukuyu ndipo
- ndakhutitsidwa ndi mmene mafunso ndinafunsawo ayankhidwira. ☐
- Ndikuvomera kutenga nawo mbali mukafukufukuyu mwakufuna kwanga. ☐

……	……	……..
Dzina la otenga mbali	Tsiku	Sayinani/Chidindo
…….	……..	……..
Dzina la otenga chilorezo	Tsiku	Sayinani
……	……..	……
Mboni	Tsiku	Sayinani

APPENDIX F: LETTER OF APPROVAL FROM COLLEGE OF MEDICINE RESEARCH AND ETHICS COMMITTEE

UNIVERSITY OF MALAWI

Principal

Prof. R.L. Broadhead, MBBS, FRCP, FRCPCH, DCH

Our Ref.: COMREC/16

Your Ref.: P.11/09/848

College of Medicine Research & Ethics Committee (COMREC)
College of Medicine
Private Bag 360
Chichiri
Blantyre 3
Malawi
Telephone: 01 877 245 ext 249
01 877 291
Fax: 01 874 700
Telex: 43744

14th December, 2009

Mrs Sasandaula Rose Muheriwa
Kamuzu College of Nursing
Blantyre Campus
BLANTYRE 3.

Dear Mrs Muheriwa,

RE: P.11/09/848 - Factors that influence utilization of prevention of mother to child transmission of HIV services in young adults in Balaka District

I write to inform you that COMREC reviewed your proposal which you submitted at its meeting of 25th November, 2009 and I am pleased to inform you that COMREC **approved** your proposal.

As you proceed with the implementation of your study I would like you to take note that all requirements by the college are followed as indicated on the attached page.

Yours Sincerely,

Approved by
College of Medicine
15 DEC 2009
(COMREC)
Research and Ethics Committee

Prof J.M. Mfutso-Bengo
CHAIRMAN - COMREC

JMMB/ck

APPENDIX G: REQUEST LETTER TO THE DISTRICT COMMISSIONER

Kamuzu College of Nursing
P.O. Box 415,
BLANTYRE
20th July, 2009.

The District Commissioner,
Balaka District
Private Bag 1,
BALAKA

Dear Sir,

RE: REQUEST TO CONDUCT A RESEARCH STUDY IN BALAKA DISTRICT

I am a student at Kamuzu College of Nursing pursuing a Master of Science in Midwifery Practice. In partial fulfillment for the award of Master of Science in Midwifery Practice, I am required to conduct a research study. The purpose of this letter is to ask your permission to conduct the study in Balaka district. My research topic is: "Factors that influence utilization of PMTCT services in postnatal young female adults in Balaka district."

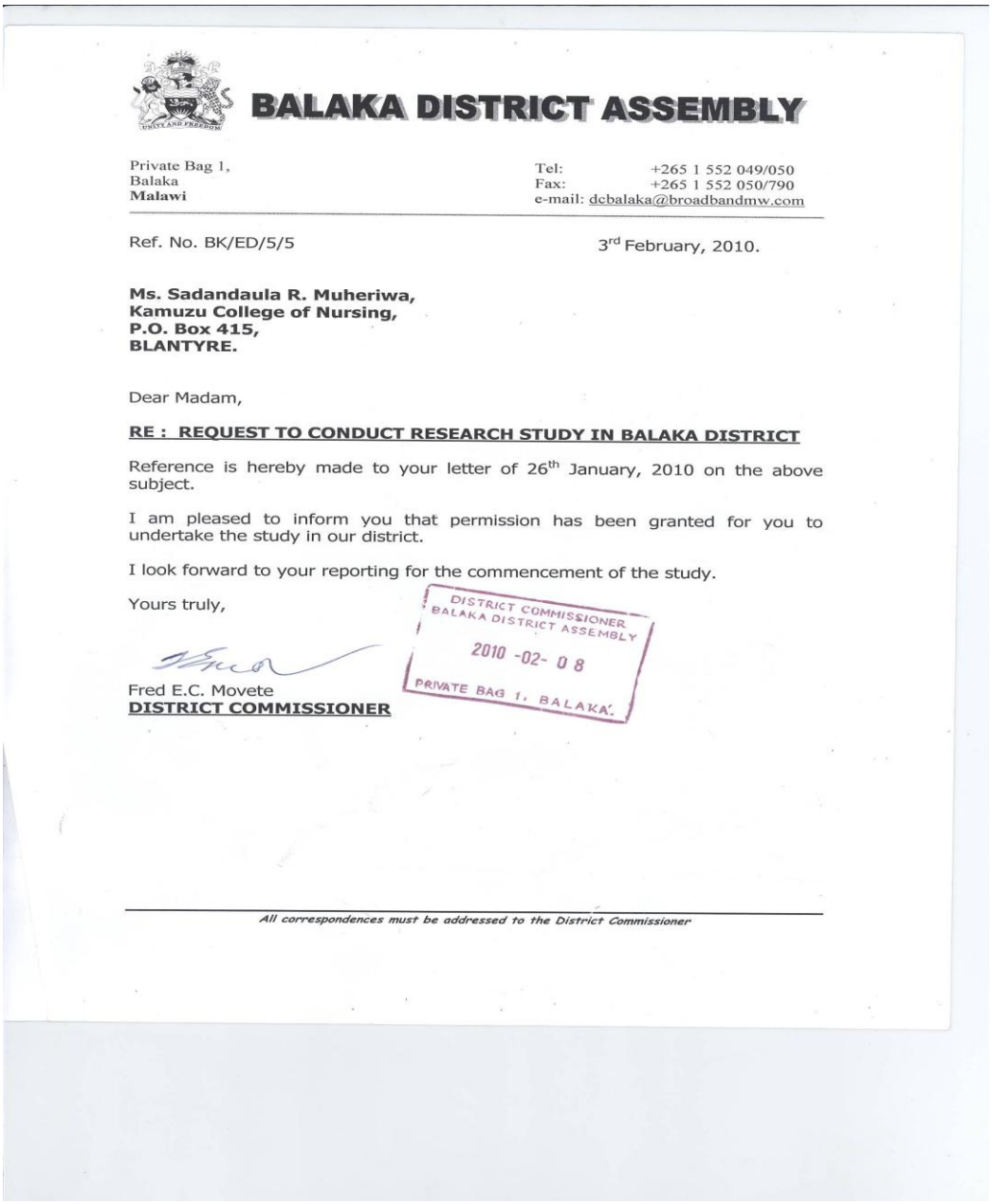
The study will involve 182 young female adults aged 15 to 24 years those who have delivered a baby in the past 18 months. Participants will be required to respond to a questionnaire, but for others an in-depth interview will be conducted

There are no known risks involved in the study. Nurses/midwives practitioners, educators, researchers and managers and other health personnel for improvement of midwifery practice in Balaka will use the results. Should I be given the permission to carry out this study, I intend to conduct the study during the months of November and December this year.

I am looking forward to hearing from you soon,
Yours Sincerely,

Sadandaula Rose Muheriwa

APPENDIX H: LETTER OF APPROVAL FROM THE DISTRICT COMMISSIONER



BALAKA DISTRICT ASSEMBLY

Private Bag 1,
Balaka
Malawi

Tel: +265 1 552 049/050
Fax: +265 1 552 050/790
e-mail: dcbalaka@broadbandmw.com

Ref. No. BK/ED/5/5

3rd February, 2010.

Ms. Sadandaula R. Muheriwa,
Kamuzu College of Nursing,
P.O. Box 415,
BLANTYRE.

Dear Madam,

RE : REQUEST TO CONDUCT RESEARCH STUDY IN BALAKA DISTRICT

Reference is hereby made to your letter of 26th January, 2010 on the above subject.

I am pleased to inform you that permission has been granted for you to undertake the study in our district.

I look forward to your reporting for the commencement of the study.

Yours truly,

DISTRICT COMMISSIONER
BALAKA DISTRICT ASSEMBLY
2010 -02- 08
PRIVATE BAG 1, BALAKA.

Fred E.C. Movete
DISTRICT COMMISSIONER

All correspondences must be addressed to the District Commissioner

APPENDIX I: REQUEST LETTER TO THE DISTRICT HEALTH OFFICER

Kamuzu College of Nursing
P.O. Box 415,
BLANTYRE
20th July, 2009.

The District Health Officer,
Balaka District Hospital,
P.O.Box 138,
BALAKA

Dear Sir/ Madam

RE: REQUEST TO CONDUCT A RESEARCH STUDY IN BALAKA DISTRICT

I am a student at Kamuzu College of Nursing pursuing a Master of Science in Midwifery Practice. In partial fulfillment for the award of Master of Science in Midwifery Practice, I am required to conduct a research study. The purpose of this letter is to ask your permission to conduct the study in your catchment population, that is, the villages served by Balaka district hospital. My research topic is: "Factors that influence utilization of PMTCT services in postnatal young female adults in Balaka district."

The study will involve 182 young female adults aged 15 to 24 years those who have delivered a baby the past 18 months. Participants will be required to respond to a questionnaire, but for others an in-depth interview will be conducted.

There are no risks involved in the study. Nurses/midwives practitioners, educators, researchers and managers and other health personnel for improvement of midwifery practice in Balaka and the whole country will use the results. Should I be given the permission to carry out this study, I intend to conduct the study during the months of November and December this year.

I am looking forward to hearing from you soon,
Yours Sincerely,

Sadandaula Rose Muheriwa.

APPENDIX J: LETTER OF APPROVAL FROM THE DHO OF BALAKA TO THE PMTCT COORDINATOR

Telephone No: 01 552344
Fax No. : 01 552347

The District Health Office
Balaka District Hospital
P.O. Box 138
BALAKA

1st February, 2010

The PMTCT Coordinator
Balaka District Hospital

Dear Sir/Madam,

APPROVAL TO CONDUCT A STUDY IN BALAKA DISTRICT

The bearer of this letter Ms Sadandaula Rose Muheriwa has been authorized to conduct a study in the health facilities in Balaka district. She is a Master student at Kamuzu College of Nursing. In partial fulfillment for the award of a Master of Science degree in Midwifery she is supposed to conduct a study. Her research topic is: ***Factors that influence utilization of Prevention of mother to child transmission of HIV service in young female adults in Balaka district.*** The proposal for this study has already been reviewed and approved by College of Medicine Research and Ethics Committee (COMREC).

Please assist her accordingly.

Yours Faithfully,

Dr. D. Kayambo
DISTRICT HEALTH OFFICER

APPENDIX K: LETTER OF APPROVAL TO HEALTH CENTRE IN-CHARGES

Telephone No: 01 552344
Fax No. : 01 552347

The District Health Office
Balaka District Hospital
P.O. Box 138
BALAKA

1st February, 2010

The Health Centre In-Charges
Balaka District

Dear Sir/Madam,

APPROVAL TO CONDUCT A STUDY IN BALAKA DISTRICT

The bearer of this letter Ms Sadandaula Rose Muheriwa has been authorized to conduct a study in the health facilities in Balaka district. She is a Master student at Kamuzu College of Nursing. In partial fulfillment for the award of a Master of Science degree in Midwifery she is supposed to conduct a study. Her research topic is: ***Factors that influence utilization of Prevention of mother to child transmission of HIV service in young female adults in Balaka district.*** The proposal for this study has already been reviewed and approved by College of Medicine Research and Ethics Committee (COMREC).

Please assist her accordingly.

Yours Faithfully,

Dr. D. Kayambo
DISTRICT HEALTH OFFICER

APPENDIX L: REQUEST LETTER TO THE IN-CHARGE: DREAM HEALTH

Kamuzu College of Nursing
P.O. Box 415,
BLANTYRE
20th July, 2009.

The Coordinator,
Dream Health Centre,
P.O.Box 314,
BALAKA

Through: The District Health Officer- Balaka.

Dear Sir/ Madam

RE: REQUEST TO CONDUCT A RESEARCH STUDY IN BALAKA DISTRICT

I am a student at Kamuzu College of Nursing pursuing a Master of Science in Midwifery Practice. In partial fulfillment for the award of Master of Science in Midwifery Practice, I am required to conduct a research study. The purpose of this letter is to ask your permission to conduct the study in your catchment population, that is, the villages served by Balaka district hospital. My research topic is: "Factors that influence utilization of PMTCT services in postnatal young female adults in Balaka district."

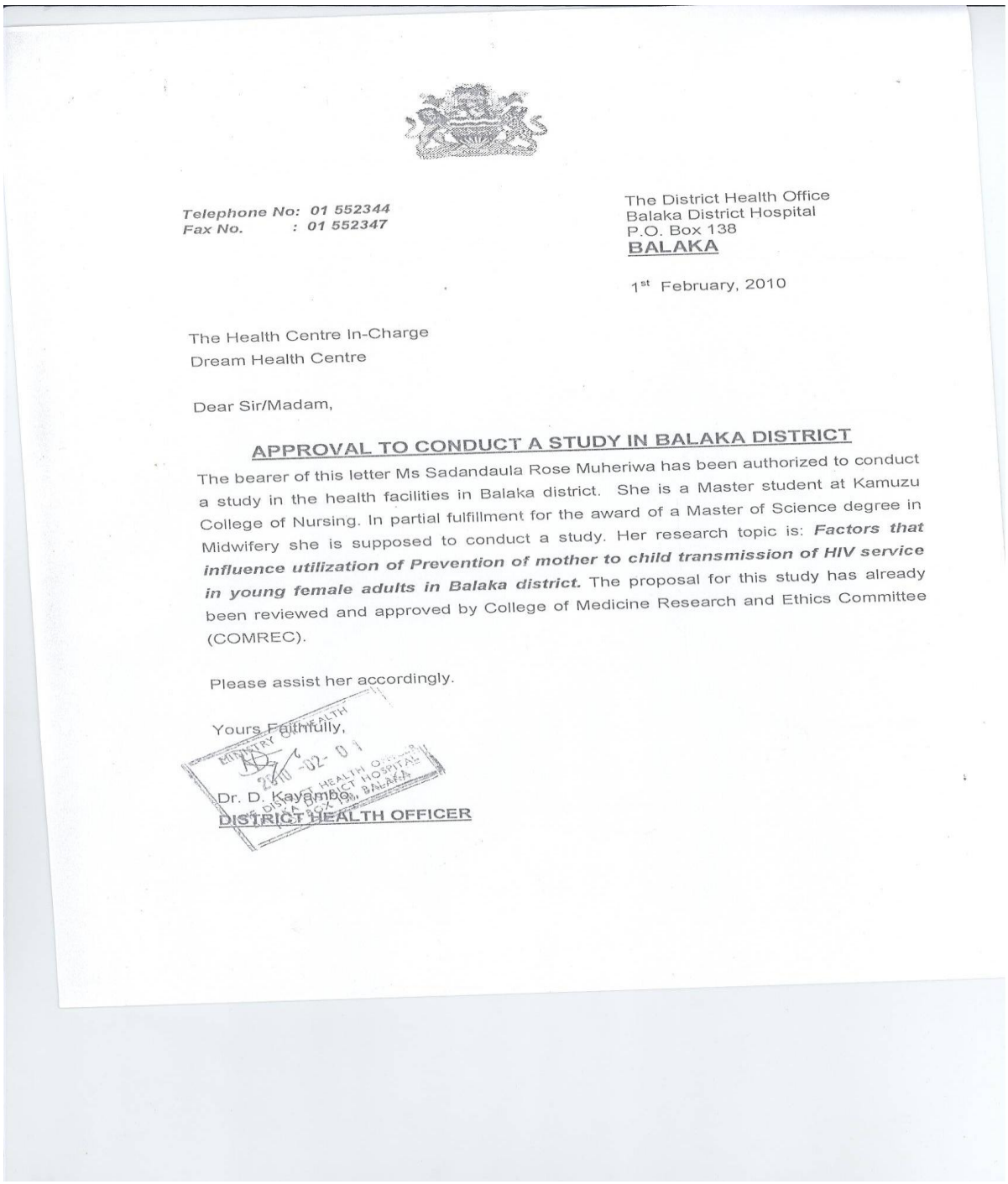
The study will involve 182 young female adults aged 15 to 24 years those who have delivered a baby the past 18 months. Participants will be required to respond to a questionnaire, but for others an in-depth interview will be conducted.

There are no risks involved in the study. Nurses/midwives practitioners, educators, researchers and managers and other health personnel for improvement of midwifery practice in Balaka and the whole country will use the results. Should I be given the permission to carry out this study, I intend to conduct the study during the months of November and December this year.

I am looking forward to hearing from you soon,
Yours Sincerely,

Sadandaula Rose Muheriwa.

APPENDIX M: LETTER OF APPROVAL FROM THE DHO OF BALAKA TO THE IN-CHARGE-DREAM HEALTH CENTRE



Telephone No: 01 552344
Fax No. : 01 552347

The District Health Office
Balaka District Hospital
P.O. Box 138
BALAKA

1st February, 2010

The Health Centre In-Charge
Dream Health Centre

Dear Sir/Madam,

APPROVAL TO CONDUCT A STUDY IN BALAKA DISTRICT

The bearer of this letter Ms Sadandaula Rose Muheriwa has been authorized to conduct a study in the health facilities in Balaka district. She is a Master student at Kamuzu College of Nursing. In partial fulfillment for the award of a Master of Science degree in Midwifery she is supposed to conduct a study. Her research topic is: ***Factors that influence utilization of Prevention of mother to child transmission of HIV service in young female adults in Balaka district.*** The proposal for this study has already been reviewed and approved by College of Medicine Research and Ethics Committee (COMREC).

Please assist her accordingly.

Yours Faithfully,

MINISTRY OF HEALTH
2010 -02- 01
DISTRICT HEALTH OFFICE
DISTRICT HOSPITAL
P. BOX 138, BALAKA

Dr. D. Kayambo,
DISTRICT HEALTH OFFICER

APPENDIX N: LETTER OF APPROVAL FROM DREAM HEALTH CENTRE

dream
Community of Sant'Egidio

BALAKA 04 / 02 / 2010

From: THE COORDINATOR
BALAKA DREAM HEALTHY CENTRE,
P.O BOX314,
BALAKA,
Cell: 09 99 396 240 Tell: 01 553 138

To: SADANDAULA ROSE MUHERIWA
KAMUZU COLLEGE OF NURSING
P.O BOX 415,
BLANTYRE.

Dear Madam,

RE: APPROVAL TO CONDUCT A RESEARCH STUDY AT OUR HEALTHY FACILITY

Following your letter dated 26th January 2010 in which you seek for an authorisation to conduct a research Study on **Factors that Influence the utilization of Prevention of Mother To Child Transmission of HIV Services in Postnatal young female adults** { PMTCT } at our Healthy Facility,am grateful to communicate to you that the management have accepted that you can conduct your study here as per your request.
Upon scrutinising your letter we are of no reason to turn down your request since you are a student pursuing Masters of Science in Midwifery and that the outcome of it will be of more beneficial to our nation and even to ourselves in near future, hence permission Granted.

Be advised to be free in asking us anything which can be useful to fulfil your research and that we are expecting you to conduct your study in a professional manner in the sense that it will not cause any incoviniences both to us as an organisation and to our patients as your Clients.

Let me take an opportunity to congratulate you once again for having been accepted to conduct your research study at our Healthy Facility.

Wishing you all the best in Your Study,

Yours Faithfully,

BRUCE TAMBWALI

CO-ORDINATOR - DREAM

COMMUNITY OF SANT'EGIDIO ACAP
04/02/2010
P.O. Box 30558,Chichiri, Blantyre 3, Malawi