FACTORS INFLUENCING UTILIZATION OF PREVENTION OF MOTHER TO CHILD TRANSMISSION OF HIV (PMTCT) SERVICES AMONG HIV POSITIVE WOMEN AT TUMBI DESIGNATED REGIONAL REFERRAL HOSPITAL

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Masters of Public Health Dissertation
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By

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A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Masters of Public Health of Muhimbili University of Health and Allied Sciences

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CERTIFICATION

The undersigned certify that he has read and hereby recommends for acceptance by the Muhimbili University of Health and Allied Sciences a dissertation entitled "F**actors Influencing Utilization of Prevention of Mother to Child Transmission of HIV (PMTCT) Services Among HIV Positive Women at Tumbi Designated Regional Referral Hospital"** in (partial) fulfillment of the requirements for the degree of Masters of Public Health of Muhimbili University of Health and Allied Sciences.

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Prof. M. Leshabari

(Supervisor)

_____

Date

DECLARATION

AND

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I **Juliana John Moshi,** declare that this **dissertation** is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

Signed …….. Date ……

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DEDICATION

I dedicate this work to my beloved children Joan and Elizabeth, my parents Ignas and Elizabeth, my brothers Arnold and Paul, and sister Fina for their encouragement, and patience during the course this study.

ABSTRACT

After 13 years of implementing prevention of mother-to-child transmission of HIV (PMTCT) program in Tanzania, there are significant improvements especially in terms of service provision. Most of health facilities are providing PMTCT services and according to the MOHSW 2012 report, 4603 out of 4647 health facilities (99%) are providing PMTCT services. However there are some challenges that prevent maximum utilization of PMTCT services by HIV positive pregnant women and postnatal mothers.

The aim of this study was to determine factors that influence utilization of PMTCT services among HIV positive women at Tumbi Designated Regional Referral Hospital.

A cross sectional study was conducted between April and May 2014 among 126 HIV positive women who were attending antenatal clinic and postnatal clinic at Tumbi hospital. Participants were recruited to participate in the study after obtaining their consent. The data on which this thesis is based was generated from structured interviews. The interviews focused on socio-demographic characteristics, retention of PMTCT clients into care, level of PMTCT knowledge, social support HIV positive women receive from different groups of people and women's satisfaction with the services.

Most of the participants had high knowledge about PMTCT services. About 87.3% knew that HIV positive women can infect her baby during pregnancy, delivery or breastfeeding. Almost all all participants (99.2%) knew that exclusive breastfeeding (EBF) is one of the ways to prevent their babies from being infected with HIV.

Many of the participants admitted to have received social support from health care workers (99.2%), husbands/partners (93.7%) and PLHIV within the health facility (67.5%). This motivated them to effectively utilize PMTCT services.

Women also reported that they were satisfied with the PMTCT services provided especially counseling on ARV use as well as counseling on disclosure of HIV status to the husbands/partners. Among 63 participants who were very satisfied with counseling on disclosure which was provided by health care workers, 63.2% had higher knowledge about PMTCT.

DEFINITION OF KEY TERMS

PMTCT: Preventive interventions consist of cascade of services, including HIV testing and counseling, ARV prophylaxis or ART, safe delivery, safer infant feeding and postpartum interventions such as cotrimoxazole prophylaxis, early infant diagnosis for HIV – exposed infants and links to treatment care as well as standard postpartum child survival interventions (WHO 2012).

All these PMTCT interventions have been adopted and included in Tanzania National PMTCT guidelines. PMTCT services are provided to HIV positive pregnant women and lactating mothers with an emphasis of long term follow-up care for mother and child, and provision of family planning services (MOHSW, 2013).

Option B+: ARV treatment approach for pregnant women in which all pregnant women living with HIV are offered life-long ART regardless of their CD4 count (UNICEF, 2012). The MOHSW has adopted this and implementation started in January 2014.

Disclosure of HIV status: The act of informing another person of the HIV-positive status of an individual. It may be done by the PLHA him/herself or by another person, with or without the consent of the PLWHA.

HIV related stigma: Unfavorable attitude and beliefs held about people living with HIV and those thought to be living with HIV (MOHSW, 2013)

Discrimination: Any distinction, exclusion, restriction or preference which has the purpose or effect of limiting the equal recognition, enjoyment or exercise of rights and freedom by all persons (MOHSW, 2013)

Psychosocial support group: A care which enhances well-being, confidence and social functions which include support groups which may be led by health care workers of be self facilitated. The primary function of the group is likely to be mutual emotional support and the sharing of personal experience (peer support); mother-to-mother mentorship and other forms of individual support, usually provided by volunteers (MOHCW Zimbabwe, 2007).

Tanzania National PMTCT guidelines stated that women living with HIV require on-going psychosocial care and support services. This will help women to fight stigma from families and communities and enable then to utilize PMTCT services effectively. The guideline recommends that the psychosocial services be offered to HIV positive women directly or by referral.

Discordant couples: A pair of long-term partners in which one has sexually transmitted infection and the other does not. In this case the sexually transmitted infection being HIV

Exclusive Breastfeeding (EBF): The infant receives only breast milk. No other liquids or solids are given, not even water, with the exception of oral rehydration solution, or drops/syrups of vitamins, minerals or medicine. WHO recommends that exclusive breastfed for the first six months of life to achieve optimal growth, development and health (WHO 2013). Tanzania MOHSW insists on counseling and support to mothers so as to improve feeding practices so as to prevent malnutrition and reduce the risk of death in children.

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ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
AIMGAPS	Assuming Infants and Mothers Get All PMTCT Services
ANC	Antenatal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral Drugs
CTC	Care and Treatment Clinic
DMO	District Medical Office
DRCHCO	District Reproductive and Child Health Coordinator
EBF	Exclusive Breastfeeding
EID	Early Infant Diagnosis
HCW	Health Care Workers
HIV	Human Immunodeficiency Virus
MOH	Ministry of Health
MOHSW	Ministry of Health and Social Welfare
MTCT	Mother to Child Transmission
NACP	National AIDS Control Program
PLWHA	People Living With HIV/AIDS
PMTCT	Prevention of Mother to Child Transmission
PNC	Postnatal Care

PSG	Psychosocial Support Group
RCH	Reproductive and Child Health
SPSS	Statistical Package for Social Sciences
SRH	Sexual Reproductive Health
THIS	Tanzania Health Indicator Survey
UNICEF	United Nations Children's Fund
VCT	Voluntary Counseling and Testing
WHO	World Health Organization

CHAPTER ONE

1. Introduction

In Tanzania, HIV prevalence is 5.1% for both men and women aged between 15 years and 49. The prevalence is higher for women (6.2%) compared to men (3.8%) - (Tanzania Commission for AIDS et, al; 2013). The burden of HIV infection due to mother to child transmission (MTCT) is high. Each year, 1.8 million women give birth. The antenatal clinic (ANC) HIV prevalence rate is 6.8% (UNICEF, 2011)

In Tanzania, the burden of HIV infection due to mother-to-child transmission is still high. The National AIDS Control Program (MOH, 2011) reported that the percentage of infants who are born to HIV infected mothers who become also infected is 25.7%. The WHO suggests that "in the absence of any intervention transmission rate ranges from 15 – 45%, but it can be reduced to levels below 5% with effective intervention" (WHO, 2011)

Prevention of mother to child transmission of HIV (PMTCT) is an intervention to prevent transmission of HIV from a mother living with HIV to her infant during pregnancy, labor and breast feeding (WHO, 2012). Prevention of mother to child transmission of HIV (PMTCT) starts when a mother goes to the clinic for her first antenatal visit, she is offered routine HIV counseling and voluntary testing. If the mother takes the test and is found to be HIV positive, she will have the chance to join the PMTCT program free of charge. All HIV positive pregnant or postnatal women are supposed to start ARV treatment which will reduce the risk of HIV transmission to the baby and protect the mother's health during and after pregnancy (WHO, 2013).

Prevention of mother to child transmission of HIV program in Tanzania (PMTCT) was first established in 2000. The main focuses of PMTCT program are pregnant women and those of reproductive age as well as their sexual partners, children, families and communities. The PMTCT program aims to prevent HIV infection in children, giving babies the chance to be HIV free and provide women and their families with access to HIV prevention, testing, care, treatment and support. The global 2015 PMTCT targets are: to reduce overall

mother to child transmission of HIV to less than 5%; 90% of mothers receive prenatal ARV; 90% of breast feeding infant-mother receive ARV (WHO, 2010)

There have been remarkable efforts and successes in the Prevention of Mother-to Child Transmission of HIV (PMTCT) strategies and programs in Tanzania. The number of health facilities providing PMTCT services increased from 1311 (28%) in 2007 to 4603 – 99% (out of 4647) in December 2011 (MOHSW, 2012).

Most of the people in Tanzania have knowledge of PMTCT. The Tanzania HIV/AIDS and Malaria Indicator Survey (2011/2012) results shows that 64% of women and 55% of men know that HIV can be transmitted by breastfeeding and the risk of MTCT can be reduced by the mother taking special drugs during pregnancy.

HIV positive pregnant mothers and postnatal mothers require not only access to quality ANC services, safe delivery and breastfeeding but also mothers must be able to access and utilize all the services and be retained in care from the beginning to the end. In order to have effective PMTCT programs there are a number of factors that can influence maximum utilization of PMTCT services. These include individual factors such as adequate PMTCT knowledge among HIV positive women and their partners, ability to disclose HIV status especially to male partners and partner's involvement (UNAIDS, 2000). There are also health systems factors such as appropriate counseling, appropriate follow up of PMTCT clients, adequate number of RCH staff. Finally there are Socio-cultural factors like stigma and discrimination related to HIV within families and community, and availability of community support for PLWHA (Gulaid and Kiragu, 2010)

In reality some women do not follow different stages that a woman must progress through to complete a PMTCT program i.e. offered counseling and testing during antenatal visits; Provision of ARVs prophylaxis (currently option B+); counseling for safer infant feeding options, pediatric care for exposed children; mother-child follow up and linkage to care and treatment clinics (CTC).

1.1 Problem Statement

Tanzania has made a good progress especially on scaling up PMTCT sites from 1311 in 2007 to 4603 in December 2011 - (MOHSW, 2012). With the availability of PMTCT services there are individual factors, health system and socio-cultural factors that influence utilization of such services by women.

Pregnancy is a very short time period, and the diagnosis of HIV often comes as a total shock. Most of pregnant women usually go to health facility so as to start antenatal clinic for making follow up of their pregnancy, but few if any, plan to take an HIV test. When a woman is diagnosed as HIV positive, she develops fear of disclosing such an HIV status to her partner, infecting her new borne as well as fear of stigma and discrimination from family and the community. In that stressful period, a woman is expected to make crucial decisions and retain a large amount of health information and make decisions that have far reaching consequences on her health, the health of her baby and family.

There is a wide gap between a woman's willingness to prevent her new born from HIV infection and actual utilization of available PMTCT services. A study which was conducted by Elizabeth Glaser Pediatric AIDS Foundation (EGPAF 2010) showed that about one-third of HIV positive woman in low and middle income countries utilize prevention of mother to child transmission of HIV (PMTCT) services. According to the DMO of Kibaha urban district the utilization of PMTCT services was only 55% of women who were diagnosed with HIV. Why was this so? How can these women be motivated to utilize the available PMTCT services? Is it adequate information about PMTCT, or social support from different sources or the extent of satisfaction with the services provided by health care workers? It was for that reason this study was conducted.

1.2 Rationale of the study

There is evidence that if HIV positive pregnant mothers receive full intervention of PMTCT they can reduce HIV transmission to their babies to less that 5% (WHO, 2012). Results from this study will help in designing of PMTCT programs that will ensure maximum utilization of services. This study adds more information to different PMTCT actors towards increasing utilization of services.

1.3 Research questions

1.3.1 Main question

What are the factors influencing utilization of PMTCT services for HIV positive pregnant women and postnatal mothers at Tumbi designated regional referral hospital.

1.3.2 Other questions

1) What is the participants' knowledge about PMTCT at Tumbi designated regional referral hospital
2) What are the retention rates of PMTCT clients from enrolment up to 12 months after enrollment at PMTCT clinic at Tumbi designated regional referral hospital.
3) What type of support and from whom do PMTCT clients at Tumbi hospital receive.
4) To what extent HIV positive women are satisfied with the provided PMTCT services at Tumbi designated regional referral hospital.

1.4 Objective of the study

1.4.1 Broad objective

To determine factors influencing utilization of prevention of mother to child transmission of HIV (PMTCT) services among HIV positive women during pregnancy and after delivery at Tumbi designated regional referral hospital.

1.4.2 Specific objectives

I. To determine the level knowledge of PMTCT among HIV positive pregnant mothers and postnatal mothers at Tumbi designated regional referral hospital.

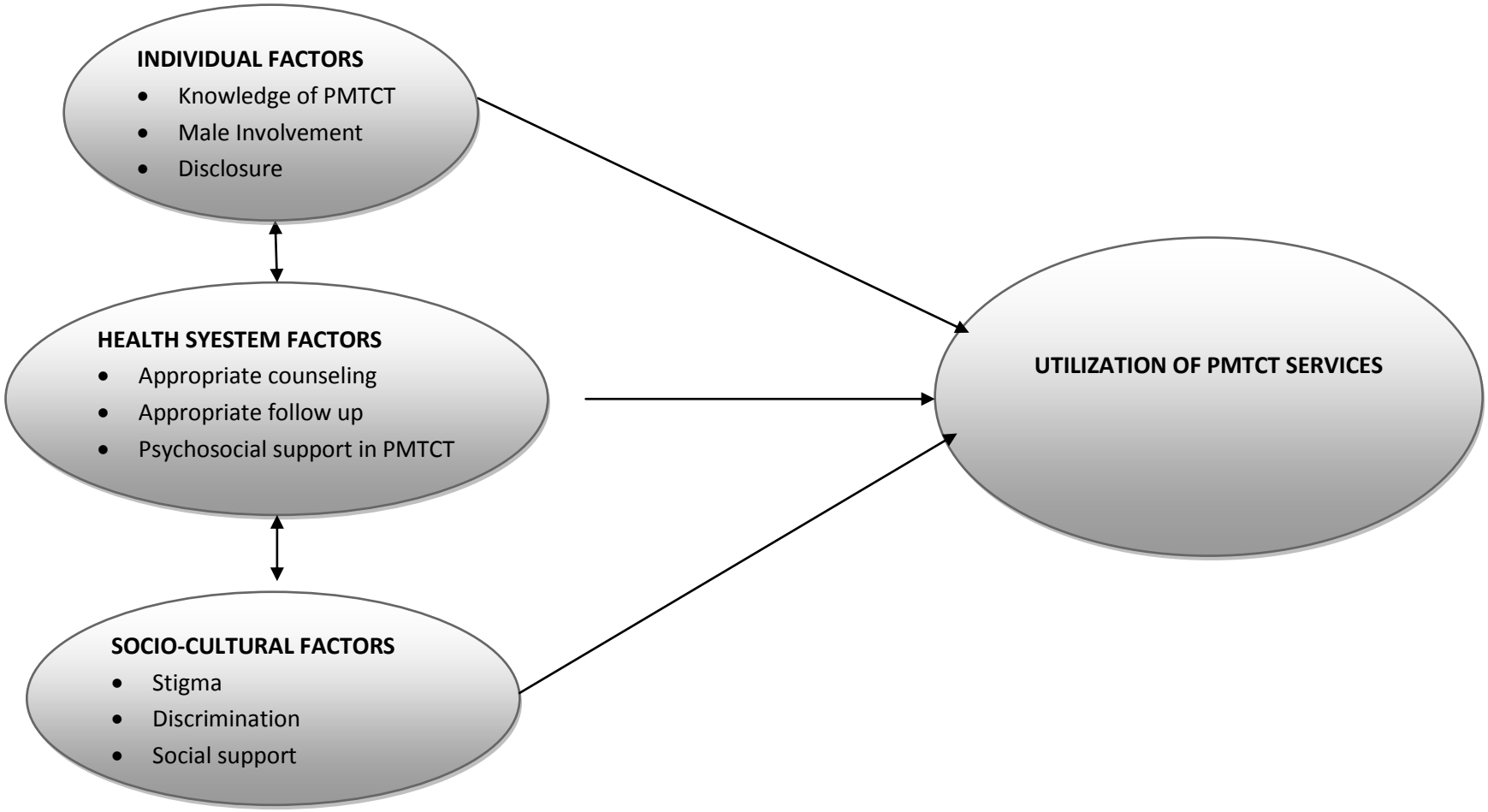
II. To determine the retention of HIV positive pregnant women and postnatal mothers into PMTCT care for 12 months after enrolment.

III. To identify sources of support for HIV positive women attending PMTCT services at Tumbi designated regional referral hospital.

IV. To determine the extent to which HIV positive women are satisfied with PMTCT services at Tumbi designated regional referral hospital

1.5 Conceptual Framework

Conceptual Framework for the factors influencing utilization of PMTCT services in Tumbi Designated Regional Referral Hospital



The diagram above analyses the relationship between the utilization of PMTCT services by HIV positive pregnant women and postnatal mothers and different factors that motivate them from to utilize the services.
This conceptual framework has focused on individual, health system and socio-cultural factors that influence utilization of PMTCT services.

Individual factors:
Health education of pregnant mothers is one of the ways of increasing awareness of HIV/AIDS and PMTCT. The higher level of PMTCT knowledge among HIV positive pregnant mothers and postnatal mothers influence utilization of PMTCT services. This is mainly because mothers understand the importance of PMTCT and the benefits of having free HIV babies.

Testing for HIV for Pregnant mothers at antenatal clinic is the initial stage for the mother to be enrolled to PMTCT program. The willingness to test facilitate identification of the HIV positive mothers and hence being enrolled into care and treatment including, including adherence counseling, breast feeding counseling and feeding options.
Woman's perception of the husband's approval of her taking an HIV test is the strongest predictor of women's willingness to accept an HIV test – (Bajunirwe et al 2005). Male involvement in PMTCT is an important factor for ensuring that women are able to utilize PMTCT services including care and treatment.

HIV positive women who have disclosed their diagnosis to their partners, family or friends are generally more likely to accept PMTCT interventions such as initiation of ARV for themselves and prophylaxis for their infant, feeding options for infants, early diagnosis for their infants – said DMO Kibaha Town Council.

Health system factors:

With adequate number of health care workers at RCH clinic help to improve efficiency of staff in providing key PMTCT interventions including counseling and tasting for HIV, adherence counseling and PMTCT client follow up.

Effective provision of PMTCT services requires continuum of care for different health care services including CD4 testing, initiation of ARV, hospital delivery, infant care and provision of prophylaxis, early infant diagnosis and treatment for infected infants. If mothers are followed up for different health services at PMTCT will increase utilization of services during the whole period that women and children are supposed to be under PMTCT care.

Psychosocial support as part of the PMTCT program has successfully helped women to adhere to ART and adequately care for their infants. It is critical at all stages of HIV infection. Women living with HIV require psychosocial care and support services – (Tanzania MOHSW 2013). Psychosocial support from HCWs in PMTCT provides educational, individual counseling and clinical care support. It improves relationship between health care providers and clients and dispels myths and rumors regarding PMTCT and link members to ART clinic and local community support for food supplement, income generating activities and hence increases utilization of PMTCT services.

Socio-cultural factors

Stigma and discrimination related to HIV are key social factors limiting the successful completion of PMTCT cascade by HIV positive pregnant women and postnatal mothers. They affect initial use of ANC services, uptake of HIV testing, enrolment into PMTCT and HIV care, hospital delivery and adherence to care during and after delivery (Turan et al, 2012).

Reducing stigma and discrimination through educating community about importance of community and family support in PMTCT initiatives can increase utilization of services by

HIV positive pregnant women and postnatal mothers. Educating leaders, traditional birth attendants, traditional healers can reduce stigma ad discrimination and hence increase utilization of PMTCT services.

HIV positive women need to get social support from their communities so that they can adhere to PMTCT interventions. They need to join or establish PLWHA groups or organizations that will enable them share experiences and get linked to other support services. The groups will also help to address stigma and discrimination issues and will promote understanding of HIV and PMTCT issues and how to deal with difficult issues.

CHAPTER TWO

2. Literature Review

The World Health Organization defined prevention of mother to child transmission (PMTCT) as interventions to prevent transmission of HIV from a mother living with HIV to her infant during pregnancy, labor and Breast feeding (WHO, 2010). When women start clinic for their pregnancy check and follow up, they can learn about available PMTCT services. It is only nurses who know who is HIV positive and who enroll positive mothers into PMTCT program. PMTCT services involve HIV positive pregnant women and postnatal mothers and their partners. The main goal of PMTCT is to reduce transmission to the infants to less than 5%. However, with the available PMTCT services very few women are utilizing them. HIV positive pregnant women and postnatal mothers require not only access to quality ANC services, safe delivery and breastfeeding but women must be able to access and utilize all the services and be retained in care from the beginning to the end. If the number of women saved through PMTCT increases there could have serious consequences to the health of HIV exposed infants and the health of HIV positive women (UNAIDS, 2001).

2.1 PMTCT Knowledge

Knowledge on PMTCT services means what individuals know about it. According to a study done by Komunami et al (2007) in Dar es Salaam, the frequency of antenatal care visit and spreading information on HIV especially mother to child transmission (MTCT) are significant factors of HIV test acceptance among pregnant women. Another study which was conducted in Ghana to determine the extent of influence of clients' knowledge level on accessing ART revealed that the knowledge level of HIV positive women on ART and PMTCT are important factors in adherence to ART (Boetang et al, 2013).

High levels knowledge is associated with access, use and adherence to ART (Boateng et al, 2013). The knowledge level of the mothers influences their adherence to ART. Improving the understanding of HIV positive women on HIV/AIDS, ART and PMTCT will impact

positively on their adherence to ART and PMTCT. This adherence will be more effective if the male partners will also be aware about PMTCT services. Partners who are well informed about reproductive health are more likely to make better choices for their own health and that of their wives as well as of their families (Alan Guttmacher Institute, 2003)

2.2 Male involvement in PMTCT

The active involvement of men in PMTCT services is crucial to the effectiveness of a program and to the empowerment of women in decision making regarding reproductive health issues. Male involvement in services such as sexual and reproductive health (SRH), antenatal care (ANC) as well as PMTCT is highly recognized as important factor that influences effectiveness of these services (Carter, 2002). Also Falnes et al (2013) said that creating male friendly space within PMTCT programming, while continuing to provide empowerment programming for women, must be a priority in creating quality PMTCT programs. If pregnant women get an opportunity to make decisions with their partners they tend to be more encouraged to utilize services even if they are complex like PMTCT (Theuring, 2010)

Most of male partners understand that it is very important for HIV positive pregnant mothers to be supported in order to access and utilize available services. But men do not want to attend clinic with their wives due to various reasons. A study which was conducted in Mbeya, Tanzania by Theuring.et al, 20110 revealed that some men lack proper information on the necessity for them to participate in PMTCT services, others claim to be busy while some say that it is not traditionally proper for a man to accompany his wife to a clinic. The above mentioned study also showed that economic hardship and fear of losing time, fear of an HIV test are among factors that hinder men to participate in PMTCT services. Non-disclosure of mother's HIV status to her husband/partners hinders their involvement in PMTCT. A qualitative study which was conducted in Kenya by Walcott et

al (2013) revealed that when women have disclosed their HIV status and their male partners are involved in antenatal care, HIV free infant survival will improve.

2.3 Disclosure

Disclosure of HIV status by a pregnant women involves informing significant others particularly the male partners about her status. The male partner has to be involved and educated together with his spouse in order to provide necessary support whenever the need arises. A study which was conducted in Addis Ababa Ethiopia showed that disclosure of HIV status by HIV positive pregnant women increases support, reduces anxiety and increases intention to utilize PMTCT services (Sendo et al, 2011). The rate of disclosure among respondent in this study was 73% was related to advances in PMTCT and antiretroviral treatment programs. Lack of disclosure by some women resulted in a limited ability to participate in PMTCT program, poor retention and poor follow up of HIV exposed infant. Therefore it was recommended that providers at PMTCT clinic should ensure that all efforts are made to council HIV positive pregnant women about disclosure of their status especially to their sexual partners from the beginning in every PMTCT intervention.

Another observational study which was conducted in rural setting in Tanzania revealed that the main factor that influence good adherence in PMTCT was disclosure to the partner, relative or a friend. Disclosure to these people enabled a mother to release emotional by receiving psychological and material support. It also enables a mother to receive approval from the husband to receive health care and transport to the hospital (Kristen et al, 2011)

Feeding for HIV exposed infant can only be effective in a situation where disclosure to partner has been done. A study which was conducted in Northern Tanzania by Falnes et al (2010) revealed that it is very difficult for an HIV positive mother to adhere to any of the infant feeding guidelines without disclosing her HIV status to her partner. Thus it is particularly important that issues of partner disclosure are taken seriously. Post test

counseling for HIV positive mother offer an opportunity to encourage serostatus disclosure and foster couple communication on HIV and PMTCT (UNICEF et al, 2004)

2.4 Counseling and follow up of PMTCT clients

Counseling on HIV is a directive process of helping someone to accept and use the information and give advice for solving or coping with a problem (Lie, 1996). Counseling conducted at antenatal clinic is an important facilitator for enrolment in PMTCT program. A study which was conducted in Kilimanjaro showed that counseling at antenatal clinic prepares pregnant women for HIV testing (Fjeld et al, 2010). Women agreed to be tested because they knew that after been tested and if found to be HIV-infected, they will get ARV to prevent HIV infection to their unborn baby. Therefore routine counseling and testing increases the acceptance of testing because it is part of the standard of care offered to all women in antenatal clinic, thus reducing stigma associated with testing (Fjeld et al, 2010)

PMTCT continuum of care involve a comprehensive range of prevention, treatment and care services for pregnant women and their infants during pregnancy, labour, delivery and after delivery. Appropriate follow up of PMTCT clients is very important for mother to complete care for the baby and for her own health. Cumulative losses in sub-Saharan Africa PMTCT programs are estimated to range from 20-28% during antenatal care up to 70% at four months postpartum and close to 81% at six months after birth. (Kalembo and Zgambo, 2012). In addition to the stresses of the HIV diagnosis; deciding whether or not to start ART; what to do about infant feeding; what will happen to their children; the stigma and discrimination; there is also the stress of wanting to have children and the social pressure for them to do so (WHO, 2013). This led the report on the global HIV/AIDS epidemic (2000) to include psychosocial support for the people living with HIV/AIDS (PLWHA) and their families as an essential service in their recommendation.

2.5 Psychosocial Support in PMTCT

In Uganda, the psychosocial support groups (PSG) are a part of the MOH NACP PMTCT program (MOH, 2004). The main services are to provide peer psychosocial support, education, individual counseling and clinical care support. A preliminary study found that PSG increased uptake ARV for mothers and babies, hospital deliveries and family planning. Testimonies and observations revealed that PSGs bring hope, help families stay together including discordant couples. Improve relationship between health provider and clients; dispel myths and rumors regarding family planning and link PSG members to ART and local community resources such as food supplement. The conclusion of the study was that PSG should be an essential component of the national PMTCT program.

In summary, the literature shows factors which influence uptake of PMTCT services among HIV positive pregnant women and postnatal mothers. The factors are knowledge of PMTCT among women, male involvement, and disclosure of HIV status, appropriate counseling, appropriate follow up and psychosocial support in PMTCT. Although the studies revealed several factors which influence utilization of PMTCT services, there is a need to conduct another study because most of the studies were conducted outside Tanzania. Also there is a variation of factors from one place to another.

CHAPTER THREE

3. Methodology

3.1 Study area

This study was conducted in Kibaha Town Council in Coast Region Tanzania. Data were collected from Tumbi designated regional referral hospital located at Kibaha Town Council. Tumbi hospital is owned by Kibaha Education Center. About 300,000 patients receive health services per year. The services include outpatient care, RCH clinic, care and treatment services for PLWHA, PMTCT services and other general health services. HIV and AIDS care and treatment clinic (CTC) at Tumbi hospital started to operate officially in June 2005. This clinic provides VCT, nutritional and adherence counseling services, investigation and treatment i.e. provision of anti-retroviral therapy (ART) to HIV and AIDS clients and treatment of STIs. The clinic attends around 70 – 80 clients per day. By the end of March 2014 CTC had enrolled 9150, out of these 4821 (53%) initiated ART (Mpemba et al, 2012). This health facility has been implementing PMTCT services since 2006. Care and treatment services for HIV positive pregnant women and postnatal mothers are integrated within RCH clinic. There were 9 HCWs providing services at RCH clinic from Monday to Friday. Total number of PMTCT clients who are current on care up to May 2014 was 176 both antenatal women and postnatal mothers (PMTCT Coordinator – Tumbi).

3.2 Study design

The design of this study was cross-sectional.

3.3 Study population

The study population included all HIV positive women who were pregnant and or had delivered and were attending care at the antenatal clinic and postnatal clinic at Tumbi designated regional referral hospital. The study participants included clients who were still on PMTCT care, who were enrolled from July 2012 to December 2013. Records from Tumbi Hospital (2013) show about 140 HIV positive pregnant mothers were enrolled at the hospital during this period.

Exclusion criteria

- All HIV positive postnatal mothers of more than 18 months after delivery.
- All women who refused to participate in the study.
- All women who did not keep their appointment during the study period.
- Women who were involved in pre-testing of the questionnaire
- Women who were sick during the study period

3.4 Sample size

The sample size expected was 140 HIV positive women who were enrolled from July 2012 to December 2013. The study captured all women who came for their normal antenatal and postnatal appointment during data collection days. One hundred and twenty six (90%) HIV positive women were captured during data collection.

3.5 Sampling procedure

In this study, participants were obtained from women who were coming for appointment for antenatal and postnatal care during data collection period. Participants were voluntarily recruited into the study after a careful explanation of the objectives of the study and obtaining their consent.

3.6 Identification and Training of Research Assistants

Research assistants were selected based on their experience of conducting research and knowledge of HIV/PMTCT. Training was conducted to orient them on the background of the study, its objectives, data collection tools (interview questions), how to obtain consent from the study participants, how to conduct interviews and data compilation.

3.7 Data collection technique

The study used structured interview as well as in-depth interview. Interviews were conducted during clinic hours every day. The interview collected information on demographic characteristics, PMTCT knowledge, sources of social support for HIV positive pregnant and postnatal women and extent of satisfaction with PMTCT services. The questions developed in English and then translated into Kiswahili and pre-tested at Tumbi hospital using HIV positive who were excluded from the study. Questions were asked the same way for each respondent in order to be consistent.

Documentary record review (registers & data base system) of PMTCT clients at Tumbi hospital was done to determine the retention of HIV positive women in PMTCT services 12 months after their enrolment.

3.8 Data processing and analysis

Data were checked every day in order to clear any errors. Information from in-depth interview was prepared every day before leaving the health facility. All questionnaires were assigned numbers and questions with multiple responses were coded before data entry. Data were analyzed using SPSS version 20.

PMTCT knowledge: This involved 21 questions to test awareness of this concept. Each correct question scored one mark which makes and wrong answers were given a zero score. Total scores obtained by each study participant were arranged in ascending order and divided into three groups. Those who scored between 1 -7 were regarded as having low knowledge; scores from 8 – 14 were classified as moderate knowledge and those scored 15

- 21 were regarded as having high PMTCT knowledge. The knowledge measured three main concepts namely available PMTCT services; ways of mother to child transmission and infant feeding options as preventive measure against infection for a new born.

The retention of women in PMTCT services: PMTCT women were identified by taking their unique numbers from PMTCT care registers. Then unique numbers were used to trace their information from the data base at the facility. Two groups of women were formed, those who had started ARV (ART clients) and those who had not yet started ARV (Pre-ART clients) to determine which group is more likely to retain into PMTCT care.

The support women receive from HCW, partners, families, PLHIV/peers, neighbors and friends:

Data was obtained by asking women about the sources of support. Analysis was done by running frequencies of women who receive support from different sources. Basing on the frequency distribution, cross tabulation was analyzed to relate support from partners with selected demographic characteristics.

The extent to which women are satisfied with provided PMTCT services: Data were obtained by asking women if they were satisfied with PMTCT services at the facility. Analysis was done by running frequencies of types of PMTCT services of which women are either satisfied or not satisfied with. Cross tabulation was analyzed to get variation of satisfaction by different age groups and by level of PMTCT knowledge.

3.9 Key variables

Independent variables included age, status (pregnant or postnatal women), marital status, level of education, knowledge of PMTCT, social support, satisfaction with services and income level.

Dependent variable was the utilization of PMTCT services.

3.10 Ethical consideration

Approval for conducting this study was obtained from the Directorate of Research and Publications of the Muhimbili University of Health and allied Sciences.

Permission to do the study was obtained from the management of Tumbi Designated Regional Referral Hospital and from the District Medical Officer. Each participant consented in writing to participate in the study after been provided with information about the study and also assured that participation was voluntary and they were free to to withdraw from the study at any stage without any consequences from the services they get from the hospital.

The investigator and research assistant introduced themselves and explained objectives of the study to each participant. The consent of each respondent was obtained before collecting any information. Respondents were assured that their names will not be attached to the report for confidentiality and that information will be used strictly for academic purposes. Data presentation has been prepared with no references to names of participants.

3.11Study limitation

This study experienced a challenge on poor documentation in PMTCT Care Register which led to failure to get updated information of PMTCT clients especially on proportion of women who were enrolled and those who are still on care. This information was traced from the computer data base whereby PMTCT data clerk used to update information for women who came for their PMTCT appointment.

CHAPTER FOUR

4. Findings

4.1 Socio-Demographic Characteristics of Study Participants

The socio-demographic characteristics of study participants are shown in the table 1 below. All respondents were HIV positive accessing PMTCT services at Tumbi hospital. The total number of PMTCT clients who were expected to participate in the study was 140 women. The study captured 126 women (90%) who came for their normal antenatal and postnatal appointment during data collection period. Two women refused to participate in the study, five women participated in pre-testing of questionnaire and were not included in the study and seven women did not turn up due to different reasons; some were sick, missed appointment and others were loss to follow up.

The age of the women ranged between 19 and 44. Mean age of women were 30.8 years, standard deviation ± 5.8 years. About a third of the study participants were antenatal women while two thirds were lactating mothers. Almost three quarters of the study participants were married and the rest were separated, widowed or single. The majority had two or more children and 34% were either pregnant for the first time or had one child.
Almost two thirds (65%) of study participants had primary education while 20% had either secondary, college or diploma education. Almost a quarter (24%) did not have any formal education. Half of these women (50.8%) were petty traders, 30.2% were peasants and 19% were employed by either government or private companies.

Of the 126 study participants, 17% were residing outside Kibaha Town where the study health facility was located but were seeking health care at the hospital. Among them 2 women were from Mbagala (about 54km away), 8 were from Mbezi (12km), 3 were from Boko Mlemela (about 32km) and 8 from Mlandizi (about 24km). Most of the participants (98%) used public transport (daladala or motorcycle) to seek health care and the cost ranged between 600 and above 5600 Tanzanian shillings (equivalent to about US $ 0.36

and $6.43). Only two participants walked to the health facility because they stayed near the hospital. However some women who stay fay from the hospital, during the in-depth interview reported that sometimes they miss their PMTCT appointment due to lack of transport money.

Table 1: Socio-demographic characteristics of respondents (n = 126)

Characteristic	Frequency	Percentage
Age		
19-24	24	19.0
25-34	69	54.8
35+	33	26.2
Status of mother		
Antenatal mother	41	32.5
Lactating mother	85	67.5
Marital status		
Married	92	73.0
Not Married	34	27.0
Number of Children		
0 – 2	84	66.7
3+	42	33.3
Level of education		
No formal education	24	19.0
Primary	82	65.1
Secondary/college/diploma	16	12.7
College	3	2.4
Diploma	1	.8

4.2 PMTCT Knowledge

The level of PMTCT knowledge of the study participants was generally high. Based on the knowledge scale which was developed, almost half (47.6%) of the participants had higher overall PMTCT knowledge compared to 10.3% whose scores were low as shown in table 2 below. The rest had moderate knowledge. The main source of PMTCT knowledge mentioned was health facilities (86%).

Table: 2 General knowledge of PMTCT and source of Information (n = 126)

	Number	Percentage
General knowledge of PMTCT		
Low	13	10.3%
Moderate	53	42.1%
High	60	47.6%
Source of Information		
Hospital	108	85.7%
Community	13	10.3%
Radio	5	4.0%
Posters	5	4.0%
Friends	15	11.9%
Health Care Workers	101	80.2%

The participants' knowledge was measured by what they knew about available PMTCT services; how children get infected by their HIV positive mothers; infant feeding options and preventive measures against infection to newborns and discordant couples.

Results summarized in table 3 show that study participants had higher knowledge about different infant feeding options as a preventive measure against infection for a new born. The majority (99.2%) knew that an HIV exposed infant should be exclusively breastfed for the first six months after birth (EBF). Scores were fairly high on the items which assessed different modes of mother to child transmission of HIV. The majority of the participants (87.3%) knew about the three modes of HIV transmission from mother to that a child; transmission during pregnancy, delivery and during breast feeding.

When the respondents overall knowledge on PMTCT was examined across age, the results shows that women aged between 25 and 34 years were better informed about PMTCT compared to other age groups, but these differences were not statistically significant (χ^2 = 5.67; P = 0.225)

Postnatal mothers were better informed about PMTCT (55.3%) compared to those who came for antenatal care (31.7%) and these differences were statistically significant (χ^2 = 7.13; P = 0.028). Interestingly, high knowledge scores on PMTCT decreased with increasing level of education varying from 54.2% among mothers without any formal education to 25% of those with secondary education or higher. However, these differences were not statistically significant

Furthermore, when results were examined across different marital categories, it was found that there was no significant variation between scores obtained and the marital status of the respondents (χ^2 = 10.05; P = 0.261). Also there was no significant variation between scores obtained and the number of children of the study participant (χ^2 = 7.7; P = 0.463).

Table 3: PMTCT Knowledge by basic PMTCT information, age, type of service, by level of education, marital status and number of children (n = 126)

	Low	Moderate	High
Basic PMTCT Information			
Available PMTCT services	23(18.3%)	38(30.2%)	65(51.6)
Mother to child transmission	1(0.8%)	15(11.9%)	110(87.3%)
Infant feeding as prevention of Infection for new born	0(0%)	1(0.8%)	125(99.2%)
Age			
19-24	0 (0%)	13 (54.2%)	11(45.8%)
25-34	7 (10.1%)	28 (40.6%)	34 (49.3%)
35+	6 (18.2%)	12 (36.4%)	15 (45.5%)
Type of Service			
Antenatal	7 (17.1%)	21 (51.250	13 (31.7%)
Postnatal	6 (7.1%)	32 (37.6%)	47 (55.3%)
Education Level			
No education	0 (0%)	11 (45.8%)	13 (54.2%)
Primary	10 (12.2%)	30 (36.6%)	42 (51.2%)
Secondary +	3 (15.0%)	12 (60.0%)	5 (25.0%)
Marital status			
Married	10 (10.9%)	38 (41.3%)	44 (47.8%)
Not married	3 (8.8%)	15 (44.1%)	16 (44.1%)
Number of Children			
0 – 2	6 (7.1%)	40 (47.6%)	38 (45.2%)
3 +	7 (16.7%)	13 (31.0%)	22 (52.4%)

4.3 Retention in PMTCT Services

An attempt was also made to determine the retention of HIV positive women in PMTCT services. This was obtained from the records of the health facility. From January 2012 to June 2013 there were 176 PMTCT clients who were enrolled into PMTCT services. Among them 83 were on ART and 93 were pre-ART care. Before February 2014 HIV positive pregnant women were initiated ARV based on CD4 count, but WHO later recommended that all HIV positive pregnant women should start ART soon after been diagnosed regardless of their CD4 count. The health facility where this study was conducted started to implement this new recommendation from February 2014.

Table 4 shows that, of 176 PMTCT clients only 72% were able to continue with PMTCT services for 12 months. When results were examined by different ART status, of 83 Pre-ART clients only 63.9% were coming for PMTCT services after 12 months and for clients who have started ARV (93) 78.5% were still attending PMTCT services. This finding suggests that clients who had started ARV soon after diagnosis are more likely to stay in PMTCT services compared to when initiation of treatment was dependent on CD4 count.

Married women are more likely to retain into PMTCT services compared to women who were not married. Results shows that out of 128 married women, 103 (80.5%) were retained into PMTCT services; while for unmarried women only 23 out of 48 (47.9%) were retained into services.

Among the missing clients, records from the hospital indicated that four died, six were transferred out to other health facilities and forty were defaulters.

Table 4: Retention in PMTCT services by client type, Age and Marital status (n = 176)

Period of enrolment – July 2012 to December 2013	Number of clients enrolled for PMTCT care	Number of Clients retained after 12 months
Client Type		
Pre-ART	83 (47.2)	53 (63.9%)
ART	93 (52.8)	73 (78.5%)
Age		
19 – 24	33 (18.8%)	24 (72.7%)
24 – 34	97 (55.1%)	69 (71.1%)
35+	46 (26.1%)	33 (71.7%)
Marital Status		
Married	128 (72.7%)	103 (80.5%)
Not Married	48 (27.3%)	23 (47.9%)

4.4 Social support received from different sources.

An attempt was also made to determine sources of social support received by the 126 study participants. Health Care workers at RCH provided different types of PMTCT support to the study participants as well as to their children. About 125 women (99.2%) received support from HCWs including HIV/AIDS education, counseling on ARV use, family planning education and counseling on disclosure of HIV status to the husband/partner. Apart from support from health care workers, 118 respondents (93.7%) mentioned that they received support from their husbands/partners. The type of support received included escort to clinic, transport, taking care of children, provision of food and clothes, affection and assistance in household chores. Support was also received from Fellow PLHIV whereby 85 respondents (67.5%) reported to receive education about HIV/PMTCT, ongoing counseling, psychosocial support and being linked to community support. Few respondents 54 (42.9%) reported that they received support from relatives of the mother, while 22 respondents (17.5%) received support from relatives of the husbands. Respondents who received supports from neighbors were 19 (15.1%) and 24 respondents (19.0%) received support from friends. Their support included provision of food for infant, escort to clinic, preparation of food and taking care of children.

When the support received was examined across marital status, the results revealed that 87 out of 92 married women (94.6%) were more likely to get support from their husbands/partners compared to women who were not marries and these variations were statistically significant (χ^2= 15.56; P = 0.004).

Results on table 5 shows that 85 out of 92 married women (92.4%) received support on transport while 76 of them (82.6%) were assisted in taking care of children and supported with food. Also 68 women (73.9%) were provided with clothes, 65 (70.7%) were assistance

in difficult duties, and 51 (59.8%) were assisted in household chores. Very few married clients 20 (21.7%) were escorted to clinic.

Table 5: Social support from partners by marital status

Type of Support	Marital Status		Significance level
	Married n = 92	Not Married n = 34	
Escort to clinic	20 (21.7%)	7 (20.6%)	$\chi^2 = 1.524$; P = 0.822
Transport	85 (92.4%)	21 (61.8%)	$\chi^2 = 37.89$; P = 0.000
Difficult duties	65 (70.7%)	15 (44.1%)	$\chi^2 = 10.48$; P = 0,033
Take care of children	76 (82.6%)	16 (47.1%)	$\chi^2 = 18.71$; P = 0.001
Food	76 (82.6%)	20 (58.8%)	$\chi^2 = 20.34$; P = 0.000
Clothes	68 (73.9%)	18 (52.9%)	$\chi^2 = 12.55$; P = 0.014
Affection	58 (63.0%)	17 (50.0%)	$\chi^2 = 6.73$; P = 0.151
Household chores	51 (59.8%)	10 (29.4%)	$\chi^2 = 8.77$; P = 0.067

Partner/husband support and participation in PMTCT was also assessed during the in-depth interview which was conducted to 25 participants, of whom 19 were married and 6 were not married; 7 were antenatal and 18 were lactating mothers. Out of all 25 interview respondents, 13 (52%) stated that that their husbands/partners didn't want to come to clinic with their wives for fear of being tested for HIV infection. Seven (28%) reported that their husbands had to continue doing other activities for getting income for the households while 5 (52%) mentioned that it is too costly it they both come to clinic in terms of transport. The following three participants explained why their husbands do not want to come to the clinic:

A 22 years old postnatal mother with one child said*"My husband does not want to come to the clinic for fear of being tested for HIV infection".*

"*My husband is a daladala driver; he cannot accompany me to the hospital because he is on the road everyday* (a 25 years old pregnant woman)

"We cannot afford paying transport cost for two people, it is too expensive! I better come alone so that we can save money for other household needs" (a 22 years old postnatal mother)

4.5 Satisfaction with PMTCT Services

Generally most of the study participants were satisfied with services provided by the health care workers in the hospital. Services accessed by clients included HIV/AIDS education, Counseling on ARV use, Family planning education and counseling on disclosure. Table 6 shows more than a half of participants were satisfied with the provision of counseling on ARV use.

Table 6: Level of Satisfaction with the Type of Service Provided (n = 126)

Type of Service Provided	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
HIV/AIDS Education	1 (0.8%)	0 (0%)	6 (4.8%)	56 (44.4%)	63 (50.0%)
Counseling on ARV use	1 (0.8%)	0 (0%)	1 (0.8%)	56 (44.4%)	69 (54.8%)
Family planning education	5 (4.0%)	3 (2.4%)	3 (2.4%)	52 (41.3%)	63 (50.0%)
Counseling on disclosure to partner	0 (0%)	0 (0%)	2 (1.6%)	68 (54.0%)	57 (45.2%)

Satisfaction with PMTCT services was examined across participant's knowledge about PMTCT. Results revealed that participants with higher knowledge about PMTCT were more satisfied with PMTCT services compared to participants with low PMTCT knowledge and these results were statistically significant.

Data in table 7 shows that among 63 participants who were very satisfied with HIV/AIDS education, 38 (60.3%) had higher knowledge about PMTCT ($\chi^2 = 11.42$; P = 0.003). Sixty nine participants were very satisfied with the provision of counseling ARV use services ($\chi^2 = 7.13$; P = 0.028).

When data were assessed on family planning services 63 participants were very satisfied whereby 41(65.1) had higher knowledge of PMTCT ($\chi^2= 15.18$; P = 0.001). Also 57

participants were very satisfied with provision of counseling on disclosure to partner and among tham 36 (63.2%) had higher knowledge about PMTCT (χ^2 = 10.58; P = 0.005)

Table 7: Higher level of satisfaction with Participants' Knowledge about PMTCT

Type of service participants satisfied with	PMTCT Knowledge			Significance level
	Low	Moderate	High	
HIV AIDS Education (n = 63)	2 (3.2%)	23 (36.5%)	38 (60.3%)	χ^2 = 11.42; P = 0.003
Counseling on ARV use (n = 69)	3 (4.3%)	28 (40.6%)	38 (55.1%)	χ^2 = 7.13; P = 0.028
Family planning education (n = 63)	2 (3.2%)	21 (33.3%)	40 (65.1%)	χ^2 = 15.18; P = 0.001
Counseling on disclosure to partner (n = 57)	3 (5.3%)	18 (36.1%)	36 (63.2%)	χ^2 = 10.58; P = 0.005

Satisfaction with PMTCT services was also observed during the in-depth interview. Twenty respondents out of 25 (80%) reported that health care workers were assisting them with respect:

The participants explained how she perceived the health care workers at the hospital *"Health care workers at this hospital are helping us with respect compared with others public health facilities. They always help us whenever we face challenges especially on taking ARVs"* (27 old pregnant woman)

The participants described how she was satisfied with provided services by health care workers *"I like the way health care worker are treating us, they listen to our problems and challenges with much respect, they always look very happy whenever they see us coming for our appointments"* (22 yeard old postnatal mother)

Participant explaine about her first experience after she was diagnosed with HIV infection and how she was assisted without being discriminated *"When I was diagnosed with HIV, I was so worried of the stigma and discrimination. But we are being attended normally without any stigmatization and discrimination from health care workers. We are being respected!"* (20 years old pregnant woman)

4.6 Incentives for Utilization of Services

Nearly 99% of the clients were accessing PMTCT services every time despite of the long distance and associated costs. Different reasons were given for preferring to attend PMTCT services at this health facility. Table 8 shows that nearly 89% of the study participants mentioned 'good assistance from HCWs and availability of PMTCT services as main factors influencing them to come for the services.

Table 8: Incentives for Utilizing the PMTCT Services (n = 126)

Factors	Frequency	Percent
Support from partner	79	62.7
Support from family members	41	32.5
Testimony provided by peers – graduate from PMTCT	99	78.6
Psychosocial support provided at health facility	80	63.5
Intensive counseling	94	74.6
Good care/assistance from HCW	112	88.9
Availability and efficiency of PMTCT services	102	81

Peers also had a strong influence in utilizing of the services and the same applies to the way counseling was provided by the health care workers. Support from family members had the least influence compared to the others.

It was also being observed during the in-depth interview that 24 respondents out of 25 (96%) reported that they do not receive support from family members. Out of 6 respondents who were not married none of them reported to have received support from family members. The main reason as mentioned by respondents was that they never disclosed their HIV status to other family members as it said by the following 4 respondents:

The participant explained why she was not receiving support from her relatives *"I do not receive any support from my relative or even the relative of my husband, I have not disclosed to them about HIV status. It is only my husband who knows about my HIV status and he is supporting me".* (22 years old pregnant woman)

The woman explained about her feer of disclosure due to stigma in the community *"If you disclose your HIV status to family members, they will not support you, instead they will start to stigmatize you and disclose to all people in the community"* (20 years old postnatal woman)

The participant explained her feer of disclosure due to what she observed from her friend who disclose the HIV status to family members *"My friend disclosed her status to family members and she faced with many challenges, she was not receiving any support, her children were discriminated! For this reason, I will never disclose my status to family members because they will not help me"* (a 19 old pregnant woman)

The participant explained her worrt of being blamed for acquiring the HIV infection *"My sister was diagnosed with HIV and she disclosed her status to the family members. After disclosure she was accused for being infected with HIV, she became very sick and no one assisted her. She had no money for going to hospital; she suffered until she died due to lack of support and love from family members"* (a 25 years old postnatal mother)

From the information on the study results most of the respondents had higher knowledge about PMTCT. Retention in PMTCT services was observed to be higher among clients who have started using ARV comparing to those who have not yet started ARV. With proven results, study participants received much support from health care workers, husbands/partners and peers in the health facility. It has also been observed that most of the participants were satisfied with the services provided by health care workers.

CHAPTER FIVE

5. Discussion, Conclusion and Recommendations

5.1 Discussion

It was observed that there was a strong commitment from health care workers who were providing various PMTCT services to HIV positive pregnant and postnatal women who went for care at Tumbi hospital. PMTCT knowledge was observed to be a contributing factor for utilization of the services by study participants. Husbands/partners support their wives to utilize PMTCT services but they were not participated in the services.

From this study, it was observed that all women who were attending PMTCT clinic at Tumbi hospital had a fairly high level of knowledge about PMTCT which is very important factor for women to access and utilize the services. The main source of PMTCT information for the study participants were health care workers. The finding suggests that frequency use of PMTCT services leads to high level of knowledge about PMTCT not only to the participants but also to their families and community. As a result many women will be informed about PMTCT which will lead to the increase of number of women who utilize the services. Similar results have been reported by Komunami et al (2007), that spreading information on HIV especially mother to child transmission – MTCT are significant factors of HIV test acceptance among women which is the entry point of PMTCT services.

Interestingly the level of PMTCT knowledge was negatively related to the level of education of the study participants. This finding may suggest that PMTCT clients with high level of education do not want to mix together with other clients during health education sessions at the PMTCT clinic. These women developed relationships with some of health care workers who assisted them to get ARV whenever they came at the hospital. It is possible this was among the reasons these women missed an opportunities to learn about important PMTCT information which are provided during health education sessions.

Results of this study show that out of 176 women who were enrolled into PMTCT services, only 71.6% were retained after twelve months. Out of 83 Pre-ART clients 63.9% were retained after 12 months and out of 93 ART clients 78.5% were retained after 12 months. This finding shows that PMTCT clients who are using ARV are more likely to retain into services that those who have not started to use ARV. The finding may suggests that early initiation of ARV to HIV positive women at PMTCT is not only efficiency in preventing mother to child transmission of HIV but also an important factor to retain women into PMTCT services. Same results were reported by Toit et al (2011) that many clients on ART (94%) were retained in ART services compared to less than half (43%) of those who on Pre-ART.

The study participants mainly received support from Health care workers, partners and fellow PLHIV at the hospital. This indicates that these three groups of people are very important to support women to utilize PMTCT services. Partners seem to be very supportive although they do not want to attend clinic with their wives/partners. There is a need to develop strategies which can effectively involve them in PMTCT program in order to have good results. A study which was conducted by Carter (2002) suggests that active involvement of male partners in PMTCT services is crucial to the effectiveness of programs.

PLHIV/Peers at the health facility are important to encourage women to utilize PMTCT services. Findings from this study showed that 66% of women receive support from their fellow PLHIV. This is probably due to that fact that women feel free to discuss about HIV issues with their fellow PLHIV whom they share the same experience. They tend to believe in PMTCT services through testimonies provided by PLHIV who have graduated from PMTCT and who have benefited from the services. The same was reported by Annelie te al (2011) that peer educators are recognized for being close to clients, they provide clients with an opportunity to individually talk to someone who was also living with HIV, who had a positive attitude about their situation and are willing to share personal stories of hope when educating and counseling clients.

Another finding showed that many participants were satisfied with provided PMTCT services. Participants with higher knowledge were very satisfied with PMTCT services provide by health care workers. This finding suggests that satisfaction with the services is determined by women's knowledge of PMTCT services. The higher level of PMTCT knowledge among clients leads to their satisfaction with the PMTCT services and hence increases utilization of services. Similar resulta were reported by Kalembo et al (2012) that the knowledge level of HIV positive women on ART and PMTCT are important factors in adherence to ART.

5.2 Conclusion

Basing on the results made from this study the following conclusion can be made. Knowledge about PMTCT was relatively high among the study participants and the main source was the health care workers. Most of the participants knew about exclusive breast feeding for an HIV exposed infant.

Retention of women into PMTCT services was 76.1% and the remaining were either transferred out, dead or defaulters. Women who were using ARV were more likely to retain in PMTCT services (78.5%) compared to women who had not yet started to use ARV (63.9%).

Study participants received support mainly from health care workers, husbands/partners and their fellow PLHIV in the hospital. Very few women receive support from relatives, neighbors and friends.

Most participants were satisfied with the PMTCT services provided by health care workers. Most of them were very satisfied with the way counseling on ARV use and disclosure of HIV status to partners was provided.

5.3 Recommendation

1. Since the knowledge of PMTCT was relatively high among the study participants, which was related to the effective utilization of PMTCT services, there is a need to educate all women of childbearing age about PMTCT so as to reduce the risk of HIV transmission from mother to child.

2. As retention into PMTCT services was observed to be higher among those women who were using ARV that those who were not using ARV, there should be strategies for ensuring that all pregnant women be initiated on ARV as soon as they are diagnosed as HIV infected.

3. From the study it was observed that husbands/partners were very supportive to their wives who are HIV positive. Health care worker should put strategies to involve them in PMTCT program so as to increase utilization of services by HIV positive pregnant and postnatal women.

4. Participants mentioned that good assistance from HCWs and availability of PMTCT services as main factors influencing them to come for the services. Therefore there should be strategies to ensure that health care workers are equipped with the up to date information and PMTCT commodities should be available at the hospital.

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APPENDICES

Appendix I: Questionnaire – English Version

A questionnaire of a study on factors influencing utilization of PMTCT services among HIV positive women during antenatal and postnatal period at Tumbi Designated Regional Referral Hospital – Dodoso juu ya mambo yanayowezesha matumizi ya huduma za kuzuia maambukizi ya vvu kutoka kwa mama kwenda kwa mtoto kwa akina mama wenye maambukizi ya VVU katika hospitali teule ya rufaa ya tumbi

Identification/Utambulisho:

1. Questionnaire number/namba ya dodoso _____
2. Name of interviewer/jina la anayehoji _____
3. Date/tarehe _____/_____ 2014

Socio-demographic Information/Taarifa binafsi kuhusu Mshiriki:

1. How old are you?/una miaka mingapi? ____ (Date of birth/Tarehe ya kuzaliwa) ____

2. Antenatal Mother/Mama Mjamzito____Postnatal Mother/Mama anayenyonyesha ____

3. Marital status/Hali ya ndoa (put a tick on the correct answer/Weka vema kwenye jibu sahihi
   a. Married/Nimeolewa b. Single/Sijaolewa c. Divorced/nimeachika d. C0-habiting/Uke-wenza e. Separated/tumeachana f. Widow/mjane

4. Type of marriage/aina ya ndoa (put a tick on the correct answer/weka vema)
   a. Monogamy/Mke mmoja
   b. Polygamy/Mke zaidi ya mmoja

5. Dou you have children?/Una watoto? Yes/ndiyo _____No/Hapana _____ If no go to question number 7/ Kama hapana endelea swali namba 7

6. If yes, how many children do you have?/Kama ndiyo, una watoto wangapi? _____

7. Do you know how to read and write?/Unafahamu kusoma na kuandika?

   Yes/Ndiyo _____

   No/Hapana ____ (If Yes, continue with the following question; If no go to question number 9 / Kama ndiyo jibu swali linalofuata, kama hapana endelea kujibu swali la 9)

8. If yes, what is the highest level of education you have attained/ Kama ndiyo, umefikia kiwanga gani cha elimu? (put a tick on the correct answer/weka alama ya vema kwenye jibu sahihi)
   a. Primary/Msingi
   b. Secondary/Sekondari
   c. College/Chuo
   d. Diploma/Stashahada
   e. University/Chuo Kikuu
   f. No formal education/Sijasoma

9. What is your current occupational/ Unafanya kazi gani kwa sasa?
   a. Employed – Government/Ajira serikalini
   b. Employed – Private/Ajira kampuni binafsi
   c. Unemployed/Sijaajiriwa
   d. Petty trade/Biashara ndogondogo
   e. Peasant/Mkulima
   f. House wife/Mama wa nyumbani
   g. Others (mention)/Nyingine (taja)

10. What is the age of your husband/partner – Mume wako ana miaka mingapi? (Date of birth/Tarehe ya kuzaliwa) _____

11. Does your husband/partner know how to read and write?/ Je, mume/mwenzi anajua kusoma na kuandika?

    Yes/ndiyo ___
    No/hapana ____ (If Yes, continue with the following question; If no go to question number 13 / Kama ndiyo jibu swali linalofuata, kama hapana endelea kujibu swali la 13)

12. What is the level of education of your partner/Je mume/mwenzi amefika kiwango gani cha elimu? (put a tick on the correct answer/weka alama ya vema kwenye jibu sahihi)
    a. Primary/Msingi
    b. Secondary/sekondari
    c. College/chuo
    d. Diploma/stashahada
    e. University/Chuo kikuu
    f. No formal education/hajasoma

13. What is the occupational of your husband/partner / Mume/Mwenzi anafanya kazi gani kwa sasa?
    a. Employed – Government/Ajira serikalini
    b. Employed – Private/Ajira kampuni binafsi
    c. Unemployed/Sijaajiriwa
    d. Petty trade/Biashara ndogondogo
    e. Peasant/Mkulima
    f. Others (mention)/Nyingine (taja)

Accessibility to Health Facility/Kufika hospitalini

14. How long does it take you to reach the health facility/ Je inakuchukua muda gani kufika hapa hospitalini? _____

15. Is this the nearest health facility / Je hii ni hospitali liyo karibu zaidi kwako?
    a. Yes/Ndiyo
    b. No/Hapana

16. How much does it cost you to reach the health facility Inakugharimu kiasi gani cha fedha kufika hapa hospitalini? _____

17. What mode of transport do you use to get to the health facility Unatumia usafiri gani kufika hapa hospitalini? /?
    a. On foot/Kwa miguu
    b. Public transport (bus/daladala)/Basi au daladala
    c. Bicycle/baiskeli
    d. Motorcycle/Pikipiki
    e. Others (mention)/Nyingine (taja)

18. Who escorts you to this health facility Ni nani anakusindikiza kuja hapa hospitalini?
    a. Husband or partner/Mumeau mwenzi
    b. Mother/Mama
    c. Mother-in-law/Mama Mkwe
    d. Sister/Dada
    e. Sister-in-law/Wifi
    f. Myself /Mwenyewe
    g. Others (Mention)/Wengine (wataje)

19. Do you have any barriers to come here/ Je una kikwazo chochote katika kufika hapa hospitalini?
    Yes/Ndiyo
    No/Hapana

20. If Yes, What are the barriers/Kama ndiyo ni vikwazo vipi?
    a. _____
    b. _____
    c. _____

Objective / Lengo 1:

To determine the knowledge of PMTCT among HIV positive pregnant mothers and postnatal mothers at Tumbi designated regional referral hospital / Kutambua kiwango cha elimu kuhusu PMTCT kwa wanawake wanaoishi na maambukizi ya VVU katika hospitali teule ya rufaa ya Tumbi

21. Have you heard about PMTCT / Umewahi kusikia kuhusu huduma za kuzuia maambukizi ya VVU kutoka kwa mama kwenda kwa mtoto (PMTCT)
    Yes/Ndiyo _____
    No/Hapana _____ (If Yes answer the following question; If no go to question number 24/ Kama ndiyo jibu swali linalofuata na kama hapana endelea kujibu swali namba 24

22. If yes, what was your source of knowledge?
    a. Hospital/Hospitalini
    b. Community/Jamii
    c. Radio/Redio
    d. Newspapers/Magazeti
    e. Posters/Mabango

f. Friends/Marafiki
g. Health care workers/Wahudumu wa afya
h. Others (mention)/Wengine (Taja)

23. What types of PMTCT services are available / Ni huduma zipi za PMTCT zinazopatikana hapa?
    a. Education about HIV and PMTCT/ Elimu kuhusu ukimwi na PMTCT
    c. HIV testing and counseling/ Ushauri na upimaji wa VVU
    d. Use of ARV/ Matumizi ya ARV
    e. Early infant diagnosis (EID)/ Upimaji wa mapema wa watoto
    f. Infant feeding/ lishe kwa watoto
    g. Family Planning/ Uzazi wa mpango
    h. Psychosocial Support/ Msaada wa kisaikolojia

24. Is it necessary for every ANC mother be tested for HIV at the start of ANC clinic? / Je ni lazima kila mama mjamzito kupimwa VVU mara ajapo kliniki mara ya kwanza?
    Yes/Ndiyo ____
    No/ Hapana ____

25. Should every HIV positive pregnant woman start ARV as soon as she is diagnosed as HIV positive? / Je kila mama mjamzito anayegundulika kuwa na VVU anatakiwa kuanza kutumia ARV mara moja?
    Yes / Ndiyo _____
    No / Hapana _____

TRUE/KWELI; NOT TRUE/SI KWELI; I DON'T KNOW/SIJUI

For an HIV positive woman / Kwa mama mwenye maambukizi ya VVU

26. A baby can be infected with HIV while in her mother's womb Mtoto anaweza kuambukizwa akiwa tumboni

27. A baby can be infected with HIV during delivery / Mtoto anaweza kuambukizwa wakati wa kujifungua.

28. A baby can be infected with HIV during breast feeding / Mtoto anaweza kuambukizwa wakati wa kunyonyesha

29. All babies born through HIV positive mothers will acquire HIV / Watoto wote wanaozaliwa na mama wenye maambukizi ya VVU ni lazima waambukizwe VVU

30. Woman living with HIV should only breastfeed her baby exclusively for first six months / Mama mwenye maambukizi ya VVU anatakiwa kumnyonyesha mtoto wake maziwa yake pekee kwa miezi sita mfululizo

31. An HIV exposed infant should not be given liquids or solids, with the exception of multivitamins, mineral supplements or medicines prescribed by a HCW / Mtoto aliyezaliwa na mama mwenye maambukizi ya VVU hatakiwi kupewa maji wala vyakula isipokuwa vitamin, madini na dawa kama atakavyoshauriwa na mtoa huduma

32. HIV exposed mothers should introduce complementary foods after six months while continuing to breastfeed up to 24 months of age (2 years)/ Mtoto aliyezaliwa na mama mwenye maambukizi ya VVU atapewa vyakula baada ya miezi sita huku akiendelea kunyonya maziwa ya mama mpaka miezi 24 (miaka miwili) .

33. HIV exposed infant can be breastfed while are given other liquids or foods (such as water, tea, formula, animal milk and porridge) within the first six months / Mtoto aliyezaliwa na mama mwenye maambukizi ya VVU anaweza kunyonya maziwa ya mama na kupewa vyakula kama maji, chai, maziwa ya kopo, maziwa ya wanyama na uji katika kipindi cha miezi sita ya mwanzo.

34. Effective condom use for HIV infected couples help to prevent new infection for the new born / Matumizi sahihi ya kondomu yanasaidia kuzuia maambukizi kwenda kwa mtoto

35. Is it possible for a woman to be HIV positive while her husband is not/ Je inawezekana kwa mama kuwa na VVU na mume wake asiwe VVU hata kama wamekuwa pamoja kwa muda mrefu?

36. Is it possible for a male partner to be HIV positive while the female partner is not / Je inawezekana kwa mume ke kuwa na VVU na mke wake asiwe VVU hata kama wamekuwa pamoja kwa muda mrefu?

37. Discordant couples are encouraged to use condoms every time they have sex so as to prevent infection for uninfected partner / Wenzi nnwenye majibu tofauti ya VVU wanashauriwa kutumia kondomu mara zote ili kuzuia maambukizi kwa mwenzi ambaye hana maambukizi ya VVU?

Objective/Lengo 2:

To identify sources of support for HIV positive women attending PMTCT services at Tumbi designated regional referral hospital / Kutambua vyanzo vya misaada wanayopata akina mama wenye maambukizi wanahudhuria huduma za kuzuia maambukizi ya VVU kutoka kwa mama kwenda ka mtoto katika hospitali ya rufaa ya Tumbi.

38. Do you get any support from health care workers / Je unapata msaada wowote kutoka kwa watoa huduma hapa hospitali

    Yes/Ndiyo ____

    No / hapana ____ (If yes continue with question 39; If no go to question 40 / Kama ndiyo jibu swali linalofuata na kama hapana endelea kujibu swali namba 40

39. If Yes, what support do you get from health care workers / Kama ndiyo, ni msaada gani unaopata kutoka kwa watoa huduma hapa hospitalini
    a. HIV/AIDS education / Elimu kuhusu VVU/Ukimwi
    b. Counseling and testing for HIV / Ushauri na upimaji wa VVU
    c. Counseling on adherence to medication / Ushauri juu ya matumizi ya dawa
    d. Provision of ARV / Kupatiwa ARV
    e. Infant feeding counseling and support / Ushauri na msaada wa ulishaji wa watoto
    f. counseling on family planning / Ushauri juu ya uzazi wa mpango
    g. Provision of condoms / Kupatiwa kondomu
    h. Psychosocial support services / Msaada wa kisaikolojia

40. Do you get any support from your partner / Je unapata msaada wowote kutoka kwa mume/mwenzi?

    Yes / ndiyo _____

No / Hapana _____ (If yes continue with question 41; If no go to question 42 / Kama ndiyo jibu swali linalofuata la 41; na kama hapana endelea kujibu swali namba 42)

41. If yes, what support do you get from your partner / Kama ndiyo, ni msaada gani unaopata kutoka kwa mume/mwenzi?
    a. Escort to clinic / kusinndikizwa kliniki
    b. Provision of bus fare / kupewa nauli
    c. Assist in difficult duties / kusaidiwa kazi ngumu
    d. Take care of children / kuhudumia watoto
    e. Food / Chakula
    f. Clothes / Mavazi
    g. Affection / Upendo
    h. Household chores / Shughuli za nyumbani
    i. Others (mention) / Nyingine (taja)

42. Do you get any support from your relatives (relatives of the woman) / Unapata msaada wowote kutoka kwa ndugu zako?
    Yes/ndiyo ____
    No/Hapana _____ (If yes continue with question 43; If no go to question 44 / Kama ndiyo jibu swali linalofuata la 43; na kama hapana endelea kujibu swali namba 44).

43. If yes, what support do you get from your relatives (relatives of the woman) / Kama ndiyo, ni msaada gani unaopata kutoka kwa ndugu zako
    a. Infant feeding / Chakula cha mtoto
    b. Escort to clinic / kusindikiza kliniki
    c. Preparation of food / kuandaa chakula
    d. Take care of children / kuangalia watoto

44. Do you get any support from relatives of your husband/partner / Unapata msaada wowote kutoka kwa ndugu wa mume/mwenzi

    Yes/ndiyo _____

    No/Hapana _____ (If yes continue with question 45; If no go to question 46 / Kama ndiyo jibu swali linalofuata 45; na kama hapana endelea kujibu swali namba 46)

45. If yes, what support do you get from relatives of your husband/partner / Kama ndiyo, ni msaada gani unaopata kutoka kwa ndugu wa mume/mwenzi
    a. Infant feeding / Chakula cha mtoto
    b. Escort to clinic / kusindikiza kliniki
    c. Preparation of food / kuandaa chakula
    d. Take care of children / kuangalia watoto

46. Do you get any support from peers at health facility / Je unapata msaada wowote kutoka kwa wana rika (waelimishaji rika) hapa hospitalini?

    Yes/ndiyo _____

    No/Hapana _____ (If yes continue with question 47; If no go to question 48 / Kama ndiyo jibu swali linalofuata 47; na kama hapana endelea kujibu swali namba 48)

47. If yes, what support do you get from peers at health facility / ndiyo, ni msaada gani unaopata kutoka kwa wana rika hapa hospitalini
    a. Provision of testimonies / Ushuhuda
    b. Ongoing counseling / Ushauri endelevu
    c. Psychosocial support / Msaada wa kisaikolojia
    d. Linkage to community support / kuunganishwa na msaada kwenye jamii
    e. Education on HIV/PMTCT / Elimu juu ya VVU na uzuiaji wa maambukizi ya VVU kutoka kwa mama kwenda kwa mtoto

48. Do you get any support from your neighbors / Je unapata msaada wowote kutoka kwa majirani?

    Yes/ndiyo _____

    No/Hapana _____ (If yes continue with question 49; If no go to question 50 / Kama ndiyo jibu swali linalofuata 49; na kama hapana endelea kujibu swali namba 50)

49. If yes, what support do you get from your neighbors
    a. Infant feeding / Chakula cha mtoto
    b. Escort to clinic / kusindikiza kliniki
    c. Preparation of food / kuandaa chakula
    d. Take care of children / kuangalia watoto

50. Do you get any support from your friends / Je unapata msaada wowote kutoka kwa marafiki?

    Yes/ndiyo _____

    No/Hapana _____ (If yes continue with question 51; If no go to question 52 / Kama ndiyo jibu swali linalofuata 51; na kama hapana endelea kujibu swali namba 52)

51. If yes, what support do you get from your friends
    a. Infant feeding / Chakula cha mtoto
    b. Escort to clinic / kusindikiza kliniki
    c. Preparation of food / kuandaa chakula
    d. Take care of children / kuangalia watoto

Objective/Lengo 3:

To determine the extent to which HIV positive women are satisfied with PMTCT services at Tumbi designated regional referral hospital / Kutambua ni kwa kiwango gani akina mama wenye maambukizi ya VVU wanaridhika na huduma zitolewazo za kuzuia mambukizi ua VVU kutoka kwa mama kwenda kwa mtoto katika hospitali ya Tumbi

52. Do you always come to this health facility for PMTCT services? / Je huwa unakuja hapa hospitalini mara zote kwa huduma za PMTCT? Ndiyo / Hapana
    Yes / Ndiyo ____
    No / Hapana ____

53. Which services do you get at this health facility? / Ni huduma zipi za PMTCT unazopata hapa hospitalini (put a tick – you can choose more than one) / (weke alama ya vema – unaweza kuchagua zaidi ya moja)

    HIV counseling and testing / Ushauri na upimaji wa VVU
    Counseling on ART initiation / Ushauri wa kuanzishiwa ARV
    Partners counseling and testing / Ushauri na upimaji kwa mwenzi
    Counseling on ARV use / Ushauri kuhusu matumizi ya ARV
    Provision of ARV / Kupatiwa ARV
    CD4 Test / Upimaji wa kinga ya mwili – CD4
    Counseling on infant feeding / Ushauri juu ya ulishaji wa watoto
    Safe delivery / Uzazi salama
    Early Infant Diagnosis / Upimaji wa mapema wa VVU kwa watoto
    ART for infants / Matibabu kwa watoto
    Family planning / Uzazi wa mpango
    Provision of condoms / kupatiwa kondoms

Counseling on safer sex / ngono salama

Psychosocial support in PMTCT / Msaada wa kisaikilojia

54. Are you satisfied with HIV/AIDS education provided at RCH / Je unaridhika na elimu inayotolewa hapa kliniki kuhusu VVU na Ukimmwi? ?
    a. Very dissatisfied / Sijaridhika kabisa
    b. Dissatisfied / Sijaridhika
    c. Neutral / sipo upande wowote (nipo kati ya kuridhika na kutoridhika)
    d. Satisfied / Nimeridhika
    e. Very Satisfied / Nimeridhika sana

55. Did you understand all the messaged during HIV/AIDS education provided / Umeelewa ujumbe unaotolewa wakati wa elimu ya VVU/Ukimwi?

    Yes/Ndiyo ____

    No/hapana _____

56. Were you explained on how to use ARV? / Ulielimishwa juu ya matumizi ya ARV

    Yes /ndiyo _____

    No / hapana ____

57. Did you understand what was told about ARV use? / Ulielewa ulichoambiwa juu ya matumizi ya ARV

    Yes /ndiyo _____

    No / hapana ____

58. Were you satisfying with the way it was delivered? / Je uliridhika namna elimu hii ilivyotolewa?
    a. Very dissatisfied / Sijaridhika kabisa
    b. Dissatisfied / Sijaridhika

c. Neutral / sipo upande wowote (nipo kati ya kuridhika na kutoridhika)
d. Satisfied / Nimeridhika
e. Very Satisfied / Nimeridhika sana

59. Were you counseled on infant feeding?/ Ulishauriwa juu ya ulishaji wa watoto
    Yes /ndiyo _____
    No / hapana ____

60. Did you understand what to do from what was said about this?/ Ulielewa ulivyoambiwa juu ya ulishaji wa watoto
    Yes /ndiyo _____
    No / hapana ____

61. Were you taught about family planning?/ Ulielimishwa juu ya uzazi wa mpango?
    Yes /ndiyo _____
    No / hapana ____

62. Were you satisfied with the way this topic was delivered?
    a. Very dissatisfied / Sijaridhika kabisa
    b. Dissatisfied / Sijaridhika
    c. Neutral / sipo upande wowote (nipo kati ya kuridhika na kutoridhika)
    d. Satisfied / Nimeridhika
    e. Very Satisfied / Nimeridhika sana

63. Did you understand what is expected of you? / Ulielewa kuwa unatakiwa kufanya nini?
    Yes /ndiyo _____
    No / hapana ____

64. Were you explained about duo protection? / Ulielimishwa kuhusu matumizi ya kondomu pamoja na njia nyingine ya uzazi wa mpango?
    Yes /ndiyo _____
    No / hapana ____ (If Yes, what does this mean? / Kama ndiiyo, hii ina maana gani? -
    ---

65. Do you use condoms?/ Je unatumia kondomu?
    Yes /ndiyo _____
    No / hapana ____ (If yes which one do you use? Male / Female – Kama ndiyo unatumia aina gani ya kondomu? Ya kike au ya kiume?)

66. Are condoms easily available when you need them? / Je konndomu zinapatikana kwa urahisi kila mara unapozihitaji?
    Yes/Ndiyo ____
    No/Hapana _____

67. In this health facility were you told the importance of disclosing HIV status to your husband/partner?/ Je hapa hospitali umeelezwa juu ya umuhimu wa kumweleza mwezi wako kuhusu hali yako ya maambukizi ya VVU ?
    Yes /ndiyo _____
    No / hapana ____

68. Were you satisfied with the way this was brought to your attention? / Je uliridhika namna swala hili liliv yoletwa kwako?
    a. Very dissatisfied / Sijaridhika kabisa
    b. Dissatisfied / Sijaridhika
    c. Neutral / sipo upande wowote (nipo kati ya kuridhika na kutoridhika)
    d. Satisfied / Nimeridhika
    e. Very Satisfied / Nimeridhika sana

69. Were you told to bring your partner for testing and counseling / Umeelezwa kumleta mwenzi ili apate ushauri na kupimwa VVU?
    Yes /ndiyo _____
    No / hapana ____

70. What makes you utilize PMTCT services at this health facility? / Ni mambo yapi yamekupelekea kutumia huduma hizi za PMTCT hapa hospitalini?
    a. Support from partner / Msaada kutoka kwa mume/mwenzi
    b. Support from family members / Msaada kutoka kwa familia
    c. Testimony provided by peers – graduate from PMTCT / Ushuhuda kutoka kwa wanarika waliopitia huduma za PMTCT
    d. Psychosocial support provided at health facility / Msaada wa kisaikolojia kutoka kwa watoa huduma hapa hospitali
    e. Intensive counseling / Ushauri wa kina
    f. Good care/assistance from HCW / Huduma nzuri kutoka kwa wahudumu wa afya
    g. Availability and efficiency of PMTCT services / Upatikanaji wa huduma za PMTCT

71. Are there any challenges that prevent you from utilizing PMTCT services in this health facility? / Je kuna changamoto zozote zinazokuzuia kutumia huduma za PMTCT unazopata hapa hospitalini?
    a. Unwilling to take an HIV test due to stigma and discrimination / Kushindwa kumeza dawa kwa sababu ya unyanyapaa na ubaguzi
    b. Unwilling to take ARV due to side effects or forget to take ARV / Kushindwa kumeza dawa kutokana na madhara ya dawa au kusahau kumeza dawa
    c. Fear to disclose to partner / Hofu ya kumweleza Mume/mwenzi
       No confidentiality / Hakuna usiri

d. Exclusive breast feeding (my child cannot get enough) / Nashindwa kumpa mmtoto maziwa ya mama pekee – Mtoto hashibi
   Partners are reluctant in using condoms / Mume/mwenzi hataki kutumia kondom
e. Partners do not want to take an HIV test / Mume/mwenzi hataku kupima VVU

72. What are your recommendations for HCW who support you with PMTCT services / Una maoni gani kwa wahudumu wanaokupatia huduma hizi za kuzuia maambukizi ya VVU kutoka kwa mama kwenda kwa motto?

_____

_____

_____

_____

_____

Appendix II: In-depth Interview Guide / Mwongozo wa maswali ya kina

1. Have you heard about PMTCT at this health facility? / Umewahi kusikia kuhusu huduma za kuzuia maambukizi ya VVU kutoka kwa mama kwenda kwa mtoto hapa hospitalini?

2. Do you get any support from partner, HCW, your relatives, relatives of your husband/partner, peers, neighbors, and friends? / Unapata msaada wowote kutoka kwa mume/mwenzi, watoa huduma za afya, ndugu zako, ndugu wa mume/mwenzi wako, waelimishaji rika, majirani, marafiki?

3. Did you test for HIV with your husband/partner? / Je ulipima maambukizi ya VVU pamoja na mume/mwenzi wako?

4. Are there any challenges which hinder your husband/partner to participate in PMTCT services / Je kuna changamoto zozote zinozowazuia wenzi kushiriki katika huduma za PMTCT

5. Is it costly for you in terms of distance and use of PMTCT services? / Je nigharama sana kufika hapa hospitalini, na katika kupata huduma za PMTCT?

6. Is it important to fight for having free HIV babies / Je ni muhimu kupigania kuwa na watoto wasiokuwa na maambukizi ya VVU?

7. Does PMTCT mean anything to you? / Je huduma za PMTCT zina maana yoyote kwako?

Appendix III: informed consent to participate in this study (English version)

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

DIRECTORATE OF RESEARCH AND PUBLICATIONS

CONSENT FORM

ID. NO ……

Greetings!

My name is Juliana John Moshi. I am a student at Muhimbili University of Health and Allied Sciences doing research on "factors influencing utilization of prevention of mother to child transmission of HIV (PMTCT) services among HIV positive women at Tumbi Designated Regional Referral Hospital"

Aim of the study:

The aim of this study is to determine factors influencing utilization of prevention of mother to child transmission of HIV (PMTCT) services among HIV positive women at Tumbi Hospital so as to enable designing PMTCT programs that will ensure maximum utilization of services.

What participation involves:

If you agree to participate in this study you will be required to answer a series of questions as required by the research assistant or Principal investigator.

Confidentiality:

All the information which will be kept confidential and we shall use only the identification number.

Rights to withdrawal and alternatives:

Your involvement in this study is your choice. You may get out of the study any moment you wish and no any penalty, even if you have already given your consent.

Benefit:

Your participation in this study will provide useful information for us and other stakeholders.

In case of injury:

We do not expect any harm to occur to you or your family as a result of participating in this study.

Whom to contact:

In case of any inquiry please contact the principle investigator, Juliana John Moshi, Muhimbili University of Health and Allied Sciences (MUHAS), P. O. Box 65001, Dar Es Salaam, Mobile number 0713 516 666 or Professor M. Leshabari, , Muhimbili University of Health and Allied Sciences, P. O. Box 65001, Dar Es Salaam. In case of any inquiry about this study you may call, the chairman of the Senate Research and publications Committee, P.O. Box 65001, Dar Es Salaam, Tel no. 2150302-6

Signature

Do you agree?
Participant agrees …….

Participant disagrees ……

I ……. have read/understood the contents in this form. My questions have been answered. I agree to participate in this study.

Signature of participant ……

Signature of witness (if participant cannot read and write)……..

Signature of research assistant …… Date of signed consent ……

Appendix IV: Fomu ya Ridhaa

Chuo Kikuu cha Sayansi za Afya muhimbili

Kurugenzi ya Utafiti na Machapisho

Form ya Ridhaa

Namba ya Utambulisho ……

Jina langu ni Juliana John Mosh, Mwanachuo wa Chuo Cha Sayansi za Afya MUhimbili. Ninafanya utafiti juu ya mambo yanayopelekea ongezeko la matumizi ya huduma za kuzuia maambukizi ya VVU kutoka kwa mama kwenda kwa mtoto kwa akina mama wanaoishi na maambukizi ya VVU katika Hospitali ya rufaa ya Tumbi..

Lengo la utafiti:

Utafiti huu una lengo la kufahamu mambo ambayo yanawafanya akina mama wenye maambukizi ya VVU waweze kutumia huduma za kuzuia maambukizi ya VVU kwenda kwa mtoto, hii itawezesha kupanga miradi itakayowezesha ongezeko la matumizi ya huduma hizi.

Ushiriki utahusisha mambo yapi:

Iwapo utakubali kushiriki katika utafiti huu, utahitajika kujibu maswali kama utakavyoulizwa na mtafiti msaidizi au mtafiti mkuu.

Usiri:

Habari zote tutakaziozipata kutoka kwako zitakuwa ni siri, wala hatutatumia jina bali namba yako ya utambulisho.

Haki ya kujitoa na vinginevyo:

Kushirii katika utafiti huu ni uamuzi wako. Kama utaamua kutoshiriki au kukatisha ushiriki hutapata adhabu yoyote, hata kama utakuwa umetoa ridhaa ya kushiriki.

Faida:

Ushiriki wako katika utafiti huu utatusaidia kupata taarifa ambazo ni muhimu kwetu na kwa wadau wengine.

Madhara:

Hatutegemei kuwa utapata madhara yoyote kwako wewe au familia yako kutokana na ushiriki wako katika utafiti huu.

Watu wa kuwasiliana nao:

Kama una swali, unaweza kuwasiliana na mtafiti Juliana John Moshi, Chuo kikuu cha Sayansi za Afya Muhimbili, S.L.P. 65001, Dar Es Salaam, namba ya simu 0713 516 666; au Msimamizi wake Profesa M. Leshabari, Chuo kikuu cha Sayansi za Afya Muhimbili, S.L.P. 65001, Dar Es Salaam. Iwapo utakuwa na swali lolote kuhusu utafiti huu, unaweza kumpigia simu Mwenyekiti wa kamati ya Utafiti na Machapisho, S.L.P. 65001, Dar Es Salaam, Simu namba 2150302-6

Saini:

Je unakubali?

Mshiriki amekubali …….

Mshiriki amekataa ……

Mimi …….nimesoma/nimeelewa yote yaliyomo katika fomu hii ya ridhaa. Maswali yangu yamejibiwa. Ninakubali kushiriki katika utafiti huu.

Saini ya mshiriki ……

Saini ya shahidi (iwapo mshiriki hawezi kusoma na kuandika

Saini ya mtafiti msaidizi ……..

Tarehe ya makubaliano …….