UPTAKE AND DETERMINANTS OF HIV RETESTING AMONG POSTNATAL MOTHERS ATTENDING PRIVATE HEALTH FACILITIES IN DAR ES SALAAM REGION, TANZANIA

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By

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A Dissertation Submitted in (Partial) Fulfillment of the Requirements for the Degree of Master of Public Health

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CERTIFICATION

The undersigned certify that he has read and hereby recommend for acceptance by Muhimbili University of Health and Allied Science a dissertation entitled **"*Uptake and determinants of HIV retesting among postnatal mothers attending private health facilities in Dar es Salaam Region, Tanzanian*"** in (partial) fulfillment of the requirement for the degree of Masters of Public Health of the Muhimbili University of Health and Allied Sciences.

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Dr. Innocent A. Semali

(Supervisor)

_____

Date

DECLARATION AND COPYRIGHT

I, **Aveline Nathanael Minja**, 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 the similar or any other degree award.

Signature…….. **Date……..**

ACKNOWLEDGEMENT

This work could not have been effectively accomplished without the help and blessings from the Almighty God. I have the honor to praise him for the mercy and his blessings.

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DEDICATION

To my lovely family,

Mr. Peter Gabriel my wonderful husband and my wonderful kids Abigail, Nolan and Jordan for their understanding and patience at all the time I was doing this work.

I love you so much.

ABSTRACT

Background: HIV retesting in late pregnancy is crucial to identify and initiate long life ARV for pregnant women who might be in the window period to prevent mother to child transmission of HIV and keeping their mothers alive. Tanzania National guideline recommends that all pregnant women and their partners should be tested and counseled for HIV during their first ANC visit, among those HIV negative they should be retested for HIV during the third trimester, during labor or at delivery.

Objective: The study aimed to determine the uptake and determinants of HIV retesting among postnatal mothers previously negative for HIV at initial antenatal clinic HIV testing in private health facilities.

Methods: Facility-based cross-sectional study was conducted from May to July 2018 after approval by the institutional review committee of MUHAS. A total of 395 postnatal mothers who delivered within seven days prior to the study period participated in the study. Only mothers who had negative HIV testing results at initial ANC HIV testing earlier in the index pregnancy were involved. They included those who delivered during the study period and those who delivered in the past seven days prior to the study. One to one structured questions were used for interviewing respondent. Informed consent was sought from all participants before the interview. Data were cleaned and entered into EPIDATA then be analyzed by SPSS version 20. Chi square was used to test for association between categorical variables and outcome variables of retesting. All variables with p value of ≤ 0.2 in bivariate analysis were included in the multivariate logistic regression model to control for confounders where odds ratios and their 95% CI were used to assess statistical significance and strength of association. Cut-off for statistical significance level was set at p value of ≤ 0.05.

Results: This study found low uptake of HIV retesting among postnatal mothers. Of 395 mothers enrolled in the study, 227 (57.5%) were retested for HIV. Among those retested, 7 (3.1%) found to be HIV positive in a repeat test. Variables independently statistically associated with retesting were ANC booking after 24 weeks (AOR-=.17, 95% CI 0.07, 0.39, p-

value 0.0001), parity of more than 3 live children AOR= 0.15 95% CI 0.03, 0.62, p value 0.01. ANC attendance of 4 or more visit (AOR 2.18, 95% CI 1.23, 3.89, p value 0.01), Perceived suboptimum quality of counseling (AOR 1.87, 1.18, 2.94, p value 0.01) and those perceived high stigma level (AOR= 0.45, 95% CI 0.29,0.71 p value 0.001)

Conclusion: Uptake of HIV retesting among postnatal mothers was associated with high stigma level, parity of more than three children, ANC attendance of 4 or more visit suboptimal counseling and late booking at ANC after 24 weeks.

Recommendation: Strengthen health education and sensitization to mothers in all areas, on the importance and benefits of HIV retesting.

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ABBREVIATIONS

AIDS	Acquired Immune deficiency syndrome
ARV	Antiretroviral drug
ART	Antiretroviral Treatment
ANC	Antenatal Care
DHIS	District Health Information System
HIV	Human Immune- Deficiency Virus
HTC	HIV Testing and Counseling
MOHCDGEC	Ministry of Health Community Development Gender Elderly and children
MUHAS	Muhimbili University of Health and Allied Sciences
MTCT	Mother to Child Transmission
PI	Principal Investigator
PMTCT	Prevention of Mother to Child Transmission of HIV
RCH	Reproductive and Child Health
SSA	Sub-Saharan Africa
UNAIDS	United Nations Programs on HIV/AIDS
VCT	Voluntary Counseling and Testing
WHO	World Health Organization
SPSS	Statistical Package for Social Sciences

DEFINITION OF TERMS

Retesting refers to repeat testing HIV for those mothers with HIV negative previously tested on first antenatal visit

Routine offer of HIV testing refers to offering HIV testing to a mother as one of the baseline investigations with pretest discussion but with no need of risk assessment

Uptake refers to repeated HIV testing three months or until delivery period among mothers who were previously HIV negative at the initial ANC routine HIV testing

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

The HIV pandemic is a serious public health problem and global estimate reveal that in 2016, 36.7 million people were living with HIV, including 1.8 million people who become newly infected that year (1). Of these, more than half were women of child bearing age and only 60% of them were accessing ART (1). It is also estimated that, more than 1.4 million pregnant women globally were living with HIV in 2016 but only 77% accessed ARV and about 160,000 new infections occurred among children that year, in addition, about one million AIDS related deaths occurred in the same year (2).

Sub Saharan Africa (SSA) is the most affected region with an estimate of 25.8 million people living with HIV accounting for almost 70% of those infected. It is also estimated that 2.6million children under the age of 15years are living with HIV globally, 91% of them come from sub Saharan Africa (3). Among the children with HIV infection, 90% of them acquired the virus through vertical transmission (4). In the absence of any intervention about 20% - 45% HIV positive mothers will transmit infection to unborn babies, 5-10 during pregnant, 10-15% during labor and delivery and 5-20% during breastfeeding (4). This contributes significantly to childhood disease burden that include failure to achieve personal and national development goals. However if these mothers could access prevention of mother to child transmission (PMTCT) of HIV services effectively may lead to elimination of MTCT of HIV to as low as 1-2% in non-breastfeeding population and $\leq$ 5% in breastfeeding population (5).

In Tanzania, 1.4 million people estimated to be living with HIV, among whom 780,000 are women above 15yrs and 250,000 are children less than 14years (6). Tanzania is among the 22 countries where HIV is targeted for elimination, because it is among the countries that contributes to 90% of pregnant women living with HIV in the world and a higher number (86,000) of annual deliveries (2).

On an effort to achieve a virtual elimination of new pediatric HIV infection, government in many countries adopted different international guideline by integrating PMTCT services in routine ANC. Tanzania through MOHCDGEC put effort to reach as many women as possible, were integrated ANC/PMTCT services are provided in 93% of all health care facilities in the country (7).

It has been observed in Tanzania that 98% of pregnant women attends ANC at least once, and around 90% of pregnant women attending ANC receive an initial HIV test, where by those identified positive are initiated a long life ARV (8). This is encouraging but the incidence of new HIV infection during pregnancy and postnatal period in African countries is 3.6%, suggesting that, a single antenatal test in early antenatal period do not capture an important subset of women who acquire HIV in the later periods of pregnancy, and whose infants are also at high risk of HIV acquisition; due to maternal high viral load associated with acute HIV infections (9). For this reason the national policy called for HIV retesting in late pregnancy, a recommendation that has been adopted by the international elimination of MTCT agenda (9,10). Thus those HIV negative should be retested for HIV during the third trimester, during labor or at delivery to rule out later infections and those who were in the window period (11). Studies have been done in Tanzania focused in rural areas and reported that about 50% repeated the tests but no such study done in urban areas and more importantly, the private facilities where HIV burden is much higher. It is thus the aim of this study to generate information which will enable understanding the extent those mothers who were HIV negative at initial ANC test, repeated the HIV test as recommended or later in the pregnancy as recommended in the policy focusing on private urban facilities.

1.2 Problem statement

Globally it has just been estimated that about 20 million HIV positive people including pregnant mothers do not have access to antiretroviral treatment making it unlikely to meet eradication goal by 2030. HIV Testing and Counseling remain critical in the global effort to eliminate HIV and mother to child transmission of HIV. Tanzania adopted PMTCT option B+ which recommends initiation of long life ART to pregnant women or postnatal mothers who tested HIV positive. Nonetheless those tested negative at initial ANC should be counseled to be tested after three months to identify those who might be sero-converted since first antenatal test in order to be aware of their HIV status and initiated ARV to prevent MTCT.

Despite the availability of global and national policy for re-testing in late pregnancy in area where the HIV epidemic is generalized, there is a death of information on the extent of HIV retesting among pregnant women in most affected countries.

In Tanzania national guideline recommends that all pregnant women and their partners should be tested and counseled for HIV during their first ANC visit, among those HIV negative they should be retested for HIV during the third trimester, during labor or at delivery (11). Current rates of HIV retesting among pregnant women in Tanzania is limited. Furthermore, the extent of HIV re-testing in public health facilities would be different from private facilities because of the difference operational contexts which could influence how free services are provided hence a need of studying them differently.

Several factors are related to lack of HIV re-testing and could be categorized to health system factors, household factors, community factors and individual factors. While factors in those four categories would include perceived quality of counseling services, availability of policy and supplies, social support, perceived stigma and discrimination (12). Thus this study is being planned to establish current proportion of pregnant mothers previous HIV negative re-testing for HIV in the third trimester or at delivery in Tanzania as one of the most affected country. It is thus the aim of this study to generate information which will enable understanding the extent those mothers negative at initial ANC test, re-test as recommended in the policy in urban private facilities.

Figure1: Present the conceptual framework on the determinants of HIV retesting among pregnant women who tested HIV negative at initial antenatal HIV testing in private health facilities in Dar es Salaam. Barriers to repeat testing after initial negative HIV result at antenatal visit from factors related to perception and social factors of the mother like perceived satisfaction with ANC services, perceived quality of provider counseling, perceived attitude of provider, anticipated stigma and social support. Other barriers are those related to health system like availability of test kits, workers availability and providers of instructions. Also, other barriers are those related to age, education, marital status, parity, occupation, and the number of ANC visit made can possibly influence HIV retesting.

Conceptual Framework

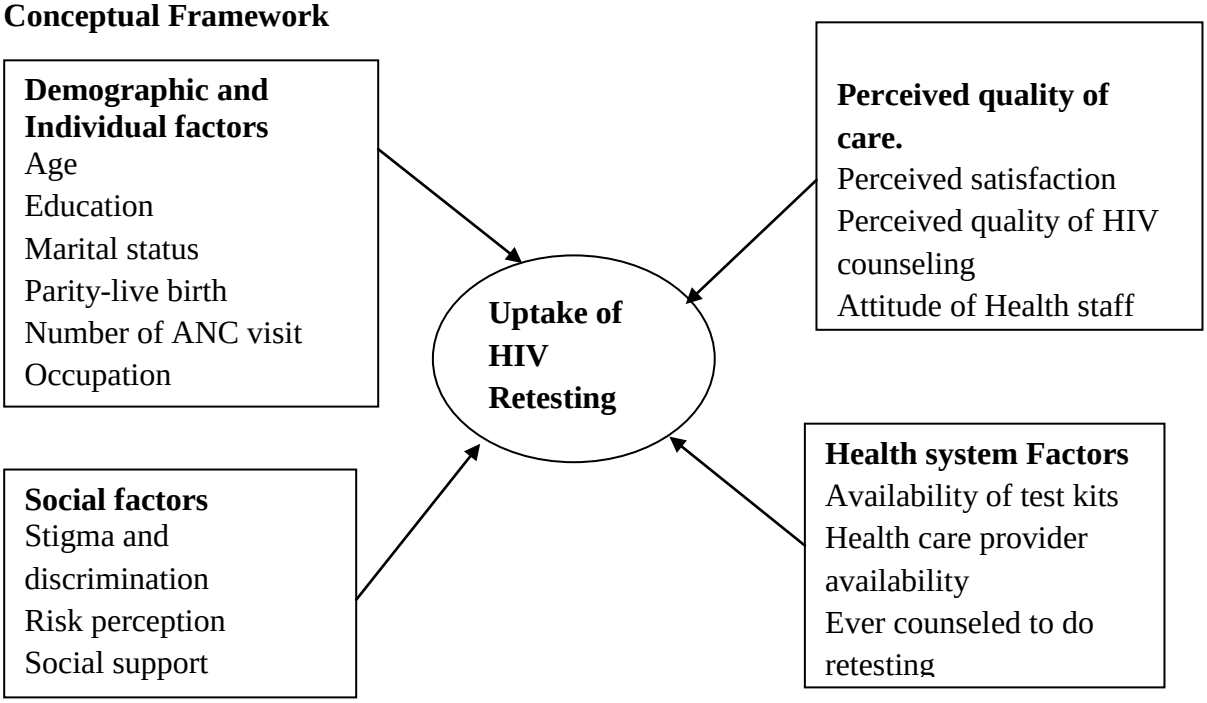

Figure: 1 Conceptual framework on factors influencing uptake of HIV retesting in private health facilities

Narration of Conceptual framework

The conceptual framework conceptualize the potential factors that influence uptake of HIV retesting among pregnant mothers tested HIV negative at initial ANC at demographic and

individual level, social factors and quality of health care services and health system factors. The aim of this framework is not only to capture the relationship between factors but rather to raise awareness for better understanding on the pathway that lead to missed opportunity for repeat HIV test in routine ANC visit. This study will attempt to provide better understanding of whether these factors have contributed to uptake of HIV retesting in late pregnancy.

1.3 Rationale of the study

Vertical transmission of HIV infection from mother to child can occur during pregnancy, delivery or breastfeeding in the absence of any intervention during these stages. Re-testing HIV to pregnant mothers who tested HIV negative at initial ANC visit can identify those who seroconvert in the course of pregnancy. Prevalence of HIV among pregnant woman in Dar es Salaam is about 5.8% with such a high prevalence it is obvious that transmission risk of HIV is high. Therefore by following the PMTCT national guideline which recommends retesting HIV for pregnant mother at third trimester or at delivery can identify HIV positive mothers who tested HIV negative at initial visit and administer lifelong ART on time in order to eliminate MTCT and hence reduce maternal and Child HIV/AIDS related mortality.

This study was designed to generate information on magnitude and determinants of HIV retesting among pregnant women. The information is important to health program managers and other stakeholders who are working on health institutions to make effective and appropriate intervention strategies; to promote HIV retesting to all HIV negative mothers attending private health facilities before delivery in order to ensure elimination of MTCT of HIV by 2030.

1.4 Research questions

1. What is the proportion of postnatal mothers previously tested HIV negative has returned for HIV re-testing in private health facilities in Dar es Salaam?
2. What is the proportional of postnatal mothers re-tested HIV positive following HIV negative result at initial antenatal visit in private health facilities in Dar es Salaam?
3. What are the determinants of HIV retesting among postnatal mothers previously HIV negative at initial antennal visit in private health facilities in Dar es Salaam?

1.5. Research Objectives

1.5.1 Broad Objective

To determine the uptake and determinants of HIV re-testing among postnatal mothers previously HIV negative at initial antenatal clinic HIV testing in private health facilities in Dar es Salaam.

1.5.2 Specific Objective

1. To determine the proportion of postnatal mothers previously tested HIV negative at antenatal who tested later in pregnant in private health facilities in Dar es Salaam.
2. To determine the proportion of postnatal mothers re-tested HIV positive following HIV negative result at initial antenatal visit in private health facilities in Dar es Salaam.
3. To determine factors associated with uptake of HIV retesting among postnatal mothers previously HIV negative at initial antennal visit in private health facilities in Dares Salaam.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Magnitude of HIV retesting

HIV testing and counseling(HTC) is an essential tool in identifying HIV infected persons in need of care and treatment and to provide targeted HIV prevention services. WHO2010 guideline recommends HIV retesting for population at higher risk of sero-conversion and general population in country where HIV prevalence is high. Proportion of HIV retesting among pregnancy women (returning for the second test after an initial HIV negative test) varies widely. A Study conducted in Vietnam, among 1108 recently delivered mothers reported that only half (52.1%) of mothers in labor had more than one HIV test (13). In another study in Zambia among postnatal mothers tested negative initially only 36% were retested in late pregnancy (14). In Kenya of 2,135 mothers who had tested HIV-1 sero-negative antenatal 2,135 (95.3%) accepted HIV-1 retesting at 6 weeks postpartum (15).

Given the low rate of HIV retesting from different countries, there is a critical need for more effectively targeting HIV retesting messages to align with national guideline and identifying pregnant mothers who sero-converted in the course of pregnancy to increase timely diagnosis and link them to appropriate HIV prevention, care and treatment services.

2.2 Positivity rate among HIV retesting pregnant women

HCT for pregnant woman is a key factor for successfully prevention of mother to child transmission of HIV (MTCT).The world health organization (WHO, 2010) guideline recommended that all pregnant women should be tested for HIV in the first trimester and that second test is considered in third trimester by 34weeks of gestation. Guideline in resource limited setting are increasingly recommending HIV retesting towards the end of pregnancy or during labor, the strategy that has been proven cost effective (16). However this strategy will only be effective if pregnant women are tested early and provided enough counseling on retesting. Evidence from many studies shows that sero-conversion among pregnant postpartum women in African countries initially tested negative is high ranging from 2.6% (53/2035) in Kenya (15) to 12% in south Mozambique (17). This was also observed in Nigeria

5.2% (21/400) (18),South Africa 11.2% (19) and in Tanzania 5.3% (20). These findings confirm that HIV incidence in pregnancy is higher. Therefore HIV retesting in late pregnancy is critical for maximal effectiveness of prevention and treatment service to reach elimination of mother to child transmission.

2.3 Determinant of HIV Retesting

2.3.1 Quality of Care

WHO defines quality of care as the extent to which health care services provided to individuals and patient populations improves desired health outcome. In the context of ANC quality of care refers to the level of satisfaction with the service received basing on the quality of communication skills, comprehensiveness of counseling information, technical competence of the counselor, privacy maintained during counseling, attitude of service provider, same day test results, availability of supplies, availability staffs, waiting time and connection/linkage to care (21). When it is properly done at first place will influence the client to come for the second HIV re-testing.

2.3.1.2 Quality Counseling and Attitude of Service Provider

Effective communication and counseling are important to improve awareness and make informed decision about the available service. In the first antenatal HIV testing quality counseling provide the client with clear information and ensure client understanding about HIV initial test and the service available in case of positive results. In addition the mother is informed on the clinical benefit of HIV repeat testing in the third trimester in case of negative results as per policy (11). When it is well done will increase the likelihood of a pregnant woman to opt for second HIV re-testing. It has been observed in Nigeria that the high rates of acceptance to rescreen was attributed to knowledge acquired by the pregnant women from initial antenatal health education and counseling by the public health nurses/midwives and counselors of the PMTCT program respectively (22). Similar findings had been reported for Cameroonian women (23).

Likewise unclear and poor counseling provided by untrained health provider at first ANC visit could limit information and less likely to influence the mother to come back for a second HIV

re-test (24)**.** A study conducted in India among pregnant women reported that they are dissatisfied with the service offered in private facilities because HIV test were carried out without informed consent, HIV counseling was rare and the results were often delivered without any explanation of their significance (24). Gita et al also reported that lack of discussion by antenatal care provider is the major barrier of HIV testing during pregnancy (25). A qualitative study done in Ghana on barriers to HIV testing and counseling among 300 pregnant women attending Antenatal clinic in public hospital found that 29.5% were not told on HIV retesting (26). Hence quality counseling at initial ANC HIV testing definitely influences re-uptake of HIV retesting at late pregnancy.

Attitude of health care workers can be a barrier for HIV re-testing uptake, critical shortage of staff is among the problem of provider burnout and may hinder uptake of HIV retesting. According to the nature of HTC provider cannot offer quality service if number of clients exceeds 30 (12). In spite of the integration of HIV services into regular clinic flow, studies reported that most providers are trained in HIV testing and counseling, and most of them knows the importance of HIV retesting in late pregnancy, some providers felt that HIV testing was dedicated to specific counselors leaving the responsibility to few, which may make the pregnant women leave untested when client volume is high (12). A study done in Namibia reported that pregnant mothers did not take HIV re-testing because of the attitude of health care workers, that they are rude, do not keep peoples results confidential and they were not supportive in case of HIV positive results (27).

2.3.2 Perceived Stigma and Discrimination

HIV and AIDS stigma has been identified as an important hindrance to HTC (28). Stigma has resulted in fear to undertake HIV test even among people with past risk behavior they are afraid of positive results and the related personal and social consequences. It is observed that individual with stigmatizing behavior is less likely to undertake HIV testing (28). Similarly Anticipations of HIV/AIDS stigma can be barriers to acceptance of HIV re testing by pregnant women because of its negative effects and is supported by a cross sectional study done in Rural Kenya among 1525 pregnant women attending ANC which found that, rates of anticipated HIV stigma were high 33% pregnant woman anticipated break up of their

relationship once re-tested positive and 45% anticipated losing their friends once re-test HIV positive (29). Therefore anticipated stigma is likely associated with HIV retesting uptake**.**

2.3.3 Social Support

Social influence and support are important to people's health decisions including whether one should test for HIV. Higher social support is associated with early HIV diagnosis and timely linkage to care and treatment. Insufficient social support and perceived peer norms which do not support HIV testing can impede HIV re-testing. The role and action of peer attitude towards HIV testing have an impact on an individual behavior towards HIV testing (30). Living in communities that have low testing rates are unsupportive, place blame, or associate HCT with immorality is associated with low HCT uptake (31). The fear of social exclusion and loss of social support caused many to avoid HCT. Studies done in many countries reported that membership in community organization for example womens group, sports club or political group is positively associated with uptake of HCT (31,32). Organization membership increases social capital and support and can give a member a feeling of belonging. A study done in Zimbabwe uptake of HIV test were higher among community members organization15% among female and 35.6 among male than in non-community organization members 9.2% female and 29.6% male (32).

2.3.4 Marital Status

In many societies, married couples and people in long relationship consider themselves not at risk for contracting HIV because of trusting their partners. Once tested negative they may consider themselves free from exposure to HIV virus. But Marriages and monogamous relationships do not exclude women from acquiring the disease because of unfaithful behaviors. Polygamous marriages are much practiced in African countries including Tanzania where a man can have many sexual partners. Studies reported that being unmarried was associated with an increase in mean gestational age of first visit and failing to returning to clinic for HIV retesting compared to those who were married (33).

2.3.5 Education

People with better education level are more likely to use services available at health facilities because they may have more understanding of the health benefits and are more likely to

respond to health promotion messages including HIV testing and counseling and hence uptake of HIV re-testing (34). Likewise pregnant women that have higher education are more likely to comprehend HIV/AIDS knowledge provided by health providers at ANC and consequently HIV retesting later in pregnancy than those who can only read and write (35). It is also likely that literacy women have more confidence, are capable in making decision about their health, have better socio economic status and are in better place to overcome cultural barriers to maternal health including PMTCT services uptake (36,37). Studies done in Ethiopia and elsewhere in Africa have shown that low education level have a positive association with low uptake of HIV test among pregnant mothers (38,39)

2.3.6Ageand ANC Attendance

Older women are more knowledgeable about health care services and have greater decision making power than young women and thus are benefiting from utilizing health service including uptake of HIV retesting (40). In addition, older women are more likely of having previous birth experienced in utilizing ANC service compared to younger women. Studies reported a positive association between the age women and returning clinic for HIV retest (33).

Pregnant woman who attended ANC at least four times are more in contact with health care provider hence likely to be tested for HIV and retested in subsequent visit. While those present late in ANC are less likely to repeat HIV testing (41). Studies reported a positive association between the number of ANC visit attended and having re-tested for HIV (33).

2.3.7 Ownership of Health Facility

In order to improve health outcomes of HIV positive women and their babies one of the policy intervention adopted by the National AIDS/STI Control Program (NACP) was to scale up the PMTCT program by increasing support, training and supply of logistics to community level facilities including private hospitals and maternity homes (11). The 2010 NACP policy on PMTCT includes details strategies for HIV testing and counseling and emphasize the routine offer of HTC to all pregnant women attending antenatal clinics (11). A study elsewhere have observed that Private health facilities have weak structures for the provision of quality HTC (42).

The study conducted in Ghana reported that private health facilities adhere in part to the National guideline with deviations in obtaining informed consent and communicating confidentiality to the clients. The study found that there was inadequate structure in place for the provision of quality HTC, principles of informed consent and confidentiality was breached. It was also reported that health care workers lack on job training (42).

Another study conducted in India urban private hospital reported that many healthcare providers made no effort to gain informed consent for any of the procedure that were part of their antenatal care including HIV testing as required by declaration of commitments on HIV/AIDS. The study also reported the breach of confidentiality and little privacy. Furthermore the study reported that, violation of the human right is common in their place while the owners of the hospital do not take any action to their healthcare providers neither to provide a conducive environment for privacy (24).

Whereas it seems private health facilities performance in the provision of HIV services is limited, it was the aim of this study to contribute more knowledge on the observation using Tanzania urban private health facilities.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study design

This was a health facility-based cross-sectional study done in Dar es Salaam region from 24 May to 24 July 2018.

3.2 Study setting

The study was conducted in Dar es Salaam which is the largest city and commercial Centre in Tanzania. Dar es Salaam region is formed by five districts Kinondoni, Ilala, Temeke, Kigamboni and Ubungo. The total surface area of the city is 1,397 square kilometers which is equivalent to 0.15 percent of the entire Tanzania Mainland area. According to the 2012 national census, the region had a population of 4,364,541. For 2002-2012, the region's 5.6 percent average annual population growth rate was the highest in the country. The Health sector in the Region provides both curative and preventive services including promotion of health in Hospitals, Health Centers, Consultant clinics, Dispensaries and Mobile health Services. The Region has 616 health facilities of which38 are hospitals, 58 health centers and 436 are dispensaries. According to city council profile, a total of 243 in the region provide PMTCT services at the time of the study. Among those, 25 are private hospitals, 12 were randomly selected and included Aghakhan, Tumaini, Hindu Mandali TMJ, Mount Ukombozi, Massana, Walter, Ekenywa, Kairuki, Kinondoni, Burhan and TOH hospital. All this facilities provide delivery care and HIV testing is a routine practice to each pregnant mother (integrated ANC/PMTCT services). The region was selected because HIV prevalence is high 4.7% while the prevalence among female is 6.5% which is much higher than the National prevalence (4.7%) (43). The region has many private for profit hospitals which could influence how free preventive services are provided. In addition people accessing services in private health facilities, their wellbeing could be better compared to those who opt to access public health services. Furthermore specialties are readily available at private facilities which influence a certain caliber of pregnancy women to seek for the services compared to the other region in the country. Hence this study included only private hospitals.

3.3 Study Population

The study population included all postnatal mothers in the first 7 days who had delivered at private hospitals whose initial antenatal HIV tests were negative.

3.3.1 Inclusion Criteria

All mothers who were HIV negative by the first ANC HIV test delivered within 7days prior to the study were included. Verification of negative results at initial HIV test uses the ANC card number 4.

3.3.2 Exclusion criteria

All postnatal mothers who were seriously sick and mental abnormality due to difficulty in consenting.

3.4 Sample size determination

The sample size was determined using the standard formula of single population proportion based on the following assumption;-

$N=Z^2p\ (1-p)/e^2$

Where;

N=the number of postnatal mothers.

Z= is the percentage point corresponding to significance level of 5% (95% C.I), Z is 1.96.

P= Expected prevalence 0.36 (assuming the proportion of the women tested HIV negative at initial antenatal clinic come back for HIV retesting at third trimester or soon after delivery is 36%) adopted from the study by (14).

E = margin of error.

Based on these, the sample size was;

$N=1.96^2x0.36\ (1-0.36)/0.05^2$

N= 354

Assuming 10% non-respondent

Adjusted sample size=N/ Response rate (90%)

= 354/0.9

=393

The minimum required sample size was 354. However, 395 postnatal mothers were involved in the study.

3.5 Sampling Technique

The sampling technique used was two stage cluster sampling. In the first stage, 12 hospitals (approximately 50%) were selected randomly from 25 private hospitals providing labour and delivery services in Dar es Salaam using sampling proportion to size. Total number of women attending each hospital for delivery services per month was obtained from records and total deliveries for all hospitals were complied. The study sample size was divided by the total number of total facility monthly deliveries was divided by the total for facilities multiplied by the sample size to obtain the number of study subject each of the 25 facilities will contribute to the sample size. Table 1 presents the number of women studied in each facility staggered over ten data collection days.

In the second stage, the required number of study subjects in each facility was divided by ten to obtain number to be recruited each day. In ach hospital, listing of all mothers who delivered in the last 24 hours was compiled; systematic sampling each day was done. It used the required number for the day to calculate sampling interval (k), which is given by N (Total number who attended in a day) /n (number needed to be sampled on each day). The first respondents were picked randomly between 1 and k and then subsequent respondent was obtained by adding k to the preceding number. This means there was a different sampling frame each day. Participants who were selected for interview but refuse to participate were replaced. Interview was continuing until the sample size for each day in a health facility was reached.

3.6 Pretesting of Tool

A pretest was conducted prior to the actual data collection. This was done by using sample of mothers who delivered within 7days attending one of private hospital which was not included in the study. The purpose of the pretest was to test if the proposed study is feasible and if the instrument is adequate to collect the required data. After pretest, the tool was reviewed, edited

and modified to capture all information required. The reviewed tools were then used to collect the required data.

3.7 Recruitment and Training of Research Assistants

Four nurses (research assistances) from private hospitals were recruited and trained for 1day on data collection process and interviewing techniqueprior to the actual data collection to familiarize on the research purpose, objectives of the study and procedures on how to collect data. Research ethics, administrative issues and logistics were also discussed. Nurses were selected in data collection process because they are familiar with ANC services.

3.8 Data Collection

After the approval of conducting a study by Facility manager, postnatal ward in charge was informed about the study and introduced the P.I and research assistant to the study participants. The research team requested to review ANC card number 4 of each mother at postnatal in the ward to ensure she had tested negative for HIV testing during ANC at initial enrollment. Then data were collected from among those who were HIV negative and had provided a written consent immediately after recovery from labor. Consented candidate were interviewed using structured questionnaires in privacy to ensure confidentiality**.** Additional information extracted from the card includes HIV retesting, time retested, HIV results after retesting, and gestation age at booking, parity and number of antenatal visit made during the course of pregnancy. In addition it also included asking them for information on demographic characteristics, perceived ANC satisfaction, perceived stigma and discrimination, perceived social support, and perceived quality of HIV counseling. After each working day data were checked for quality and all corrections done where needed.

3.9 Variables

3.9.1 Dependent Variable

Uptake of HIV retesting in ANC.

Refers to repeated HIV testing three months later or until delivery period among mothers who were previously HIV negative at the initial ANC routine HIV testing.

Uptake of HIV retesting was established by extracting the retesting information from mothers ANC card number 4.

3.9.2 Independent Variables

These include age, marital status, ANC attendance, education level, and perceived quality of care, attitude of health staff, perceived stigma and discrimination, parity, Perceived quality of counseling and social support. Perceived stigma, perceived quality of care at ANC service, perceived quality of counseling and perceived social support were measured by use of set of questions. Perceived stigma and social support was measured by completing questions where anticipated stigma scale used to measure the extent to which participants anticipated negative intrapersonal and interpersonal consequences were they to contract HIV in the future. All item were rated on a likert scale (1= strong disagree; 4 = strong agree. A principal component factor analysis (conducted in SPSS version 20) was used to construct the underlying factor index representing an overall stigma score. High value indicating greater anticipated stigma.

Perceived quality of counseling, Perceived attitude of counselor and perceived satisfaction at ANC were measured by set of questions. The questions in each domain were coded as 1 if Yes and 0 if No. The purpose was to make sure the respondent was unidirectional. The questions in each category were subjected into Principal Component Analysis (PCA) with varimax rotation in order to create component and respective factor loading. In each domain the first component which also accounted for most of the variance was adopted as the variable in that respective domain. The variables were each converted to dichotomous variable coded and was coded as 1if was higher than 6 and 0 if was lower than 6.

3.10 Data Management and Analysis

3.10.1 Data Quality

To ensure quality of data collection, all research assistants were trained on data collection tool and emphasis was made on data completeness and accuracy. In addition, the principal investigator (PI) was fully engaged in field activity and meeting with research assistances daily to ensure that the data collection process was going well. Routine Monitoring of data collection was done by checking the completeness of questionnaires and detection of errors or

omission. In case of any error, research assistant was requested to go back to the interviewee to rectify the faulty.

3.10.2 Data Analysis

Raw data was cleaned and coded then entered into EPIDATA software and analysis was performed using Statistical Package for Social sciences (SPSS) for windows; version 20 which provides a broad range of capabilities for the entire analytical process.

Frequency tables and cross tabulations were generated to indicate the distribution of social demographic characteristics of the respondents and determine the percentage of the uptake of HIV retesting.

Bivariate analysis was carried out to determine the association of uptake of HIV retesting with the predictor variables. Chi-square test was performed to establish the significance of association for categorical variables. All variables with p value of ≤ 0.2 in bivariate analysis were included in the multivariate logistic regression model to control for confounders where odds ratios and their 95% CI were used to assess statistical significance and strength of association. Cut-off for statistical significance level was set at p value of ≤ 0.05.

3.11 Ethical Consideration

Approval to carry out the study was sought and obtained from Muhimbili University of Health and Allied Sciences (MUHAS) Ethical review committee. Official letters were written to the selected hospital and permission was obtained before conducting the data collection. Finally informed consent was obtained from each study participant before enrolling them into the study. Explanation on the purpose of the study, benefits to participate, confidentially, was assured that non-participation would have no effect on their subsequent service reception or provision and assurance right to withdraw. The signatures of the participants were obtained for their willingness. Only those who signed the consent were recruited to the study.

3.12 Dissemination

The Research findings will be disseminated toMUHAS, MoHCDGEC, DMO Kinondoni, Temeke, Ubungo, Ilala, Facility in charges of all studied hospitals and directorate of Postgraduate MUHAS. Furthermore the results will also be published in peer reviewed journals.

CHAPTER FOUR

4.0 RESULTS

4.1 Table 1 present a total of 395 mothers were studied in this study. Each facility contributes the number of mothers according to their weight.

Table 1: Hospital of recruitment of the study participants

Name of facility	Number	Percent
Agakhan hospital	36	9.1
Burhan hospital	33	8.4
Ekenywa hospital	33	8.4
Hindu mandal hospital	34	8.6
Kinondoni hospital	35	8.9
Masana hospital	34	8.6
Mount Mkombozi hospital	29	7.3
Kairuki hospital	30	7.6
TMJ hospital	34	8.6
TOH hospital	48	12.2
Tumaini hospital	31	7.9
Walter hospital	18	4.6

4.2 Socio-demographic characteristics of the respondent

A total of 395 postnatal mothers during data collection in private health facilities in Dar es Salaam were included in this study. The socio-demographic characteristics of the respondents are summarized on Table 1. The respondents ages ranged from 17years to 47 years with an overall mean age of 28years (SD, 5.8). Majority of mothers were aged 25yearsor more 281 (71.1%). Married mothers were of higher proportion 338 (86.1%), employed 159 (40%) with secondary or higher education level 328 (83.1%). Most of their spouse 355 (89.9%) had high education level 355 (89.9%). More than half 252 (63%) of the mothers booked their first ANC during second trimester with ANC attendance of more than four visits 316 (80%). Most of ANC attendee had 3 or less children 316 (80%). Table 2.

Table 2: Socio- demographic and obstetrics characteristics of the study participants

Characteristics	Frequency	Percent
Age of the respondent (years)		
≤24	114	28.9
25+	281	71.1
Education level of mother		
Attended primary school	67	17.0
Attended/Secondary/education/Higher education	328	83.1
Education level of spouse		
Attended primary school	40	10.1
Attended/Secondary education/Higher education	355	89.9
Occupation of mother		
Employed	159	40.3
Not employed	125	31.7
Self-employed	111	28.1
Gestation age at ANC booking		
≤12	90	22.8
13-24	252	63.8
>24	53	13.4
Marital status		
Single/divorced/separated	57	14.5
Married/Cohabiting	338	85.5
ANC attendance		
<4	79	20.0
4+	316	80.0
Parity		
≤3	350	88.6
>3	45	11.4

4.3Uptake of HIV re- testing

More than half 227 (57.5%) of postnatal mothers who tested HIV negative during antenatal period retested for HIV. Of those tested negative for HIV 3.1% (7/227) were found to be HIV positive on the retesting (Fig 2).

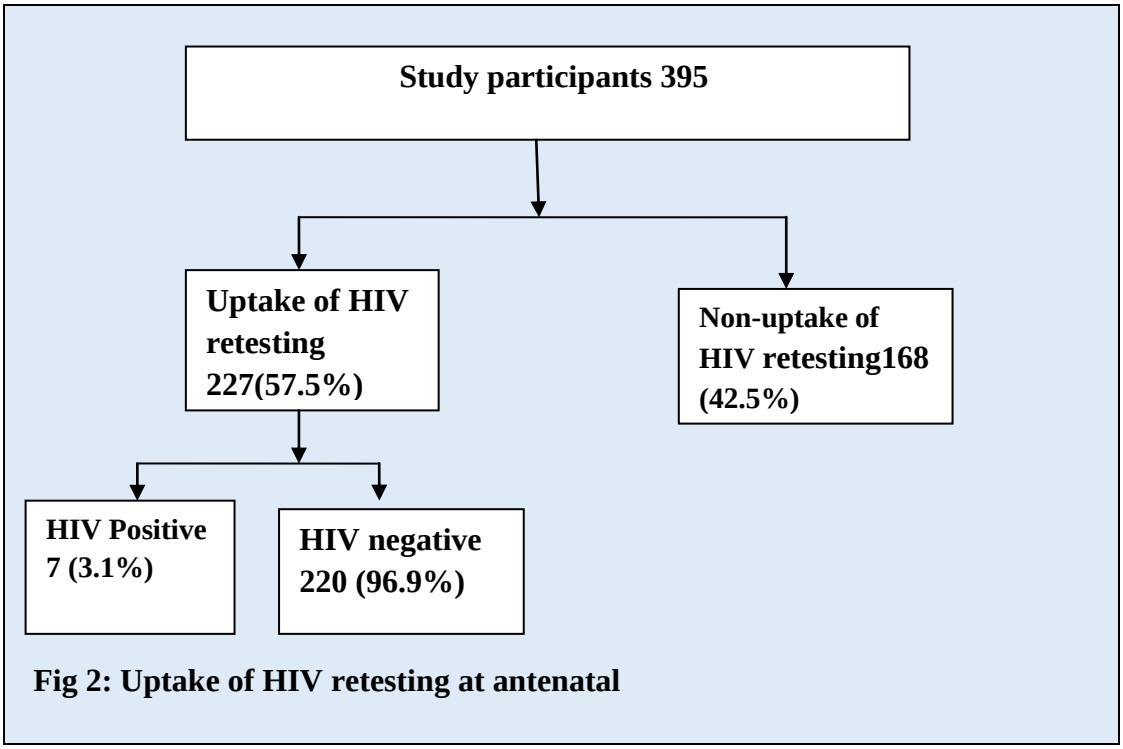

Fig 2: Uptake of HIV retesting at antenatal

4.4. Socio demographic and Obstetrics factors associated with HIV retesting among postnatal mothers previous HIV negative at initial antenatal visit in private Health facilities

Table 3 present socio demographic variables associated with HIV retesting among study participants. Booking late in the 3rd trimester was associated with 84% less likelihood of retesting for HIV compared to booking early in the first trimester (COR 0.16 95% CI 0.07, 0.30) Additionally, those who attended 4 or more ANC visit accounted for a significantly higher proportion (62%) of retesting than those who attended less than 4 visit (COR 2.53 95% CI 1.53, 4.91). Parity showed significant association with uptake of HIV re-testing in that women with 3 or more than three live children were 55% less likely to re-test for HIV compared to women with three or less children (COR 0.45 95% CI 0.24,0.85).

Table 3: Socio-demographic ad obstetric factors associated with uptake of HIV retesting among postnatal mothers previously HIV negative at initial antennal visit in private health facilities in Dar es Salaam – bivariate results

Factor	Uptake of HIV Retesting n (%)		COR	(95% CI)
	Yes	No		
Age				
≤24	68 (59.6)	46 (40.4)	1.00	
25+	159 (56.6)	122 (43.4)	0.88	(0.57, 1.37)
Education of respondent				
Primary school	36 (53.7)	31(46.3)	1.00	
Secondary or higher	191(58.2)	137(47.8)	1.20	(0.71, 2.04)
Education of partner				
Primary school	22 (55)	18(45)	1.00	
Secondary or higher	205(57.7)	150(43.3)	1.12	(0.58, 2.16)
Occupation of mother				
Employed	86(54.1)	73(45.9)	1.00	
Not employed	71(56.8)	54(43.2)	1.12	(0.70, 1.79)
Self-employed	70(63.1)	41(36.9)	1.45	(0.88, 2.38)
Marital status				
Single or divorced	32(56.1)	25(48.9)	1.00	
Married or cohabiting	195(57.7)	143(42.3)	1.07	(0.61, 1.88)
Gestation age at booking (weeks)				
≤12	56(62.2)	34(37.8)	1.00	
13-24	160(63.5)	92(36.5)	1.06	(0.64, 1.74)
>24	11(20.8)	42(79.2)	0.16	(0.07, 0.30)
Parity				
≤3	209(59.7)	141(40.2	1.00	
>3	18(40)	27(60)	0.45	(0.24, 0.85)
ANC attendance				
<4	31(49.2)	48(60.8)	1.00	
4+	196(62.0)	120(38.0)	2.53	(1.53, 4.91)

4.5 Individual/Clinical factors associated with uptake of HIV retesting

Table 4 presents the results of the bivariate analysis of participants' perception and association with HIV retesting among the study population. Mothers who perceived low stigma level had a significantly higher proportion (65.5%) of HIV retesting compared to those having high stigma level 48.7% (COR 0.50 95% CI 0.33, 0.75). Also mothers who perceived sub optimum quality of HIV counseling had a significant higher proportion 64.1% of HIV retesting (COR 1.67 95% CI 1.2, 2.51) than those who perceived otherwise.

Table 4: Individual/ Clinical factors associated with uptake of HIV retesting among postnatal mothers previously HIV negative at initial antennal visit in private health facilities in Dar es Salaam – bivariate results

Factor	Uptake of HIV retesting n (%)		COR	(95% CI)
	Yes	No		
Perceived Stigma				
Low stigma score	135(65.5)	71(34.5)		
High stigma score	92(48.7)	97(51.3)	0.50	(0.33, 0.75)
Perceived Satisfaction with ANC service				
Satisfied	170(58.8)	119(41.2)	1.00	
Not satisfied	57(25.3)	168(74.7)	0.81	(0.52, 1.27)
Perceived Social support				
Have support	121(55)	99(45)	1.00	
Have no support	106(60.6)	69(39.4)	1.26	(0.84, 1.88)
Attitude				
Good attitude	13(72.2)	5(27.8)	1.00	
Bad attitude	214(56.8)	163(43.2)	0.51	(0.18, 1.45)
Perceived Quality of counseling				
Optimum	109(51.7)	102(48.3)	1.00	
Not optimum	118(64.1)	66(35.9)	1.67	(1.12, 2.51)

4.6 Predictors of with HIV retesting

Table 5 presents multivariate analysis adjusting for other variable. Variables independently statistically associated with pregnant women for up taking HIV retesting in this study were ANC booking after 24 weeks gestation were more than 80% less likely to re-test for HIV (AOR-= 0.17, 95% CI 0.07, 0.39, p-value 0.0001). Also associated with less likelihood to re-test were parity of more than 3 live children (AOR= 0.15 95% CI 0.03, 0.62, p value 0.01). In addition, mothers who attended ANC 4 or more were more likely to retest compared to those with few visit (AOR 2.18, 95% CI 1.23, 3.89, p value 0.01), Furthermore mothers who perceive high stigma score were less likely to comeback for retesting compared to those perceived otherwise (AOR= 0.45, 95% CI 0.29,0.71 p value 0.001). The uptake of HIV retesting were more likely to mothers who perceived suboptimum quality counseling than those perceived otherwise even after adjusting for confounding variables (AOR 1.87, 1.18, 2.94, p value 0.01).

Table 5: Independent Predictors of HIV retesting during late pregnant

Variables	AOR	(95% CI)	P value
Age of the mother (years)			
≤24	1.00		
25+	0.98	(0.59, 1.62)	0.92
Occupation of mother			
Employed	1.00		
Not employed	1.15	(0.68, 1.97)	0.53
Self-employed	1.81	(1.03, 3.20)	0.04
Gestational age at ANC booking			
≤12	1.00		
13-24	1.11	(0.65, 1.90)	0.21
>24	0.17	(0.07, 0.40)	<0.0001
Parity			
≤3	1.00		
>3	0.15	(0.03, 0.62)	0.01
ANC attendance			
<4	1.00		
4+	2.18	(1.23, 3.89)	0.01
Stigma			
Low stigma score	1.00		
High stigma score	0.45	(0.29, 0.71)	0.001
Attitude			
Good attitude	1.00		
Bad attitude	0.47	(0.15, 1.45)	0.19
Quality of counseling			
Optimum	1.00		
Not optimum	1.87	(1.18, 2.94)	0.01

CHAPTER FIVE

5.0 DISCUSSION

In this study, we noted that only about half (57.5%) of postnatal mother previously HIV negative received a repeat HIV re-test. Factors significantly associated with uptake of repeat HIV test included being reporting three or more parity, ANC attendance of more than four visits, ANC booking of more than 24 weeks, reporting high stigma level, employment status, and perceiving that counseling was of suboptimal quality.

Results of this study shows that uptake of HIV re-testing is low compared to those recommended in National guideline of above 90% (44). However, the proportional uptake of repeated HIV testing was similar (52.1%) reported in a study done in Vietnam (45). However, it was a bit higher (34%) compared to those observed in Zambia by Mtaja et al (14).

The HIV positivity rate in repeat HIV test in this study was high (3.1%) among the booked antenatal attendees who were previously HIV sero-negative earlier in pregnant. It is much higher than that observed in Kenya (2.6%) but lower than those observed in south Mozambique 12% (17), Nigeria 5.3% (18), South Africa 11.2% (19) and in Tanzania 5.3% (20). These differences may be due to the interventions in contexts as well as the existing prevalence of HIV in a particular region. However the studies done in high prevalence areas would also anticipate high sero-conversion at repeated HIV testing.

Surprisingly in this study, participants who received sub optimal counseling had increased their likelihood to repeat HIV test. While poor quality service could make client uncomfortable to accept the service provided hence decrease the uptake this was contrary, also supported by the finding in a study by Gita et al (25) who found that poor communication during antenatal care was the major barrier of HIV testing. These findings might be contributed to the fact that participants are tested unknowingly and their results documented in ANC card without any communication between counselor and the client. The same finding was reported in India private hospital by Madhivanan et al (24).

In our study, mothers who had three or more parity were less likely to repeat HIV test. This could be explained by their assumptions that the previous HIV first negative result would remain the same in the subsequences HIV test in the same pregnancy. As a result they have self-reassurance that they are still HIV negative and no reason of HIV retesting. Similar finding was obtained in a study done in Uganda and Ethiopia and elsewhere, where mothers who had 2-3 live birth were less likely to have HIV re-test compared to those having no live child (35,46).

This study also revealed that mothers who attended four or more ANC visit were more likely to repeat HIV test than those who made fewer visit. The reason could be probably due to multiple visit increases the likelihood of contact with healthcare provider which also increase PMTCT knowledge and hence likelihood to be re-tested. This finding is in line with studies done in Malawi and elsewhere in Sub-Saharan Africa which reported association between number of ANC visit and having tested for HIV (40,47–49).

The study also found out that, postnatal mothers with high stigma score were less likely to retest HIV compared to those having low stigma. These suggest that mothers were afraid to become stigmatized by their friends and their families and mistrusted their confidentiality. It is observed in a study done in Kenya and other sub-Saharan African countries, high rates of refusal of HIV testing by pregnant women continue to be seen, and it is likely that HIV/AIDS stigma play a role in these setting (50,51). Perceived stigma regarding HIV may be barrier to uptake of HIV test even in an environment where the HIV re-testing in the antenatal clinic is becoming the norm. We argue that even a small percentage of women refusing HIV re testing are important in this high prevalence setting.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Study Limitation

Retesting information reported by the mothers was not considered which may lead to low uptake while the mothers were real retested though documentation was missing.

6.2 Conclusion

Results from the present study revealed that repeated HIV among pregnant women at PMTCT is moderate (57.5%) which can be considered as an early warning that risk of MTCT is still high among postnatal mother attending health care facilities. This is despite that 80% of the mothers attended ANC at least four visit, but opportunity to retesting them is low (57.5%) than what is stipulated in PMTCT guideline of above 90%. This study highlighted some of the factors associated with uptake of HIV retesting being mothers parity, number of ANC visits made, those reported with high stigma, ANC booking of more than 24 weeks and perceived quality of counseling.

6.3 Recommendation

It is important to strengthen health education and sensitization to mothers in all areas, on the importance and benefits of HIV retesting on the course of pregnancy.

Further studies should be conducted on factors affecting adherence to national PMTCT national guideline among private health care workers.

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APPENDICES

Appendix I: Informed Consent Form (English Version)

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCE DIRECTORATE OF RESEARCH AND PUBLICATION, MUHAS.

ID-NO.....

Consent to Participate in the Study

Greetings! My name is Aveline Minja, from Muhimbili University of Health and Allied Sciences, Dar es Salaam. I am carrying out a study on determinant of uptake of HIV second test among postnatal mothers attending care at Dar es Salaam Region.

Purpose of the Study

The study is aimed to collect information on factors associated with uptake of HIV second test. You will be asked to participate in this study as stakeholder, a resident from the study site. We should be grateful if you are willing to participate by answering questions from the study.

What Participate Involves

If you agree to participate in this study you will be asked a series of question by trained interviewer which has been prepared to obtain information on uptake of HIV second test in order to inform policy makers on how to improve the observed situation.

Confidentiality

I assure you that any information obtained in connection with you in this study will remain confidential and the final report will be sent to Muhimbili University of Health and Allied Sciences without disclosing your identity. To achieve this, your name will not be written on any questionnaire or in any report/document that might allow someone to identify you. Your name will not be linked with the research information in any way. All information collected on forms will be entered into computers with only the study identification number.

Confidentiality will be observed and unauthorized person will have no access to the data collected.

Risk

We don't anticipate any harm from participating in this study. If you feel uncomfortable to answer any question you have the right to refuse to answer and stop the interview at any time. We don't anticipate any harm from participating in this study.

Right to withdraw from the study and alternative

Taking part in this study is completely voluntary. You can decide to withdraw your participation at any time, even if you have already given in your consent. Refuse to participate or withdraw from the study will not involve penalty.

Benefits

We hope the information you provide to us is important and valuable, as it will provide useful information to assist health officials at every level to improve or overcome barriers in favour of appropriate service utilization to women in the course of pregnancy and delivery.

In case of Injury

We are not anticipating any harm to occur as the result of your participation in this study

Compensation

There will be no compensation on the time spent during the interview but your participation will be highly appreciated

Who to contact

If you have any questions about this study please contact the principal investigator, Aveline Minja, P.O.BOX 65001, MUHAS Dar es salaam. Mob 0713336100

If you have questions about your rights as a participant, you may contact the Chairperson of the senate Research and Publication committee MUHAS, Dr. Joyce Masalu at MUHAS, P.O.BOX 65001, DaresSalaam. Tel:2150302-6.

DR. INNOSENT SEMALI, Senior Lecturer and Supervisor, MUHAS P.O.BOX 65001 Dar es Salaam. (Mob.0754269838)

Signature:

Do you agree?

Participant agrees ……..

Participant does NOT agree…….

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

Signature of participant ……..

Signature of PI or designee…….

Date of signed consent …….

Appendix II: Fomu ya Ridhaa

CHUO KIKUU CHA SAYANSI YA AFYA NA SAYANSI SHIRIKISHI MUHIMBILI

Namba ya utambulisho…….

Ridhaa ya kushiriki kwenye utafiti

Hujambo? Mimi naitwa Aveline Minja, natoka chuo kikuu cha Afya na Sayansi ya TibaMuhimbili. Tunafanya utafiti wenyelengo la kutambua sababu zinazopelekea kurudia kipimo cha marudio ya virusi vya ukimwi kwa akinamama waliojifungua na hawakuwa na maambukizi ya virusi vya ukimwi katika kipimo cha mwanzo katika mkoa wa Dar es salaam**.**

Madhumuni ya Utafiti

Utafiti huu unafanyika kama sehemu ya shahada ya uzamili ya Utafiti ya Chuo Kikuu cha Afya na Sayansi za Tiba Muhimbili. Utafiti unalenga kuchunguza ufanisi wa huduma zitolewazo ili kutoa mapendekezo yatakayowezesha kupata sababu zinazopelekea/kutaka kufanikisha kipimo cha marudio ya virusi vya ukimwi. Hivyo unaombwa kushiriki katika utafiti huu ukiwa miongoni mwa jamii inayokaa katika mkoa huu. Tafadhali kuwa mkweli na muwazi kwa vile matokeo ya utafiti huu yanaweza yakatoa maamuzi na mapendekezo ya baadaye.

Nini kinahitajika ili kushiriki

Kama umeamua kushirikiutafiti huu unatatakiwa kukaa na msaili /mtafiti aliyepewa mafunzo jinsi ya kuhoji na kujibu maswali yanayohusu namna unavyo fahamu kuhusu sababu zinazopelekea kufanikisha au kutokufanisha kipimo cha marudio cha virusi vya ukimwi kwa kina mama waliojifungua na hawakuwa na maambukizi katika kipimo cha awali

Hutatakiwa kutoa utambulisho wa aina yoyote wakati wa usahili isipokuwa umri na kiwango cha elimu.

Mahojiano yatachukua muda mfupi kati ya dakika 25-30

Usiri wa Taarifa

Taarifa zozote zile zitakazopatikana kutoka katika utafiti huu ambazo zinaweza zikakutambulisha wewe zitabaki kuwa siri, taarifa ya mwishoya utafiti huu itapelekwa chuokikuu cha Muhimbili pasipo kutambulisha taarifa zako binafsi.

Athari za Kushiriki

Hatutegemei kutokea athari yoyote kwa kushiriki kwenye utafiti huu.

Haki ya kujitolea au vinginevyo

Ushiriki katika utafiti huu ni wa hiari unaweza kuacha kushirikikatikautafiti huu muda wowote hatakama ulikwishatoa idhini yako. Kukataa kushiriki au kujitoa kutoka kwenye utafiti huu hakutahusisha adhabu yoyote.

Faida

Taarifa utakayotupatia ni ya muhimu sana na ni yenye dhamani kwa kuwa utasaidia kuongeza uelewa wetu kuhusu ufahamu wa sababu zinazopelekea mahudhurio hafifu katika kiliniki za wajawazito na wakina mama kujifungua ambao hawakuwa na maambukizi ya virusi vya ukimwi katika kipimo cha awali. Pia taarifa utayotupatia itasaidia kuandaa mipango na mikakati ya kuboresha huduma ya marudio ya kipimo cha pili kwa kina mama ambao hawakuwa na maambukizi katika kipimo cha awali.

Madhara

Hatutegemei kupata madhara yoyote kutokana na ushiriki wako katika utafiti huu.

Fidia ya muda

Hakutakuwa na fidia ya muda utakaotumika wakati wa kufanya mahojiano au majadiliano katika utafiti huu, ijapokuwa ushiriki wako katika utafiti huu ni wa muhimu na wa thamani.

Nani wa kuwasiliana nao

Kama una maswali kuhusiana na utafiti huu, wasiliana na mtafiti mkuu wa utafiti huu Aveline Minja wa S.L.P 65001(Simu Na. 0713336100)Chuo kikuu cha Tiba na Sayansi ya Afya cha Muhimbili,Dar es salam.

Mkurugenzi wa Taarifa na machapisho, Chuo Kikuu cha Tiba na Sayansi za Afya cha Muhimbili, Dr Joyce Masalu S.L.P 65001, DaresSalaam. Simu: 2150302-6.

S.L.P. 65001, Dar es Salaam

DR. INNOCENT SEMALI, Msimamizi Muelekezi wa Utafiti pia Mhadhiri Mkuu, Chuo kikuu cha Tiba na Sayansi za Afya cha Muhimbili (Simu no 0754269838)

Sahihi

Je umekubali?

Mshiriki amekubali.....

Mshiriki hajakubali.....

Mimi .....nimesoma maelezo ya fomu hii maswali yangu yamejibiwa, nakubali kushiriki katika utafiti huu.

Sahihi ya mshiriki……

Sahihi ya mtafiti mkuu au mwakilishi.....

Tarehe ya kutia sahihi ya idhini ya kushiriki ...……..

Appendix III: Questionnaire

Uptake and determinant of HIV retesting among postnatal mothers previously HIV negative at initial antenatal clinic HIV testing in Dar es Salaam region.

Questionnaire number……

Name ofthe health facility……..……

Date of interview…….. Month……..

SOCIAL DEMOGRAPHIC INFORMATION

2. Current HIV status

(Trace on ANC card of the mother)

1. Positive…….
2. Negative……

3. Date of birth (DOB)……. 4. Age of the mother……

5. Residence……

6. Education level of mother

1. No formal education
2. Attended some primary school
3. Completed primary school
4. Attended Secondary education/Higher education

7. Education level of spouse

1. No formal education
2. Attended some primary school
3. Completed primary school
4. Attended Secondary education/Higher education

8. Occupation of mother
    1. Employee
    2. Not employed
    3. Self employed
9. Marital status (circle the correct)
    1. Single
    2. Married/Cohabiting
    3. Divorced
    4. Separated
    5. Widowed

Antenatal information (Trace from ANC card of the mother)

10. Gestation age at booking----------
    1. First trimester (From Conception to 12 weeks)
    2. Second trimester (from 13weeks till 24weeks)
    3. Third trimester (above 24 week)

11. Parity (live child)…….

12. Number of antenatal visit done …….

13. Date of first antenatal HIV test---------- (inset date)

14. Repeat HIV test done. (Trace on ANC card)
    1. Yes ( )
    2. No ( )

15. Date of Repeat HIV test……..

16. Delivery date……

Perceived attitude of counselor

17. The queues were too long when you go for HIV test
    1. Yes
    2. No

18. You were invited to repeat HIV test
    1. Yes
    2. No

19. When you went for retest there were counselors to carry out the test
    1. Yes
    2. NO

20. When you went for a retest counselors were not too busy
    1. Yes
    2. No

CLIENT SATISFACTION WITH ANC SERVICES

21. Information provided on important of attending ANC and HIV testing services were satisfactory
    1. Strong disagree
    2. Disagree
    3. Not sure
    4. Agree
    5. Strong agree

22. ANC services provided meet you expectation
    1. Strong disagree
    2. Disagree
    3. Not sure

4. Agree
5. Strong agree

23. Facility has enough equipment for providing complete ANC services

1. Strong disagree
2. Disagree
3. Not sure
4. Agree
5. Strong agree

24. There were enough health care providers with team work spirit.

1. Strong disagree
2. Disagree
3. Not sure
4. Agree
5. Strong agree

25. Health provider warmly welcoming client.

1. Strong disagree
2. Disagree
3. Not sure
4. Agree
5. Strong agree

Assessing quality of counseling

Pre-testing counseling

26. Before the test the counselor explain to you on the reason and benefit of testing HIV and you consented

1. Yes
2. No

27. Counselor gives you information on Mother to child HIV transmission and incase of HIV positive results how you will choose the family planning method for the following pregnancies
    1. Yes
    2. No
28. Counselor informs you the important of HIV results disclosure.
    1. Yes
    2. No

29. Counselor informed you the result will be confidential between you and him/ her
    1. Strong disagree
    2. Disagree
    3. Agree
    4. Strong agree

30. Counselor educate you on the ways of HIV transmission
    1. Strong disagree
    2. Disagree
    3. Agree
    4. Strong agree

31. Counselor gave you information on what to do if the test results were positive or negative
    1. Strong disagree
    2. Disagree
    3. Agree
    4. Strong agree
32. HIV testing room has privacy
    1. Strong disagree
    2. Disagree
    3. Agree
    4. Strong agree

Post-test Counseling

33. Was the results given on time and in clearly way?

1. Yes
2. No

34. Counselor inform you the reason of retesting and the time to repeat the test

1. Yes
2. No

35. Did you discuss about risk reduction?

1. Yes
2. No

36. Did your counselor give you the chance to ask questions?

1. Yes
2. No

37. How did you see the time spent during counseling?

1. Enough
2. Was enough

Perceived Stigma and Discrimination

Please give your suggestion on the following question

38. If your relative with HIV becomes sick you would not be willing to take care of him or her in my own household.

1. Strong disagree
2. Disagree
3. Agree
4. Strong agree

39. People with HIV should be ashamed of themselves.

1. Strong disagree
2. Disagree
3. Agree
4. Strong agree

40. People with HIV should be ashamed to bring the virus to the community.
    1. Strong disagree
    2. Disagree
    3. Agree
    4. Strong agree

41. You are not willing to buy Vegetables from a seller who has HIV virus
    1. Strong disagree
    2. Disagree
    3. Agree
    4. Strong agree

42. You cannot allow your child to play with a child living with HIV.
    1. Strong disagree
    2. Disagree
    3. Agree
    4. Strong agree

43. If one of you family member becomes HIV positive you will not keep secret about his/her disease
    1. Strong disagree
    2. Disagree
    3. Agree
    4. Strong agree

Perceived Social Support

44. Relatives/husband and you entire friend had never tested for HIV
    1. Strong disagree

2. Disagree
3. Agree
4. Strong agree

45. Husband/family members and friends have never encouraged you to get an HIV test
    1. Strong disagree
    2. Disagree
    3. Agree
    4. Strong agree

46. If your results are HIV positive your relative and friends/husband will not help you for anything
    1. Strong disagree
    2. Disagree
    3. Agree
    4. Strong agree

47. If you become HIV positive there is no one you can share your most private secret
    1. Strong disagree
    2. Disagree
    3. Agree
    4. Strong agree

48. If you become HIV positive you Husband/friends/relative will not give you support
    1. Strong disagree
    2. Disagree
    3. Agree
    4. Strong agree

Appendix IV: Dodoso la Utafiti

DODOSO LA KUKUSANYIA TAARIFA ZA KIPIMO CHA PILI CHA VIRUSI VYA UKIMWI KWA WAKINA MAMA WALIOJIFUNGUA NA SABABU ZINAZOPELEKEA KIPIMO HICHO KUTOFANYIKA KATIKA MKOA WA DAR ES SALAAM.

Namba ya dodoso……..

Jina la kituo……..……..

Tarehe……

TAARIFA BINAFSI

2. Hali ya maambukizi ya virusi vya ukimwi

(Angalia kwenye kadi ya kliniki)

1. Ana maambukizi
2. Hana maambukizi

3. Tarehe ya kuzaliwa ya mama……

4. Umri wa mama……..

5. Mahali anapoishi……

6. Kiwango cha elimu alichofikia

1. hajasoma kabisa
2. Hajamaliza elimu ya msingi
3. Amemaliza elimu ya msingi
4. Elimu ya secondary/Chuo

7. Kiwango cha elimu cha mwenza

1. Hajasoma
2. Hajamaliza elimu ya msingi

3. Amemaliza elimu ya msingi
4. Elimuya secondary/Chuo

8. Kazi ya mama
    1. Ameajiriwa
    2. Hajaajiriwa
    3. Amejiajiri

9. Hali ya Ndoa (zungushia jibu sahihi)

    1) Hajaolewa
    2) Ameolewa/anaishi na bwana
    3) Wameachana
    4) Mjane.

10. Tarehe ya kujifungua……

Taarifa ya Kliniki (Angalia kwenye kadi yake Kliniki)

11. Umri wa mimba alipoanza kliniki (Chagua moja kwa kuzungushia)

    1. Mimba changa hadi wiki ya 12
    2. Wiki kati ya 13 hadi ya 24
    3. Zaidi ya wiki 24

12. Amezaa mara ngapi……

13. Idadi ya mahudhurio ya kliniki…….(angalia kwenye kadi)

(Angalia kwenye kadi ya kliniki ya mama)

14. Tarehe ya kupima virusi vya Ukimwi kwa mara ya kwanza wakati wa ujauzito huu……..

15. Amerudia kupima Virusi vya Ukimwi baada ya kipimo cha kwanza?

1. Ndio ( )
2. Hapana ( )

16. Tarehe aliyojifungua……

Kupima tabia ya mtoa huduma

17. Hakukuwa na foleni kubwa kliniki ulivyoenda kupima VVU
    1. Ndio ( )
    2. Hapa ( )

18. Ulikaribishwa kurudia kipimo
    1. Ndio
    2. Hapana

19. Ulivyo kwenda kurudia kipimo kulikuwa na mpimaji
    1. Ndio ( )
    2. Hapana ( )

20. Wapimaji hawakuwa wamezidiwa na kazi.
    1. Ndio ( )
    2. Hapana ( )

URIDHISHWAJI WA HUDUMA ZA KLINIKI

21. Uliridhishwa na uelimishaji wa umuhimu wa kuhudhuria kliniki na kupima virusi vya Ukimwi
    1. Sikubali kabisa
    2. Sikubali
    3. Sina hakika
    4. Nakubali
    5. Nakubali kabisa

22. Huduma za mama mjamzito zinazotolewa zinaridhisha
    1. Sikubali kabisa

2. Nakubali
3. Sina Hakika
4. Sikubali
5. Sikubali kabisa

23. Hospitali ina vifaa vyote kwa ajili ya kutoa huduma ya mama
    1. Sikubali kabisa
    2. Sikubali
    3. Sina hakika
    4. Nakubali
    5. Nakubali kabisa

24. Watoa huduma wapo wa kutosha na wanafanya kazi kwa ushirikiano.
    1. Sikubali kabisa
    2. Sikubali
    3. Sina Hakika
    4. Nabakuli
    5. Nakubali kabisa

25. Watoa huduma wanapokea wagonjwa kwa ukarimu na upendo
    1. Sikubali kabisa
    2. Sikubali
    3. Sina hakika
    4. Nakuli
    5. Nakubali kabisa

Taarifa Kabla ya Kipimo cha Virusi vya Ukimwi

26. Mshauri nasaha alikupa maelezo kuhusu kipimo, na manufaa yake kabla ya kukupima virusi vya ukimwi na uliridhia kupima?
    1. Ndio

2. Hapana

27. Mshauri nasaha alikuelimisha kuwa maambukizi ya virusi yanaweza kutoka kwa mama kwenda kwa mtoto na endapo utakuwa na maambukizi ni kwa jinsi gani uchague njia ya uzazi wa mpango kwa mimba zitakazofuatia?
    1. Ndio
    2. Hapana

28. Mshauri nasaha alikupa umuhimu wa kumshirikisha mtu mwingine majibu yako
    1. Ndio
    2. Hapana

29. Mshauri nasaha alikupa maelekezo kuwa majibu ya kipimo chako yatakuwa siri kati yako na yeye tu
    1. Sikubali kabisa
    2. Sikubali
    3. Nakubali
    4. Nakubali kabisa

30. Mshauri nasaha alikuelimisha njia zinazoweza kusababisha kupata virusi vya ukimwi?
    1. Sikubali kabisa
    2. Sikubali
    3. Nakubali
    4. Nakubali kabisa

31. Mshauri nasaha alikupa maelezo nini cha kufanya endapo majibu yako yatakuwa chanya au hasi
    1. Sikubali kabisa
    2. Sikubali
    3. Nakubali
    4. Nakubali kabisa

32. Chumba cha kupimia Virusi vya ukimwi kilikuwa na usiri

1. Ndio
2. Hapana

Taarifa baada ya majibu

33. Je majibu yalitolewa kwa wakati na kwa njia ya kueleweka?
    1. Ndio
    2. Hapana

34. Mshauri nasaha alikupa taarifa urudie kipimo baada ya muda gani na sababu ya kurudia
    1. Ndio
    2. Hapana

35. Mshauri alikupa mbinu mbalimbali za kujikinga na maambuki ya VVU
    1. Ndio
    2. Hapana

36. Mshauri alikupa fursa ya kumuuliza maswali?
    1. Ndio
    2. Hapana

37. Unauonaje muda alioutumia mshauri kuongea na wewe
    1. Hautoshi
    2. unatosha

Kupima unyanyapaa

Tafadhali toa maoni yako kwa maswali yafuatayo.

38. Ukiwa na ndugu anayeishi na virusi vya ukimwi akiugua hunaweza kumhudumia nyumbani kwako.
    1. Sikubali kabisa
    2. Sikubali
    3. Nakubali
    4. Nakubali kabisa

39. Watu wenye virusi wanapaswa waone aibu

1. Sikubali kabisa
2. Sikubali
3. Nakubali
4. Nakubali kabisa

40. Watu wenye virusi wanapaswa waone aibu ya kuleta virusi kwenye jamii

1. Sikubali kabisa
2. Sikubali
3. Nakubali
4. Nakubali kabisa

41. Huwezi kununua vitu kama mbogamboga kwa mtu unayejua anaishi na maambukizi ya ukimwi

1. Sikubali kabisa
2. Sikubali
3. Nakubali
4. Nakubali kabisa

42. Huwezi kumruhusu mtoto wako akacheza na mtoto wa rafiki yako mwenye maambukizi ya virusi vya ukimwi

1. Sikubali kabisa
2. Sikubali
3. Nakubali
4. Nakubali kabisa

43. Ndugu au rafiki anayeishi na maambukizi ya VVU hunaweza kumtunzia siri.

1. Sikubali kabisa
2. Sikubali
3. Nakubali
4. Nakubali kabisa

Msaada wa kijamii

44. Katika familia yako ndugu/rafiki/mume hawajawahi kupima VVU

1. Sikubali kabisa
2. Sikubali
3. Nakubali
4. Nakubali kabisa

45. Hukushauriwa na mume wako/na ndugu zako/ rafiki upime VVU

1. Sikubali kabisa
2. Sikubali
3. Nakubali
4. Nakubali kabisa

46. Je unafikiri ukiwa na maambukizi ya Ukimwi huwezi kupata msaada kwa ndugu/ rafiki/mume wako?

1 Sikubali kabisa
2 Sikubali
3 Nakubali
4 Nakubali kabisa

47. Je unafikiri ukiwa na maambukizi ya VVU inawezekana ukakosa mtu wa kumshirikisha siri zako?

1. Sikubali kabisa
2. Sikubali
3. Nakubali
4. Nakubali kabisa

48. Je unafikiri ukiwa na maambukizi ya VVU ndugu/mume hawatakupa huduma?

1. Sikubali kabisa
2. Sikubali
3. Nakubali
4. Nakubali kabisa

Appendix IV: Ethical clearance

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
OFFICE OF THE DIRECTOR OF POSTGRADUATE STUDIES

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Ref. No. DA.287/298/01.A/ 2nd May, 2018

Ms. Aveline N. Minja
MPH-Executive Tract
MUHAS.

RE: APPROVAL OF ETHICAL CLEARANCE FOR A STUDY TITLED: "UPTAKE AND DETERMINANTS OF HIV RETESTING AMONG POSTNATAL MOTHERS ATTENDING PRIVATE HEALTH FACILITIES IN DAR ES SALAAM REGION"

Reference is made to the above heading.

I am pleased to inform you that, the Chairman has, on behalf of the Senate, approved ethical clearance for the above-mentioned study. Hence you may proceed with the planned study.

The ethical clearance is valid for one year only, from 30th April, 2018 to 29th April, 2019. In case you do not complete data analysis and dissertation report writing by 29th April, 2019, you will have to apply for renewal of ethical clearance prior to the expiry date.

Dr. Emmanuel Balandya
ACTING: DIRECTOR OF POSTGRADUATE STUDIES

cc: Director of Research and Publications
cc: Dean, School of Public Health and Social Sciences