FACTORS INFLUENCING FAMILY SUPPORT FOR PMTCT OF HIV AMONG COMMUNITY MEMBERS IN KINONDONI MUNICIPALITY

By

Faraja Lutula

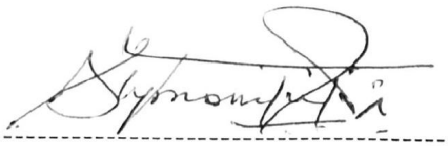
A Dissertation Submitted in Partial Fulfilment of the Requirements for the Degree of Master of Public Health of the Muhimbili University of Health and Allied Sciences

Muhimbili University of Health and Allied Sciences

November, 2007

CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance of the award of the degree by the Muhimbili University of Health and Allied Sciences a dissertation entitled: " *Factors influencing family support for PMTCT among community members in Kinondoni Municipal"* in partial fulfillment of the requirement for degree of Master of Public Health.



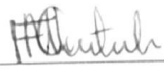
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(SUPERVISOR)

Date 9th November, 2007

DECLARATION AND COPYRIGHT

I, Faraja Lutula, 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.

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ACKNOWLEDGEMENT

My deepest appreciation is to Dr PGM Mujinja my supervisor, for the continuous and tireless support, supervision and encouragement towards the completing of this dissertation. I am very grateful for having the opportunity to work with and benefit from him.

Special thanks go to Dr. S. Mamuya, my academic advisor for his advice, support and guidance during development of this study proposal.

I am deeply indebted to the Kinondoni Municipal Medical Officer, Dr. Beatrice Byarugaba and other heath facilities staff members if the Kinondoni municipal for facilitation of my study in the health facilities.

I am also indebted to The Kinondoni Municipal Director, and other Local Government Leaders of the Kiondoni Municipal for the facilitation in the whole process of household survey. I would also like to thank respondents who volunteered to participate in this study.

Special thanks to Mr. C. Makwaya and Mr. F. Mayunga for their assistance in data processing and analysis. My appreciation also goes to the School of Public Health and Social Sciences staff and all my fellow MPH students 2006/07 for their various contributions towards the completion of this work.

I also express my appreciation to my family. I owe much of the gratitude to my husband Fred Msemwa and my sons Joshua and Erick-Michael. I thank them all for their support, prayers, encouragement and being there for me whenever I needed them.

Finally, but not least, my gratitude goes to the Belgium Technical Cooperation who sponsored my studies for the entire course.

DEDICATION

I dedicate this work to my beloved parents. My beloved father, the late Mr. Michael Gerson Lutula and beloved mother Rachel Lutula, who together provided me with a good educational foundation.

ABSTRACT

Mother to child transmission of HIV is a leading mode of HIV transmission among the children in Tanzania. Tanzania adopted to implement the program of PMTCT since the year 2000 as a measure to control HIV transmission among the children as well as to reduce infant and children mortality as stipulated in the National Guideline for PMTCT.

This study aim at exploring factors that influences support from family and household members given to PMTCT clients in the process of abiding to the recommendations and practices which are being instructed as per the guideline for the programme in Kinondoni Municipal.

A cross-sectional study was carried out in the months of June and July 2007. Data was collected from 377 adults household community members. Data was also collected from 82 PMTCT clients who had children aged below one year. Data collection was done through face to face interviews. Households which participated in the study were selected using multistage sampling procedure. The PMTCT clients were conveniently sampled.

Knowledge on PMTCT among household respondents was low and moderate level 57.6% and 42.4% respectively. However, there was no significant difference in knowledge of PMTCT between males and females. Also, awareness on transmission of HIV from mother to children through breast feeding was significantly higher among

females (62.7%) than males (37.3%). Furthermore (32%) household respondents knew that ARVs can prevent mother to child transmission of HIV.

Majority of household respondents had negative attitudes towards PMTCT recommended options practiced by clients in their homes. Where by 61% of the clients disagreed with not breast feeding the child at all. And also, 55% and 54% respondents disagreed with wet nursing and exclusive breast feeding for first six months respectively. Furthermore, 58% of household respondents did not support use of ARVs by HIV infected lactating mothers. Also majority of household respondents had wrong and negative perception towards women involving themselves with the PMTCT infant feeding recommended options and use of ARVs.

Most (41%) of PMTCT clients opted exclusive breast feeding their children. Only 14% of clients were practicing replacement feeding. However, problems which PMTCT clients encountered regarding feeding options included stigma and discrimination which was reported by 60% of clients who were practicing replacement feeding only. Other problems were those related to cultural beliefs on infant care and financial constraints. Problem reported by most (38%) of clients using ARVs was suspicion and HIV related stigma as well as 18% clients faced resistance from family members that ARVs are harmful to children's health.

This study concluded that, general knowledge on MTCT and PMTCT of HIV among household members was low and awareness on use of ARVs for PMTCT was also low. Low knowledge of PMTCT, negative attitudes and wrong perceptions of household/family members regarding PMTCT recommended practices by HIV infected mothers in homes, are factors which contributed to inadequate support given to HIV infected women in abiding to PMTCT recommendations in Kinondoni municipal.

The results from this study, therefore, add to the already known factors, and hence could be useful in formulation or improving existing policies aiming at increasing the efficiency of PMTCT program.

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CHAPTER ONE

1. INTRODUCTION.

It is estimated that 38.6 million people worldwide were living with HIV by the end of 2005 (UNAIDS 2006). It is also estimated that 4.1 million became newly infected with HIV currently and 2.8 million lost their lives to AIDS by 2005 (UNAIDS 2006). Africa remains the global epicenter of the AIDS pandemic where by Sub-Saharan region carries the largest burden of the epidemic. However, the epidemic in this region is extremely severe in Eastern and Southern Africa. In South Africa, it is estimated that 5.5 million people were living with HIV by 2005 and 18.8% of adults were living with HIV infection. Furthermore, almost one in every three pregnant women attending public antenatal clinics were having HIV infection by 2004 (UNAIDS 2006). In Tanzania, HIV prevalence has been rising since the first cases of AIDS were diagnosed in 1983. The survey conducted in Tanzania revealed that overall HIV prevalence among 15 – 49 years population was 7.2% where 6.7% and 7.7% ware among males and females respectively. Furthermore, urban residents are having considerably higher rates of 10.9%, than rural residents 5.3%. More than 60% of cases occur in young people, especially female (TACAIDS, 2005).

In Tanzania, HIV is mainly transmitted heterosexually, and in the 2003/04 HIV survey, about 77% of all HIV cases were reported to be heterosexually transmitted. Mother to child transmission contributed about 5% and blood transfusion about 0.5%. In 17% of the reported cases the mode of acquisition was not stated. (NACP 2004; NACP 2005)

However, maternal to child transmission is the leading mode of HIV transmission among the children: Although not contributing significantly to the total HIV/AIDS cases, still it is contributing significantly to child mortality. Without any intervention, 25% to 40% of infected pregnant women will transmit HIV infection to their babies during pregnancy, delivery or through breast feeding (NACP 2004). Notwithstanding, children born by HIV positive mothers do not all return to the clinics for subsequent follow-ups (NACP 2005). Therefore, it becomes difficult to draw a conclusion on the proportion and timing of infection to children.

A number of HIV/AIDS control methods have been developed and practiced in different countries to slow the epidemic and eventually mitigate its impacts of mother to child transmission of HIV (PMTCT) is among the control measures which have been implemented in Tanzania since the year 2000. Since then, the program has been expanding its coverage and by March, 2006 there were 544 sites offering PMTCT services in Mainland Tanzania. PMTCT program provides services to women who are attending maternal and child health clinics of both public and private health facilities. In the program, pregnant women are exposed to counseling and testing for HIV, short courses of Ant Retroviral Therapy (ART) regimens to HIV infected women, counseling and support for safe infant feeding including breast feeding and referral for long term ART. All these are supposed to be implemented by mothers in their homes. (NACP 2006) Despite achievements of PMTCT- high acceptance rate of 85%, a number of

challenges have been identified to affect the effectiveness of the program, these are; low coverage, low uptake of antiretroviral prophylaxis, poor male partner involvement, inadequate services for follow up of children and poor community participation and support. Also, there has been a very low rate of women (6.9%) who opt for replacement feeding due to wide spread stigma and unaffordability of feasible replacement feeding option (NACP 2006). However, factors contributing to that slow uptake and continuity to those who have attended the clinic are not well established. Furthermore, since the PMTCT clients live in households with other family members, friends, and relatives, factors that affect the implementation of PMTCT from households have not been well documented.

1.1. PROBLEM STATEMENT.

There are a number of methods recommended worldwide for controlling HIV infection in different sites and risk groups. These measures include, Voluntary counseling and testing (VCT), care and treatment clinics (CTC), Information, education and communication (IEC) for behavior change towards practicing safe sex and Prevention of maternal to child transmission of HIV. Despite the fact that more than 90% of the population has awareness on HIV/AIDS, still infection rate has increased even among the children (TACAIDS 2005). PMTCT has been found to be a cost effective method of controlling HIV from mother to children. However, PMTCT is a new concept to most of the Tanzanians and its services are delivered at health facilities in MCH clinics, hence

other people who do not attend such clinics would rarely understand the objectives and benefits of PMTCT (NACP, 2004).

Counseling, testing and education services as PMTCT components are provided in Mother and Child Heath clinics (MCH). However, MCH clinics are mostly attended by women. All other members of the respective families are less or in most cases not involved. The services and information provided to mothers in clinics are to be practiced at home. These practices are like; taking medication, breast feeding and infant feeding. However, in most of the African families the clients are likely to be living with other people in their respective homes. Furthermore, at the clinics mothers are also the only ones counseled on how to take care of the children to protect them from HIV infection. Inadequate knowledge on how to assure the child is protected from HIV infection among other family members may have an effect in compliance to the recommended child feeding practices like avoiding mixed feeding to infants of less than six months. Also, women may be predisposed to stigma, discrimination, violence and lack of support from their spouses and other family members following changes in their behavior and practices. These may happen in a situation where other family members are not aware and counseled to accept the conditions of the respective mothers.

Many studies have involved women in MCH clinics as target population. The studies which interviewed PMTCT clients have shown reasons hindering achievement of PMTCT objectives being, lack of male partner support, infant feeding stigma and

negative attitude of health workers (Kebaabetswe, 2007; Ntabaye, 2004). Mothers have also mentioned lack of care and support from other family members and communities as one of the problems (Rwechungura, 2006). However these studies focused on the clients' perceptions and not exploring the practices, behaviors, and other factors that happen in their homes and communities.

There are limited studies which have explored the family and other community member's behavior and judgments on the implementation of PMTCT instructions by the mothers at homes. Furthermore little is known on the community members understanding of the PMTCT objectives at family and community levels in Kinondoni municipal. This study therefore, addressed this gap. The study generated knowledge on factors that would affect changes in mothers like breast feeding practices and child feeding in general. Understanding community member's knowledge on PMTCT, attitudes and perception of community regarding PMTCT recommended practices would be very useful in improving implementation of PMTCT at household level. Also the information may help in addressing stigma issues in households and communities.

1.2. RESEARCH QUESTION.

What are the household member's behavior and actions that affect the implementation of PMTCT objectives?

1.3. RATIONALE OF THE STUDY

This study generates information regarding household and community member's behaviors and practices that affect the effectiveness of PMTCT program objectives. And hence the findings could be useful in formation or improving existing policies aiming at increasing the efficiency of PMTCT program.

1.4. STUDY OBJECTIVES

Broad Objective.

To explore PMTCT clients' and community members' knowledge and actions that affect implementation of PMTCT in a home environment.

Specific Objectives

1. To explore knowledge of individuals on PMTCT objectives.

3. To explore the individuals attitudes on PMTCT clients actions in homes.

2. To explore perception of the individuals on PMTCT clients practices in homes.

4. To identify the pattern of PMTCT clients breast feeding, child feeding practices and medication adherence in homes.

5. To find out the PMTCT clients' assessment on other family members' actions and perceptions on their practices in homes.

CHAPTER TWO.

2.0 LITERATURE REVIEW.

2.1. Knowledge on MTCT and PMTCT of HIV in Tanzania and other African countries.

A community survey conducted in Tanzania observed that knowledge of MTCT of HIV in the country was higher among women than males. About 69% women and 63% men respectively knew that viruses can be transmitted from mother to a child through breast feeding. Also, only 15% of women and men knew that there are special drugs for pregnant women to prevent transmission of the virus through breast feeding. (TACAIDS, 2006). Thus there was low awareness on MTCT and use of ARVs for PMTCT among community members.

Furthermore, another study which involved women attending MCH clinics in Dar es Salaam showed that 49% of women attending MCH clinics were aware that MTCT can occur during pregnancy, 55% and 63% of them were aware of transmission during delivery and during breast feeding respectively. Only 38% of the women were aware of presence of medications to prevent mother to child transmission of HIV (Kominami, et al, 2007).

A study conducted among pregnant women attending antenatal clinics in Lagos Nigeria to determine their knowledge and acceptability of HIV voluntary counseling and testing during pregnancy as a strategy for the prevention of mother-to-child transmission of

HIV. It was observed that, the majority of the women (89.9%) had good knowledge of the modes of HIV transmission. However, knowledge of specific aspects of PMTCT was poor. Close to half of the women (41.7%) were not aware of the association between breast milk and HIV transmission. Awareness of anti-retroviral drugs among the study group was very poor. Almost all the women (96.1%) were willing to undergo HIV testing in pregnancy particularly if it would assist preventing transmission of HIV to their babies; but only few would undergo the test if the result would be shared with relatives due to fear of stigma and discrimination. Also, many of the women would still prefer breastfeeding even if they were found to be HIV positive, (Ekanem, et al 2004).

2.2. Stigma and Disclosure of HIV status.

Different studies focusing on PMTCT implementation have identified some reasons causing poor acceptability of the program as weaknesses caused by individuals in the families and communities where PMTCT clients are living. In Botswana, PMTCT clients have reported problems to be caused by people in community or family members. These factors included lack of male partner support and infant feeding stigma and discrimination (Kebaabetswe, et al, 2007).

Another reason observed to affect performance of PMTCT at house hold level was low rate of disclosure of the HIV status to the male spouse. Most PMTCT clients do not disclose their sero-status due to fear of adverse social events like physical violence,

verbal abuse, separation or divorce, and stigma (Kilewo, et al, 2001). Fathermore it was reported that disclosure rate among PMTCT clients ranged from 16.7% to 86.0%. And about 14.6% women suffered physical violence from partner following disclosure of HIV status (Madley, et al, 2004). The low rates of HIV sero-status disclosure reported among women in antenatal settings has implications for prevention of mother-to-child transmission of HIV programmes because the optimal uptake and adherence to such programs may be difficult for women whose partners are either unaware or do not understand their role to play in insuring prevention of HIV infection to their children (Madley, et al, 2004). It was also observed that encouraging couple counseling during PMTCT may facilitate the understanding of male partner role and increase support from male spouse hence reduce incidences of the adverse events to women. Only 28% of women who were counseled with their spouses reported at least one adverse social event within 6 months after delivery (Bajunirwe, et al, 2005; Semrau, et al, 2005)

Women attending antenatal clinic in Arumeru, Tanzania, have reported a number of social and cultural barriers which confronts pregnant women when they decide to opt for HIV testing (Ntabaye, et al, 2004). The study reported that 85% of women expressed their willingness to be tested, and most women were concerned about confidentiality and disclosure of HIV sero-status because of fear of negative reactions from their husbands, parents, and other community members. It was suggested that, for VCT and PMTCT interventions to be successful, attention must be focused on education and development culturally appropriate interventions that empower women to make decisions related to

their reproductive needs. Also, involvement of men and addressing stigma and discriminatory attitudes towards HIV infected women (Ntabaye, et al, 2004).

2.3. Breast feeding and infant feeding practices.

Failure to comply with breast feeding as recommended by PMTCT is another problem which has been encountered by most PMTCT clients. Studies have shown that women who because of a wish to prevent MTCT are employing formula feeding, may rise suspicion and prejudice amongst family members and surrounding community (Eide, et al, 2006; Becquet, et al, 2005).

It has been reported among HIV positive and HIV negative women attending MCH clinics that, most infants (97%) had ever been breast-fed, and HIV-negative mothers introduced fluids/foods other than breast milk significantly sooner than HIV-infected mothers (Orne-Glieman, et al, 2006). Also, more than 90% of mothers reported that breast-feeding their infant was a personal decision. While, HIV-infected mothers interviewed were gradually implementing infant feeding practices recommended in the context of HIV, the majority needed infant feeding support to be increased.

A qualitative study to explore how the HIV epidemic has affected the infant-feeding experiences of HIV-positive mothers in South Africa found that the HIV epidemic has changed the context in which infant-feeding choices are made and implemented (Doherty, et al, 2006). Whereby fear of disclosure of HIV status and stigma has

weakened the ability of mothers to resist entrenched community norms that encourage early introduction of fluids and foods to infants. Women who chose to exclusively formula feed had difficulties accessing formula milk because of inflexible policies and financial constraints. Also, they mentioned limited postpartum support causing social isolation among HIV positive mothers doubting their ability to care for their children (Roquers, et al, 2006). Similarly, the study showed that infant-feeding experiences of HIV-positive mothers have serious implications for the operational effectiveness of programs that aim to prevent HIV transmission from mother to child.

It has been reported in India that if a woman is not to breastfeed her baby, may face negative attitudes from the partner which include; thinking that the mother is harming the baby, that she is not a good mother, and thinking she has been unfaithful. Also non breast feeding predisposes discrimination against the community and threat of domestic violence (Roqers, et al, 2006). Building support by communities may be through diffusing information about PMTCT into the communities at large. A process can be reinforced through community education activities in churches, bus terminals, schools, bars; sometimes conducted by drama groups. Studies conducted in Kenya and Zambia, (Danian, et al, 2003) observed that common practice of mixed feeding was difficult for most women to forgo because of pressure from the surrounding people in communities. Therefore in order to increase levels of compliance with PMTCT feeding guidelines, it

was recommended that PMTCT services have to extend infant feeding counseling beyond antenatal care clinics.

In order to address stigma discrimination and lack of community support for people living with HIV and AIDS it is important to have health promotion of education at grassroots level and a strong support of the a community outreach as well as an improved training of health and community service providers (Ramlagam, et al, 2004). In South Africa, studies have shown that, where people do not have access to information like guidelines and policy on HIV and AIDS, There is lack of community support to people living with HIV and AIDS which promotes further barriers to policy implementation and service utilization of programs like PMTCT, (Ramlagan, et al, 2004)

Both basic knowledge and awareness of specific facts of PMTCT ware one of the factors identified to affect implementation of PMTCT services in Sub Saharan Africa (Varga, et al, 2004). Other factors were stigma, poor male partner participation in PMTCT, wide range of cultural beliefs surrounding infant care and influence of family structure and residence of HIV infected women. It was concluded that consideration of community and social factors is vital in order to improve the acceptability and effectiveness of PMTCT interventions. (Varga et al, 2004)

CHAPTER THREE

3.0. METHODOLOGY.

3.1. Study design

A descriptive cross sectional study was conducted in Kinondoni Municipal in the months of June and July 2007. The study involved household members in the community and facility based exit interviews to PMTCT clients who visited the MCH facilities.

3.2. Study area.

Kinondoni Municipal is one of the three Municipalities in Dar es Salaam City. According to the 2002 population national census, Dar es Salaam region had a total population of 2,497,940 of which 1,236,864 (45.9%) were female. (URT, 2002). The current estimated population if Dar es salaam is 4 million (Kinondoni Municipal, 2006)

Dar es Salaam is one of the cities in Tanzania with a high prevalence of HIV infection of 10.9% (TACAIDS, 2005). The region was chosen because has facilities spread in all Municipalities which provide PMTCT services and also the degree of diversity of cultural characteristics of its residents. Out of the three Municipalities of Dar es Salaam city, Kinondoni Municipality was conveniently selected because it has a good number of PMTCT sites which are 22.

Kinondoni municipality is bordered by the Indian ocean to the north east, Bagamoyo district to the north, Kibaha district to the west and Kisarawe district on the South west.

In the South it borders Ilala Municipality. The economic activities of people in the district include formal and informal sectors employment, small scale business and urban agriculture. It is estimated that 360,000 residents are employed in private and public sector (95% in private and 5% public sector) whereas 3% are engaged in agriculture. Kinondoni municipality is both urban and semi- urban comprised of 4, divisions, 27 words, 113 streets, 14 villages. There are a total of 212 health facilities of which 14 are hospitals, 6 health centers and 192 dispensaries. Kinondoni Municipal has 22 facilities providing PMTCT services in integration with other MCH services. (Kinondoni Municipal, 2006)

3.3. Study population.

The study population involved adults living in communities in Kinondoni Municioal and PMTCT clients in health facilities in the municipality.

1. Community members.

For the community survey, respondents were adult individuals aged 18 years and above both male and female from 4 wards selected for the study. The selected wards included Manzese, Mwananyamala, Kinondoni and Magomeni.

2. PMTCT clients exit interviews.

Women attending postnatal MCH clinics were approached and asked for interview after completion of their services on the day of the study.

3.4. Sample size estimation.

1. Sample size for household survey.

Sample size for household members' surveys was determined using the formula below, where by estimated knowledge of PMTCT among individuals in general community was 66%. (TACAIDS, 2005)

$$n = \frac{Z^2 P (100-P)}{d^2}$$

Where: n= required sample size.

Z= standard normal deviate, which is 1.96

d= margin of error, 5%

P= proportion of community members with knowledge on PMTCT 66%

n= 4 x 0.66 x (1- 0.66) / 0.05 x 0.05

n= 345.

From the formula, estimated sample size was 345 people. Adding 10% attrition rate, n=380. Therefore, a maximum sample of 380 household members. However the study managed to include a maximum of 377 household members.

2. Sample size for PMTCT clients.

Because of the poor follow up of PMTCT clients during postnatal period due to lack of documented identity for PMTCT clients in their MCH cards, it was difficult to get and identify the PMTCT clients attending postnatal clinics (NACP, 2006). Therefore, a total

of 100 clients were to be conveniently selected from different PMTCT sites in the Municipality.

3.5. Sampling procedures.

3.5.1. Sampling for household members.

A multistage cluster sampling procedure was used to obtain divisions, wards, streets and finally households that were included in the study. The procedure was based on the local government administrative structure. A list of all wards and their respective divisions were obtained from the Municipal Planning Officer. Kinondoni district has 4 divisions; out of these two divisions namely Kinondoni and Magomeni were randomly selected. All wards in the selected divisions were listed and two wards from each division were randomly selected by using tables of random numbers. For each ward selected, all streets were listed and 5 streets from each ward were also randomly selected. All households from each selected street were listed and 20 households from each selected hamlet were selected for the study, making a total of 200 households. From a list of the households selected every eligible adult present in the household during the study was asked to participate in the study. A total of 377 household members were interviewed.

3.5.2. Sampling for PMTCT clients.

The sample of clients attending MHC clinics was conveniently obtained from five sites out of 22 facilities offering PMTCT services in Kinondoni municipality. The PMTCT sites were purposefully chosen, where by sites chosen were those which provide services

to clients residing within the two divisions included in a community survey. These sites were; Mwanamyamala hospital, Magomeni health centre, Sinza Health centre, Tandale dispensary and Mburahati health centre. The exit interviews of the clients were conducted for 20 consecutive working days. A total of 82 eligible clients who visited the MCH facility during the study were asked for interview which took about thirty minutes.

3.6. Selection and inclusion criteria.

1. Individuals 18 years and above, both female and males were included in the household survey.
2. Women with a child aged one to twelve months enrolled in PMTCT during the antenatal period, were included in the PMTCT clients' exit interview.

3.7. Data collection

Data collection tools

Data were collected from the household members using semi structured instruments and for PMTCT clients also a semi structured questionnaire was used to interview clients who left the facility. The questionnaires were developed in English and translated to Kiswahili. Before starting data collection pre testing of instruments was done by principal investigator and research assistants in five households in Magomeni ward and at Magomeni health centre. The purpose of the pre testing exercise was to check for accuracy, consistency, coherence and validity of the questions.

3.8. Selection and training of research assistants.

The principal investigator recruited three research assistants for the household survey and five research assistants for the health facility study. The research assistants were trained on data collection. The training was run for a period of three days on the understanding of the study objectives, understanding the questions, recording questions responses and interviewing skills.

3.9. Data collection procedure.

Data collection started after obtaining permission from the Kinondoni Municipal authorities. In the process of data collection, the selected wards were visited one day before the interview day to meet the Government leaders to explain about the purpose of the study and ask for their assistance in identifying the households in the selected streets. The interview took place in the participants' households. Eligible individuals were asked for their consent to participate in the study and upon acceptance they were interviewed. The information collected included socio demographic characteristics and information on knowledge, attitudes, perception regarding studied specific aspects of MTCT and PMTCT.

For PMTCT clients' exit interviews, permission was obtained from Municipal Medical officer and Medical in charge of the facility visited. Interviews were conducted in the MCH clinics on days where PMTCT services were operating in some of the facilities and every day in those facilities operating the MCH and PMTCT services on daily basis.

Identification of eligible clients was performed with help from the nurses who were MCH coordinators and PMTCT in charge in every facility. Exit interviews were conducted by the principal investigator and research assistants (who were nurses within the MCH clinics involved in the study). Eligible client who attended postnatal visits was asked for consent to participate in the study, and upon agreement the client signed the written consent form and was then interviewed. Importance of a written consent was to assure confidentiality. A total of 82 PMTCT clients were interviewed during the study period from the 5 selected sites.

3.10. Data management and analysis.

During the field work the principal investigator supervised the research assistants by inspecting the collected data on the same day, errors detected were corrected immediately and data coding was then done. Responses to closed ended questions were coded on the day of interview, while those of open ended questions were coded after completion of data collection according to responses given. Data obtained were entered, cleaned and analyzed using EPI Info version 6 software. Dependent variables including respondents' knowledge on PMTCT, attitudes and perceptions of individuals on PMTCT clients' recommenced practices. Data were cross tabulated with independent variables including respondents' characteristics like age, sex, marital status, education. Other variables were occupation, religion and number of people in households. The results were then interpreted using statistical tests to find associations between dependent and independent variables.

2. Perception of household members on PMTCT recommended instructions practiced by PMTCT clients.
3. Attitudes of household members towards recommended PMTCT instructions practiced by clients.
4. PMTCT performance activities by clients in their homes which includes; Breast feeding practices, infant feeding practices and taking medication.

The independent variables in this study included;

1. Age of respondents
2. Sex of respondents.
3. Marital status of respondents.
4. Education and occupation of respondents.
5. Religion of respondents.
6. Income of respondents.
7. Household size (number of people in the household).
8. Age of PMTCT clients' children.

3.12. Ethical issues.

Ethical clearance was obtained from MUHAS research ethical committee. Permission to conduct the research in the study area was obtained from the Kinondoni Municipal authorities, The Municipal Medical Officer, Divisions, Executive wards and streets officials respectively. Also permission was sought from the MCH facilities.

3.12.1. Informed consent.

Each study participant was informed on the study aims and procedures. Consent was obtained from each participant to protect human rights and to assure confidentiality. PMTCT clients who were not willing to participate were assured to continue with their routine services at the facilities as planned.

3.13. Limitations of the study.

1. Information bias that the study may not have gathered enough information like any other cross-section studies; also the sample selected may not be representative.
2. The study area was conveniently chosen and hence results can not be generalized to other districts.
3. Most of Dar es Salaam residents work in places far from their homes; therefore it was not possible to interview some of eligible individuals in the households. Because data collection was done during working hours.
4. Some PMTCT clients not abiding to the recommended feeding practices may not say the truth and decide to please the interviewer by mentioning the response which was supposed to be done. To reduce this problem, the interviewer had to explain to the client on the importance of the study.

3.14. Definition of terms.

AIDS- related stigma.	Is the process of devaluation of people who are living or associated with HI/AIDS.
Attitude.	Is a general and enduring positive or negative views, feeling or emotion an individual has towards a fact, state, or an issue. In this study it is defined as enduring positive or negative feelings an individual has about PMTCT and its specific recommended instructions practiced by HIV infected women.
Knowledge.	Familiarity, awareness or understanding gained through experience or study. Can also be defined as the state or fact of knowing,
Perception	Ability to notice and keep natural understanding about something or an issue.
Wet nursing	Giving a child to breast feed from another woman who is not his/her biological mother.

CHAPTER FOUR.

4.0. RESULTS.

4.1.Demographic and Socio-economic Characteristics

A total of 377 household members and 82 exit PMTCT clients were interviewed in the community and the MCH clinics respectively in the last week of June and the first two weeks of July, 2007.Among households members interviewed, 114 (30.2%) were males and 263 (69.8%) were females. Since only women attended PMTCT, all PMTCT clients, 82(100%), were females.

Table 1 shows the socio-economic-demographic characteristics of the two samples interviewed. The Table indicates that, among household respondents, 259 (68.7%) had formal education up to primary school level, 68 (18.0%) had secondary school education, and 6 (1.6%) and 2 (0.5%) had post secondary education and university level respectively. And thirty nine (10.3%) of the household respondents had no any formal schooling.

The ages of eighty two (82) PMTCT clients interviewed ranged between 17 and 39 years with a mean and median age of 29.8 and 30 years respectively. Majority (76.8%) had primary education, 11% had secondary education and 4.9% had post secondary education. About 7.3% of the clients had no formal education.

Business was the main income generating activity for about 31% of the interviewed household respondents. About (15%) engaged in apprenticeship and 4.2% employed in public or private sectors. Majority (49.9%) were unemployed. They included house wives and students. For PMTCT clients, about 27% were engaged in business, (22%) apprenticeship and (17%) were employed in formal sector. However most of the PMTCT respondents 34% were unemployed.

Table 3: Socio-demographic economic characteristics of respondents in the community and PMTCT clients.

Household members			PMTCT clients		
	n	%		n	%
Age groups in years			Age groups in years		
18-19	29	8.0	≤ 24	11	13.4
20-29	178	48.9	25-29	26	31.7
30-39	86	23.6	30-34	27	32.9
40-49	44	12.1	35-39	18	22.0
50 +	27	7.4			
Total	264*	100		82	100
Gender					
Male	114	30.2		-	0
Female	263	69.8		82	100
Total	377	100		82	100
Marital Status					
Single	149	39.6		22	26.8
Married/Cohabited	217	57.7		48	58.5
Widowed	3	0.8		5	6.1
Divorced	7	1.9		7	8.5
Total	376**	100		82	100
Level of education					
No formal education	39	10.3		6	7.3
Primary	259	79.3		63	76.8
Secondary	68	18.0		9	11.0
Post secondary(not university)	6	1.6		4	4.9
University	2	0.5		-	-
Others	3	0.8		-	-
Total	377	100		82	100
Occupation					
Employed	16	4.2		14	17.1
Self employed	57	15.1		18	22.0
Business	116	30.8		22	26.8
Unemployed	188	49.9		28	34.1
Total	377	100		82	100
Religion					
Catholic	71	18.8		23	28
SDA	5	1.3		1	1.2
Other Christian	39	10.3		15	15
Muslim	260	69.0		43	43
Others	2	0.5		-	-
Total	377	100		82	100

* 13 household respondents did not disclose their ages.
** Information on marital status for 1 household respondent was not disclosed.

4.2. PMTCT general knowledge levels among household respondents.

According to the criteria used in this study in measuring PMTCT knowledge levels among community members, 57.6% had a low level of PMTCT knowledge while 42.4% had a moderate knowledge level. According to this criterion none had a high level of PMTCT knowledge.

Table 2 shows the level of household respondents' knowledge of PMTCT by their ages. The Table shows that none of the age groups had more than fifty percent (50%) of its members with moderate PMTCT knowledge. The age group that indicated a relatively higher knowledge (moderate) was the 20-29 years one. However, there was no statistical significant difference among all age groups (p=0.295).

Table 4: Household Members' Knowledge on PMTCT by age.

	Knowledge level on PMTCT		
Age group in years	Low	Moderate	Total
≤ 19	21 (72.4%)	8 (27.6%)	29 (8.0%)
20-29	93 (52.2)	85 (47.8)	178 (48.9%)
30-39	52 (60.5)	34 (39.5)	86 (23.6%)
40-49	24 (54.5)	20 (45.5)	44 (12.1%)
50 +	15 (55.6)	12 (44.4)	27 (7.4%)
Total	205 (56.3)	159 (43.7%)	364 (100%)*

Chi square = 4.92;P value = 0.295
*13 Household respondents did not disclose their age.

Household respondents' knowledge on PMTCT was also related to respondents' gender, and respondents' level of education. It was found that majority of the females (58.2%) had low level knowledge on PMTCT compared to males (56.1%). (p=0.713). Regarding respondents education level, knowledge on PMTCT was not statistically different amongst different education level groups. About 56%, 59%, and 53% of those who had no formal education, primary education and those with secondary education and above had low knowledge about the PMTCT program respectively. (p=0.625)

4.3. Household respondents' awareness on Transmission of HIV from mothers to children

About 90% of household respondents reported that HIV virus can be transmitted from the mother to her child. Respondents were further asked when HIV virus can be transmitted from a mother to her child. 57.2% of the respondents said it can occur during delivery; about 47% reported that transmission can occur during breast feeding. Others 24% and 2.8% said that it is possible for transmission to occur during pregnancy and during labour, respectively.

The knowledge on transmission of HIV virus from mother to children was further related to household respondents' gender and level of education. Awareness that transmission can occur during pregnancy was higher among female (75.9%), while about 24.1% males reported the possibility of transmission during pregnancy. However, the difference was not statistically significant. (p=0.06) There was a statistically

significant difference between females 62.7% and males 37.3% who reported that transmission can occur during breast feeding. (p=0.03)

Regarding respondents level of education and awareness on timing of transmission, 73.5% of respondents who had primary education reported that transmission of HIV could occur during pregnancy. While the other 15.7% of respondents with no formal education, 9.6% with secondary education and 1.2% of those with more than secondary education reported transmission can occur during pregnancy. (P=0.03) Furthermore, among 48% respondents who reported that transmission could occur during breast feeding, majority (60%) were those with primary education, 24.1% had secondary education and 10.8% had no formal education.(P= 0.01)

4.4. Awareness on PMTCT and PMTCT program among household respondents.

Household respondents were also asked on any possibility of a woman who is HIV infected to have a child who is not infected. A total of 283(75.3%) respondents reported that it is possible for a woman who is HIV infected to have a child who is not infected. Out of those, 72.1% said that there are some ways which can reduce chances of transmission of HIV virus from mothers to their children. Furthermore 69.2% of the respondents reported to be aware of the existence of the PMTCT program in the country. Among these, 72% reported to get the information about PMTCT program from the

media, 67% from health facilities, and 27% got information from either relatives, meetings/ forums or places of worship (churches or mosque).

Table 3: Indicates respondents' responses on strategies to reduce MTCT of HIV virus. About 52% respondents reported that avoiding breast feeding since child's birth and delivering at health facilities under professional guidance may help to reduce MTCT of HIV. While, 32% of the respondents mentioned use of ARVs, about 13% and 0.7% reported early cessation of breast feeding at three or four months and exclusive breast feeding during the first six months of life, respectively.

Table 3: Proportion of household respondents' knowledge's on PMTCT strategies.

Statements on PMTCT recommendation	Respondents agreed n (%)
Use of ARTs.	87(32)
Avoiding breast feeding since child's birth.	139(51.9)
Exclusive breast feeding during the first six months	2(0.7)
Early cessation of breast feeding at 3 or 4 months.	34(12.7)
Delivering at health facilities under professional supervision.	138(51.5)

4.5. Attitudes of household members towards PMTCT clients practices at home.

Household respondents were asked to report on their attitude towards different practices and instructions emphasized in the PMTCT program to be practiced by the clients at

home. Table 4 indicates that among the five PMTCT instructions only one "living with and supporting HIV infected mothers at home" was supported by most of the respondents (more than 90%). Table 4 also indicates that about 61% of the respondents disagreed with the instruction that "HIV positive women should not breastfeed their children at all". Of whom 55% and 54% disagreed with the instructions that HIV positive women should practice wet nursing and exclusive breast feeding for the first six months respectively. Furthermore, the Table shows that about 58% of the household respondents did not support the use of ARVs by HIV positive lactating mothers.

Table 4: Attitudes of household members towards different recommendations of PMTCT, practiced at home.

Option	Strong agrees,	Agree,	Indifferent,	Disagree,	Strong disagree
	n (%)	n (%)	n (%)	n (%)	n (%)
Not breast feed since birth.	103 (27.5)	30 (8.0)	14 (3.7)	141(37.6)	87(23.2)
Wet nursing.	97 (25.9)	60 (16.0)	13 (3.5)	119 (31.7)	86(22.9)
Exclusive breast feeding for 6 moths.	62(16.5)	72(19.2)	40(10.7)	121(32.3)	80 (21.3)
Use of ARV by lactating mothers.	49(13.1)	43(11.5)	64(17.1)	125(33.3)	94(25.1)
Living with and supporting HIV infected mothers at home.	190(50.7)	163(43.5)	3(0.8)	13(3.5)	6(1.6)

Table 5 shows household respondents attitudes towards different recommended PMTCT instructions by respondents' gender. The table indicates that most of both males (51.7%)

and (64.7%) females expressed negative attitudes towards the PMTCT instruction of mothers not to breast feed their babies since birth, the difference was statistically significant (p=0.008). Regarding wet Nursing, the Table indicates that most males (61.4%) agreed that HIV infected women should practice wet nursing, while majority of the females (62.8%) were not in favors of wet Nursing (p<0.0001). Also there was a significant difference between female 57.1% and males 46% who did not support exclusive breast feeding during the first six months of the child's life. (p< 0.0001) Furthermore, Table 5 indicates that both male (60.2%) and female (54.4%) did not support the use of ARVs' by lactating mothers for PMTCT. (p=0.666) Regarding household respondents attitude towards living with and supporting HIV infected women in their homes. The Table indicates that males 92.1% and 95.0% females highly supported the idea of living together and supporting HIV positive mothers at home. However the difference between males and female who supported the idea was not statistically significant. (p= 0.518)

Table 5: Attitudes of household respondents on PMTCT recommended options by respondents' gender

PMTCT recommended option	Respondents gender		
	Male n(%)	Female n(%)	Total n(%)
Not breast feeding the child since birth.*			
Agreed with.	49(43.0)	84(32.2)	133(35.5)
Disagreed with	59(51.7)	196(64.7)	228(60.7)
Uncertain	6(5.3)	8(3.1)	14(3.7)
Wet nursing of a child instead of breast feeding from own mother.**			
Agreed with.	70(61.4)	87(37.6)	157(41.9)
Disagreed with.	41(36.1)	164(62.8)	205(54.6)
Uncertain	3(2.6)	10(3.8)	13(3.5)
Exclusive breast feeding of a child during the first six months of life.***			
Agreed with.	38(33.3)	96(36.8)	134(35.7)
Disagreed with.	52(45.6)	149(57.1)	201(53.6)
Uncertain	24(21.1)	16(6.1)	40(10.7)
Use of ARTs by a lactating HIV positive mother****			
Agreed with	29(25.5)	63(54.4)	92(27.2)
Disagreed with.	66(54.4)	154(60.2)	219(58.4)
Uncertain	23(20.2)	41(15.7)	64(17.1)
Living with and supporting HIV infected women in homes/families*****			
Agreed with.	105(92.1)	248(95.0)	353(94.2)
Disagreed with.	8(7.1)	11(4.2)	19(5.1)
Uncertain	1(0.9)	2(0.8)	3(0.8)

KEY:
Chi square tests.
* p- value =0.008
** p-value <0.0001
*** P-value = 0.0001
**** P value = 0.666
***** p-value =0.518

Household respondents' attitudes towards PMTCT instructions were also related to respondents' marital status and level of education. The respondents' who were married (62.8%) had a negative attitude (disagreed) that HIV infected mothers should not breast feed their babies since birth. Also about 57.8% of the single respondents (including widowed and divorced) disagreed with the advice that HIV positive women should not breast feed their babies since birth. However, the difference was not statistically significant (p=0.708). Regarding wet nursing and respondent's marital status, more than 50% respondents in both groups single (52.8%) and married (55.9%) did not support wet nursing. (p=0.459)

Respondent's attitude towards exclusive breast feeding of babies born to HIV infected mothers for the first six months of life and respondents' marital status were also explored. Whereby a higher proportion of married respondents (58.6%) expressed negative attitude towards exclusive breast feeding during first six moths of life while about 47% of single respondents also did not support the idea (=0.140). Concerning respondents attitudes towards use of ARVs by lactating mothers and the respondent's level of education it was revealed that, about 72%, 55.6% and 59.5% individuals in all three groups; those with no formal education, primary education and those with secondary education did not support use of ARVs by lactating mothers. (p=0.088)

4.6. Perception of household individuals towards different PMTCT clients practices in homes.

Table 6 shows the household respondents' perception towards a HIV infected woman who is not breast feeding her child at all since birth. The indicates that, most of both males (71.7%) and females (62.9%) supported that a HIV infected woman who is not breast feeding her child is doing a good thing to protect her child against HIV infection. (p=0.007)

Table 6: Household respondents' perception towards an HIV infected woman not breast feeding her child since birth by respondents' gender.

Respondents' opinion	Male	Female	Total
	n (%)	n (%)	n (%)
It is acceptable and good for protecting the child.	81(71.7)	163(63.1)	244(65.7)
It is not good, will compromise the child's heath	22(19.5)	56(21.7)	78(21.0)
It is good only if the baby will be given replacement food.	3(2.7)	22(8.5)	25(6.7)
Don't know.	7(6.2)	17(6.6)	24(6.5)

Chi square=16.7;Degree of freedom=3;P value=0.007
*Missing response from 6 respondents

Table 7 indicates that, about 43% respondents had a perception that, "a lactating woman who uses ARVs is doing a good and acceptable thing for protecting her child". About 47% of them were males and 41% were female. About 50% of the respondents were against this practice. Whereby 30% of them said "she is doing a very bad thing which

may affect the child's health". Other (19.8%) expressed that "She is doing an unacceptable thing which is not going to help in protecting the child". About 6.5% of the household respondents were of the idea that, "a woman who uses medication while breast feeding does not know about prevention of mother to child transmission of HIV". The differences in perception between males and female regarding use of ARVs by lactating HIV positive woman were statistically significant. (p= 0.0068)

Table 7: Household members perception towards a lactating woman who uses ARVs, by respondents gender

Opinion statement	Male	Female	Total
	n (%)	n (%)	n (%)
She is doing a good thing to protect her child against HIV infection	53 (46.9)	106 (41.4)	159(43.0)
It is not acceptable and will not help to protect the child.	11 (9.7)	62(24.2)	73(19.8)
She is doing a very bad thing which may affect the child's health.	43 (38.1)	70 (27.3)	113(30.6)
She doesn't know about mother to child HIV prevention.	6 (5.3)	18(7.0)	24(6.5)
Total	113(30.4)	256(69.6)	369(100)*

Chi square= 12.16; Degree of freedom= 3; P value=0.0068
* There were 5 missing responses. 3 don't know responses not included.

Regarding household respondents perception on women who are practicing exclusive breast feeding during the first six months of the Childs' life, it was found that, about 10% household respondents had perception that a woman practicing exclusive breast

feeding for six months is doing a good and acceptable thing for protecting her child against HIV infection. About 66% males and 51% female perceived a woman practicing exclusive breast feeding as, "a bad person who is doing an unacceptable thing which may compromise the health of her child". Furthermore, 8% males and 20.2% female reported that, "that woman is a very bad person like a killer who does not know how to take care of her child". Also, some (5.3%) males and 13.6% female expressed that, "that woman is not able to afford food for her child due to financial constraints". The difference between males and female perception on exclusive breast feeding for six months was also statistically significant.(p=0.00023)

Table 8: Perception of individuals towards a woman practicing exclusive breast feeding for first six months, by respondents' gender

Opinion statements	Male	Female	Total
She is doing a good and acceptable thing to protect her child against HIV.	18(15.9)	19(7.4)	37(10.0)
She is a bad person, this is not acceptable because it compromises the child's health	74(65.5)	131(50.8)	205(55.5)
Is a very bad person, she doesn't know how to take care of the baby she is like a killer.	9(8.0)	52(20.2)	61(16.4)
She has financial Problems, she can't afford the child's food.	6(5.3)	35(13.60	14(11.1)
I don't know.	6(5.3)	21(8.1)	27(7.3)

Chi square= 21.67; Degree of freedom= 4; P value= 0.00023.
*Missing responses from 6 respondents.

4.7. PMTCT client breast feeding and child feeding options advised in PMTCT guideline.

PMTCT clients were asked to respond on type of child feeding they have opted as well as the reasons for respective feeding option. The distribution of the feeding options and their respective reasons are summarized as follows.

Regarding feeding options, majority (41%) of PMTCT clients were practicing exclusive breast feeding, 14% of the clients were practicing replacement feeding only. The other 30.1% were practicing mixed feeding, 3.8% used breast milk and supplementary foods and 26.9% replacement and supplementary foods. About 14% of PMTCT clients were feeding their children with other foods only. 4 PMTCT clients did not disclose the feeding options.

On responding to reasons for the choice of feeding options, majority (70.6%) of the PMTCT clients were following advice given at MCH clinic for PMTCT of HIV to their children. Of these, 31 (45.6%) were those who were exclusively breast feeding. The other 11 (16.2%) , 8 (11.7%), and 6 (8.8%) were those opting replacement feeding, other foods only, and replacement feeding plus supplementary foods respectively. Other PMTCT clients 23.5% gave the reason that, breast or alternative milk alone is not sufficient for their children, and 4.5% of the clients including (3%) who were using replacement feeding and supplementary foods and (1.5%) those feeding their children with other foods only, said that they can not afford buying alternative milk due to

financial constrains. 10 PMTCT clients did not give reasons for choice of feeding option.

Table 9 shows the PMTCT clients reported preferable environment while feeding their children in their homes. The Table indicates that 90% of clients who practice exclusive breast feeding could do it in presence of other people, 40% of clients practicing replacement feeding only also could feed their children in presence of other people and about 47% of clients giving supplementary foods and (50%) who use other foods, could feed their children in presence of other members. About 10%, 16% and 60% of the clients who practiced exclusive breast feeding, supplementary foods with breast or alternative milk, and those feeding replacement food alone, respectively prefer to be themselves while feeding their children. Furthermore, 30% of clients using other foods only preferred being alone while feeding the children.

Table 9: Description of child feeding option and the preference of home environment for the PMTCT clients.

	Preferable home environment			
Feeding option	With others,	Alone,	any place	Total
Exclusive breast feeding	27(90%)	3(10%)	0 (0%)	30(43.5)
Replacement feeding	4 (40%)	6(60%)	0 (0%)	10(14.5)
Breast feeding or replacement feeding and supplementary foods	9 (47%)	3(15.8%)	7(36.8%)	19(27.5)
Other foods only.	5(50%)	3(30%)	2(20.0%)	10 (14.5)
Total	45(62.2%)	15(21.7%)	9(13%)	69*

* There was missing information from 2 clients practicing exclusive breast feeding, 1 Practicing replacement feeding, 5 practicing supplementary feeding and 1 client using other foods.

PMTCT clients who reported preferring to be alone (hiding) while feeding their children were further asked on the reasons for preferring confidentiality. The respondents' reasons for preferring confidentiality for the specific feeding options were summarized as follows.

All (100%) clients feeding the child with supplementary foods,75% of clients using other foods without milk and about (67%) of clients who use replacement feeding,

reported that, "they hide so as to avoid to be asked why they are not breast feeding". And that, they do not want to be suspected as being infected with HIV because in the community it is believed that a woman who does not breast feed her baby may be HIV infected". Furthermore, all (100%) who were opting exclusive breast feeding and 33% of clients opting replacement feeding gave the reason that it is not allowed in their culture new born babies to be taken outside before age of 3 months.

4.8. Assessment of PMTCT clients' medication adherence in their homes.

PMTCT clients were asked about the use of medication at home. About (54%) of the clients were using ARVs, 8 clients (9.8%) used other medications like vitamins. The other 29 (35%) clients were not using any medication.

PMTCT clients who use ARVs were asked of problems they encountered, if any, because of their use of medication in their homes. Table 11 indicates that about 51% clients reported to be facing some problems: about 20% of clients were bothered by many questions asked by people, and the other (18%) were facing resistance from family members who claimed that medications are harmful to children if taken by a lactating mother. Furthermore, about 13% clients said people were avoiding and discriminating them.

Table10: Proportion PMTCT clients responding on problems they face on use of ARVs at home.

Problems	Frequency	%
People asking many questions why I use drugs	9	20.0
Facing resistance that drugs may harm the child.	8	17.8
They are avoiding me because they suspect I have HIV.	6	13.3
No any challenge	22	48.9
Total	45	100

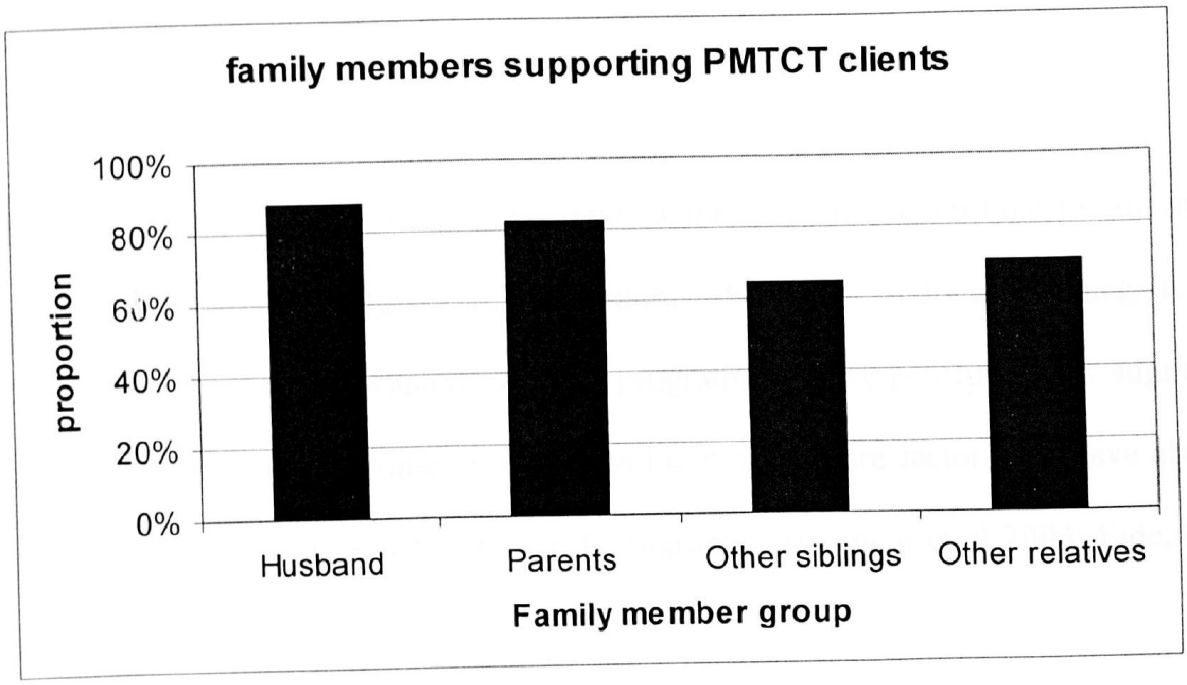
PMTCT clients using ARVs who reported encountering some problems at home were further asked on ways which they use in overcoming the problems. Majority (78%) of PMTCT clients said they usually try to avoid being seen while taking medications, the other 17% said they are trying to eat well in order to appear healthy and attractive so that people could not perceive them as sick or HIV infected. However, about 4.3% said they prefer to stay alone in the homes in absence of other relatives.

4.9. PMTCT clients' assessment on other family members' actions and perception on their practices in homes.

PMTCT clients' HIV sero-status disclosure to their spouses or other family or household members was established from respondents. 78% of interviewed clients had disclosed their sero-status either to their spouses or other relatives. Furthermore, the clients were asked to respond if they have been getting support from family or household members including husband, parents, their children and other relatives. Similarly all interviewed PMTCT clients were asked about their views on how other family and household members regard their practices as PMTCT clients on implementing PMTCT in their homes.

Figure 1: Shows proportion of PMTCT clients who reported being given support by other family or household members, the figure shows that higher proportion (88%) of clients received support from their husbands followed by 82% of clients who reported to get support from their parents. While about 64% and 70% of PMTCT clients received support from their children and other relatives respectively.

Figure 1: PMTCT clients' description of the support from household and family members.



Respondents who reported being supported by family members were 67 (82%).

The PMTCT clients were asked to respond on what they thought their family members and other relatives perceived what they as clients of PMTCT are doing to abide by the program instructions. Majority (71%) of the clients said that family/household members understand their practices and they help them. Furthermore, about 47% of the clients reported that family/household members do not understand them and that they are one of the reasons for failing to abide to PMTCT recommended instructions. Only 6% of the respondents said household members do not have any effect to them.[1]

[1]Clients mentioned more than one response

CHAPTER FIVE.

5.0. DISCUSSION.

This study has enabled exploration of different factors that may contribute to current performance of PMTCT program in Kinondoni Municipal. Individuals' negative attitudes towards practices recommended in the program, negative perception and stigma attached to the practices and women involved in the program, are factors that have also been found in other studies to affect PMTCT programme.(Ekanem et al 2004; Eide, et al, 2006; Becquet, et al, 2005)

5.1. Knowledge of MTCT and PMTCT of HIV.

This study found relatively low knowledge levels among community members. On the PMTCT programme, however, knowledge levels between male and female were not significantly different, but most of respondents were found to be aware of the possibility of children to acquire HIV infection from their mothers and aware of existing program for PMTCT. These findings may be explained either by the fact that PMTCT is still a new program in the country hence many people in the communities are still not reached with information regarding the program. (NACP 2004) Also, the study did not sample households which were involved directly in the programme, this may have contributed to the knowledge results because people in the community do not have a constant and reliable source of information on issues regarding PMTCT. It is likely that PMTCT clients who are being taught and counseled on PMTCT do not communicate well the information to most of their relatives or even their spouses. This is likely because, only a

small proportion of people (12.4%) reported to get the information from relatives while majority about 72% got from the media and 67% from health facilities.

Knowledge on some specific aspects of MTCT of HIV and PMTCT was minimal. Only 57% respondents were aware of transmission during delivery and most of them were females. Also, about 47% of the community household respondents knew about the possibility of transmission during breast feeding and majority were females. However, these findings are similar with findings from TACAIDS (2005) where it was found that majority of females and 63% males knew of possibility of transmission to occur during delivery. Also findings from the study conducted in Temeke Municipality. (Kominami et al 2007) which found that most females knew that transmission may occur during delivery and most during breast feeding. Generally, findings from these three studies reflects that most of the females knew about the possibility of HIV transmission from mothers to children through delivery than through other means like breast feeding and during pregnancy.

Furthermore, females are the ones who are more aware of different specific aspects of PMTCT than males, Women are likely to be more exposed to information on MTCT and PMTCT of HIV because they are the ones attending MCH clinics. Also, the setting how PMTCT program is currently being conducted in the country puts more emphasis on services to its clients during antenatal period than postnatal. (NACP, 2004) What was observed during the study was that prompt PMTCT services were given to women

during antenatal period where women were given information on protection of infection to their children before and after delivery. Also recommendations and canceling on safe infant feeding is given in antenatal period. Furthermore, women are given short courses of ARVs during labour and delivery with exception of those who are being referred for long term ARVs. Once a woman has safely delivered and completed her short course of ART and discharged, there has been inadequate follow up to ensure updating of information relevant to the women for PMTCT after delivery and during the whole period of child caring.(NACP, 2006) This poor postnatal PMTCT follow-up may be contributing to misconception and belief that there are no more chances of a child to be infected after delivery through breast feeding.

Awareness of ARVs for PMTCT among the household respondents from community was also poor. Only 32% household members knew that ARVs can lower chances of HIV infection from mothers to children when used by the mothers. This proportion has been higher comparing to what was found in the community study TACAIDS (2005). The findings also reflect that awareness on HIV and HIV/AIDS prevention through use of ARVs among people in the community is gradually increasing. Low awareness of use of ARVs for PMTCT among the study respondents may be explained by low awareness of the community about the program which is still new to most of people in the communities.

Findings from this study also show that, none of the socio demographic characteristics has an influence on general knowledge on PMTCT. However, knowledge on some aspects of transmission from mother to child including time of transmission of virus from mother to a child was found to be varying with respondents' gender and level of education. This could be due to differences in exposure to information on PMTCT between males and females in the community.

5.2. Attitudes and perception of people in the community on specific practices done by women who are PMTCT clients.

Exploration of individuals' attitudes on specific aspects regarding PMTCT found that the practices which concern safe infant feeding and breast feeding for HIV infected mothers and use of ARVs by HIV infected mothers were not supported by most of the respondents from community.

Only 59% respondents supported the idea of a mother who is HIV infected not to breast feed her child at all. However most of the females disagreed with this idea. This may be due to low awareness among respondents on the possibility of HIV transmission through breast feeding and the perception of people in the community that a woman not breast feeding her child is not a good mother. Also, that woman not breastfeeding is denying the rights of the children which will affect the children's health. Furthermore, stigma attached to women who are not breastfeeding and employ alternative feeding

predisposes them to discrimination and isolation from other members in their families. As a result, most women would prefer breast feeding their children. Similar findings were obtained from the studies by (Eide, et al, 2006; Becquet, et al, 2005; Roqers, et al, 2006)

The idea of exclusive breastfeeding the children born by HIV infected mothers was also not supported by more than half of the respondents. Furthermore, about 70% of the respondents from household survey perceived a woman who does not introduce other foods to her child early, as a bad mother who does not like her baby, she is compromising the child's health. Others went further to say this woman is like a killer. Therefore, these perceptions which discourage the idea of exclusive breastfeeding for six months may explain the low acceptance of this recommendation. These findings are similar to other previous studies results. (Doherty et al 2006; Roqers et al 2006). Furthermore, inadequate knowledge on the importance of exclusive breastfeeding and relationship between breastfeeding and HIV transmission from mothers to their children among the studied sample may also be explaining the low acceptance of this idea of exclusive breast feeding for first six months of life.

Another feeding alternative involving giving a child born by HIV infected mothers to breast feed from another woman who is a close relative instead of her mother was also not supported by more than a half of the household respondents. This may be attributed to the lack of evidence and trust among women in the community that the other person

who has to breastfeed the child is not having HIV infection as well. Also, this practice was commonly used in the past for babies whose mothers died early after giving birth hence many people might find it difficult to have their babies fed by another person while the biological mother is alive. Most people currently may not know if there is a possibility of a person to start breastfeeding a child while she hasn't given birth to a child recently. Therefore, in order for the program of PMTCT to succeed in addressing issues of infant feeding it is necessary to have strategies for spreading information on importance and practicability of the recommended feeding options. Furthermore, wet nursing is not among the options taught to antenatal PMTCT clients as compared to exclusive breastfeeding and not breastfeeding at all and use of replacement feeding instead.

Only a few (24%) of household respondents supported the use of ARVs by HIV infected women who are lactating. Nevertheless, respondents gave the views that use of ARVs by a woman who is HIV infected may be acceptable if it can help to prevent transmission of the virus to her child. However, the importance of ARVs use for PMTCT is not well understood by people. Perception towards PMTCT clients who are using medication regularly was mostly negative. People were able to report that it is not possible for drugs taken by a mother to protect her child especially after birth during breastfeeding. Low understanding among the study group on the relationship between breastfeeding and HIV infection to children could also be an explanation to such findings. This study also found that, people had a wrong perception that if drugs are taken by a lactating mother

there is a possibility of causing harmful effects to her child and not benefiting the child. Furthermore, males ware found to be more negative on the idea of using ARVs by lactating women. This could be explained by inadequate information among males concerning MTCT of HIV and the use of ARVs which depends mostly on mass media contrary to women who may receive information from MCH clinics as well as from fellow women and other sources like media.

The importance of family support to women who are PMTCT clients was well supported by most of respondents in this study. More than 94% of the household respondents agreed with the idea of living with and supporting HIV infected women in abiding by PMTCT recommended child feeding practices at home. These findings indicate that people in the studied communities were not well informed on PMTCT objectives and practices, and hence they could not correlate the PMTCT recommended practices by HIV positive women and PMTCT. This point to the importance of giving proper information to communities in order to improve their understanding on the importance of PMTCT recommended practices. Also, stigma, discrimination and isolation of HIV infected women as a result of observing some of their actions like not breastfeeding or use of medication may be reduced substantially.

5.3. PMTCT clients breast feeding and infant feeding patterns and medication adherence in their homes.

This study also involved some PMTCT clients who were attending postnatal MCH clinics. Identification of infant feeding options and patterns of feeding was done. Also medication use and adherence by the clients was identified as well as PMTCT clients' assessment of other family and house hold member's attitudes and actions towards them.

This study found that, majority (41%) of the clients who participated in the study were practicing exclusive breastfeeding. About 97% of clients practicing exclusive breast feeding and 100% of clients practicing replacement feeding were following information and counseling that was provided for PMTCT at the MCH clinics. Only 4% of the respondents were practicing mixed feeding (breast feeding and other foods). These results may be attributed to the reason that majority of the interviewed clients had their children aged below six months hence not yet introduced to other supplementary foods.

Furthermore, financial constraints and the perception that milk was not sufficient for the healthy growth of infants were the reasons given by clients who were feeding their children with supplementary food in addition to breast feeding or replacement feeding. This may be probably due to lack or poor support given to PMTCT clients by other family or household members. Also cultural and traditional infant feeding experiences of early introduction of other foods to infants may contribute to findings. Furthermore

wrong perception of the community to the practice of exclusive breast feeding for six months could also contribute to the practice of mixed feeding. These findings are similar to that from previous studies in Zambia and Kenya where by a practice of mixed feeding of infants before six months was common. (Dadian, et al, 2003) Also a study in South Africa. (Doherty, et al, 2006)

Stigma and discrimination of HIV infected mothers participating in PMTCT program was also reported and implied in the findings of this study. Where by about 22% clients reported to prefer hiding and being alone while feeding their children in their homes. Most (60%) of the clients who preferred hiding were those practicing replacement feeding. Moreover, reasons given by clients were mostly pointing to suspicion and stigma to mothers who are practicing PMTCT recommended feeding options. Other reasons based on cultural beliefs on infant care within communities. Similar findings were obtained by studies in different Sub Saharan countries studies (Varga, et al, 2004) and the studies by Eide, et al, (2006) and Bequet ,et al,(2005).

More than half of PMTCT clients who reported using ARVs gave a number of problems which they always encounter in the course of abiding to the treatment. The problems ranged from HIV stigma and discrimination to HIV infected women, and pressure due to misconception that use of medication by mothers is harmful to children. None of the clients reported to discontinue ART use or missing some of the doses because of the resistance from people in the surrounding environment. However, clients reported some

of ways which they usually use to overcome the problems and ensure compliance and adherence to treatment. Majority reported hiding and avoiding to be seen while taking medication. Others reported to be eating well and appear healthy and attractive to avoid being suspected and discriminated by people because they are having HIV infection. These findings do imply that PMTCT clients understood the importance of ARVs use contrary to other people in the communities (Dadian, et al, 2003). Hence, the importance of rising people awareness on PMTCT and its objectives beyond health facilities has to be emphasized

The assessment of PMTCT clients' perception on the attitudes and actions of family members towards them shows that, majority (71%) of the clients were satisfied with the support from some of household/family members. About 47% of the clients were not satisfied with actions from other family/household members and that they are a reason for their failure to abide to the instructions for PMTCT. These findings are similar with the study conducted in Botswana which found that poor performance of PMTCT could be due to weaknesses from individuals in families and communities where the clients live (Kebaabetswe, et al, 2007).

The finding that most clients were having support from their husbands or spouses and from their parents may be reflecting that male partner support for PMTCT has increased probably due to increase rate of sero-status disclosure which in this study was found to be 78%. Sero-status disclosure was found to be one of the determinants for successful

implementation of the programs like PMTCT (Madley, et al, 2004; Bujanirwe, et al. 2005).

CHAPTER SIX.

6.0. CONCLUSION AND RECCOMMENDATIONS.

6.1.Conclusion

From the study it can be concluded that general knowledge on MTCT and PMTCT among the household respondents in Kinondoni Municupal was low. Less than half of the household respondents had a moderate knowledge of PMTCT.

- Awareness on use of ARTs for PMTCT is very low among the household respondents in Kinondoni Municipal.

- Age, sex, level of education, occupation, marital status and religion of household respondents do not have a statistical significant influence on general knowledge on PMTCT.

- Sex of household respondents was found to have statistical significant influence on attitudes and perception of household respondents on PMTCT.

- Household respondents have negative attitudes towards specific aspects recommended to PMTCT clients which are preformed by women in their homes. These include exclusive breastfeeding of infants during first six months of life, avoiding breast feeding since birth and the use of replacement feeding. Also practicing wet nursing, as well as use of ARVs by HIV infected lactating women.

- Low knowledge on PMTCT among household respondents, negative attitudes and wrong perceptions of household respondents regarding PMTCT recommended practices by HIV infected women in their homes contributes to poor support given to HIV infected women to abide to the specific recommended options and instructions. These are the main household related factors that affect implementation of PMTCT programme in Kinondoni Municipal.

- Stigma to HIV infected women is existing in families and it has an effect in implementation of the program objectives.

- Most of PMTCT clients opted for exclusive breastfeeding of their infants than other feeding options recommended for PMTCT.

- Most PMTCT clients were satisfied with support from their spouses, parents, and other relatives. Stigma and discrimination to HIV infected women involved in the PMTCT program are existing in the communities where PMTCT clients live in Kinondoni Municipal.

6.2. Recommendations

Since knowledge on PMTCT in this study was found to be low, and that majority of the respondents reported to get information they had about PMTCT from the health facilities, it is recommended that emphasis should be made by Ministry of Health and Social Well fare to raise people's awareness on PMTCT. This has to be achieved through the use of other communication means beyond health facilities like, mass media, forums and open meetings as well as in schools.

Family members of women participating in PMTCT should be encouraged to accompany the clients to the MCH facilities and seek proper information regarding practices by PMTCT clients in the homes. This is important for them to change their attitudes which are against the practices and hence provide necessary support to PMTCT clients.

PMTCT follow up and services to postnatal women should be emphasized to ensure better implementation of the program objectives. This can be achieved through establishment of special programs and services in the MCH clinics which are specific to postnatal PMTCT clients.

Public campaigns to address stigma and discrimination to HIV infected women should be emphasized. Further studies on the implementation of PMTCT which may involve

specific families living with the PMTCT clients may help to uncover the information which was not captured by this study.

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