ASSESSMENT OF HIV-POSITIVE POSTNATAL CLIENTS' SATISFACTION WITH PREVENTION OF MOTHER-TO-CHILD TRANSMISSION SERVICES AT KENYATTA NATIONAL HOSPITAL, NAIROBI, KENYA

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DECLARATION

This thesis is my original work and has not been presented for a degree in any University or for any other award

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DEDICATION

I dedicate the thesis to my dear wife Njeri, children Peris, Varis, Mary and Aimee for their support, encouragement and perseverance during the study.

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ACRONYMS/ABBREVIATIONS:

AAVP	African AIDS Vaccine Programme
AED	Academy for Educational Development
AFASS	Acceptable, Feasible, Affordable, Sustainable and Safe
AIDS	Acquired Immune Deficiency Syndrome
AIDSCAP	AIDS Control and Prevention Project
ANC	Antenatal Clinic
AR I	Acute Respiratory Infections
ARV	Antiretroviral
ART	Antiretroviral Therapy
AZT/ZDV	Zidovudine (Azidothymiadine)
BCC	Behaviour Change Communication
CAH	Child and Adolescent Health
CDC	Centre for Disease Control and Prevention (USA)
CHG	Commission on HIV andAIDS and Governance
CHGA	Commission on HIV and AIDS and Governance in Africa
CHNRI	Child Health and Nutrition Research Initiative
COHIRED	Council for Health Research and Development.
CS	Caesarean Section

CT	Counselling and Testing
DHMT	District Health Management Team
DAIDS	Division of AIDS
ECA	Economic Commission for Africa
EMTCT	Elimination of Mother-to-Child Transmission
ENHR	Essential National Health Research
EU	European Union
FANTA	Food and Nutrition Technical Assistance
FCH	Family and Community Health
FGD	Focus Group Discussion
FHI	Family Health International
FP	Family Planning
GAP	Global AIDS Programme
GFHR	Global Forum for Health Research
GIS	Geographical Information System
GOK	Government of Kenya
H/E	Health Education

HAART Highly Active Anti-Retroviral Therapy

HCT/HTC/HITCHIV Counselling and Testing

HIV Human Immune Deficiency Virus

HPTN HIV Prevention Trials Network

HPTU HIV Prevention Trials Unit

HRC High Risk Clinic

HTS HIV testing services

HVTN HIV Vaccines Trials Network.

IAVI International AIDS Vaccine Initiative

Ibid In the same Guidelines for PMTCT of HIV and AIDS in Kenya

ICRW International Centre for Research on Women

ICT International Clinical Trial or Information and Communication

IEC Information, Education and Communications.

IGA Income Generating Activities

IMCI Integrated Management of Childhood Illness

IPM International Partnership for Microbicides

IPPF International Planned Parenthood Federation

KAIS	Kenya AIDS Indicator Survey
KNH	Kenyatta National Hospital
Ksh	Kenya shilling
KSPA	Kenya Service Provision Assessment
KU	Kenyatta University
MAP	Monitoring the AIDS Pandemic
MCH	Maternal and Child Health
MDG	Millennium Development Goal
MDR	Multi-Drug Resistant
MOH	Ministry of Health
MRC	Medical Research Council
MSH	Management Sciences for Health
MTCT	Mother-to-child transmission of HIV
MTCT-plus	MTCT programme and treatment for women and their families
MTP	Medium Term Plan
NASCOP	National AIDS and STD/STI Control Programme
NGO	Non Governmental Organization

NIAD	National Institutes for Allergies and Infectious Diseases-
NIH	National Institutes of Health (USA)
NVP	Nevirapine
OAU	Organization of African Unity
OIs	Opportunistic illnesses/infections
PATH	Programme for Applied Technology in Health
PCR	Polymerase chain reaction
PEP	Post Exposure Prophylaxis
PHEHP	Public Health Education and Health Promotion.
PLHIV	People living with HIV
PMTCT	Prevention of mother-to-child transmission of HIV
PNC	Postnatal clinic
PPC	Post pregnancy clinic
PRU	Population Reference Bureau
PSI	Population Services International
R&D	Research and Development
RCH	Reproductive Child Health

RCS	Research Capacity strengthening
RCT	Randomized Control Trial
RHC	Reproductive Health Care
SARA	Support for Analysis and Research in Africa
SPSS	Statistical packages of social sciences
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
SWAA	Society of Women against AIDS.
TB	Tuberculosis
TDR	Special Programme for research and Training in Tropical Diseases
UN	United Nations
UNAIDS	United Nations Programme on AIDS
UNDP	United Nations Development Programme
UNGASS	United Nation General Assembly Special Session on HIV and AIDS
UNICEF	United Nations Children's Fund
UON	University of Nairobi
USAID	United States Agency for International Development

VCT	Voluntary Counselling and Testing
WHO	World Health

ABSTRACT

In the era of HIV and AIDS global pandemic, clients' satisfaction is one of the outcome measures for the free PMTCT services and HIV/AIDS care.Despite increasing availability and accessibility to free PMTCT services in Kenya, there is inadequate information on clients' satisfaction with PMTCT services.This study aimed at establishing the levels of HIV- positive postnatal clients' satisfaction with PMTCT services offered in post pregnancy clinic atKenyatta National Hospital, possible influencing factors and improvement strategies to enhance achievement of desired clients' satisfaction. A descriptive cross sectional study was conducted for HIV-positive postnatal clients. A simple random sampling was used to obtain 139 participants at service exit after consideringformulated eligibility criteria (exclusion and inclusion).Quantitative data was collected by use of in-depth exit interviews and focus group discussions. Data was processed using SPSS software version.22 to test hypothesis and explain relationships.Results were considered significant when p-value was equal or less than 0.05.The results revealed that integrated PMTCT services were offered in every clinic appointment.Results from Chi-square test were further confirmed by use of logistic regression analysis that showed that; waiting time ($p<0.01$), resources and infrastructure ($p<0.01$), clients' level of knowledge of HIV ($p<0.01$), health providers' attitudes ($p<0.01$), provider-client communication ($p<0.01$), psychosocial support and stigma ($p<0.01$) were found to have influenced clients' satisfaction with the PMTCT services.The study findings enabled the rejection of null hypothesis and adoption of alternative hypothesis. Overall, the study results revealed that majority (86/139) of the respondents were satisfied with PMTCT services offered while more than one third of the respondents (53/139) were dissatisfied. Clients' satisfaction was associated with staff understanding of clients' needs, desires, expectations and concerns, quality of services or care received,adequate counseling,strong psychosocial support servicesand quality laboratory services. The clients' dissatisfaction was associated with long waiting time, delayed laboratory investigations, pharmacy being located far from the clinic, high cost incurred when travelling to seek for PMTCT services from their residential zones, inadequate privacy and confidentiality etc.The study yielded a range of new insights on strategies for achieving desired satisfaction with PMTCT services such as reduction of waiting time, performance and quality improvement, improved infrastructure and supply of relevant resources, improved integration and organization of relevant services such as partner involvement, child healthcare, HIV testing services etc. The improvement strategies will enhance efficiency and effectiveness in provision of PMTCT services as indicated in the national guidelines.The study recommends that stakeholders of PMTCT program embrace and implement the proposed improvement strategies, facilitate similar studies in future throughout the country to identify experiences, service quality gaps and model best practices for sharing among stakeholders to strengthen PMTCT program in the country.

CHAPTER ONE: INTRODUCTION

1.1 Background to the study

There was a lot that was known about HIV and AIDS such as mode of transmission, prevention and control measures. In spite of this knowledge, there was still low uptake of services for the prevention of mother to child transmission of HIV and AIDS by known HIV-positive pregnant women and their partners (United Nations Programme on HIV/AIDS, 2012).The risk of an HIV-infected mother passing the virus to her infant during pregnancy, labor and delivery or in the postnatal period is 1 in 3 if nothing was done to reduce this risk (Pathfinder, 2004).Transmission during labor and delivery occurs when the infant sucks, imbibes or aspirates maternal blood or cervical secretions that contain HIV or has mucous membrane exposure. This situation had contributed to high rate of MTCT in developing countries, compared to much lower rates in richer countries and this had illustrated growing inequalities in global health. In wealthy countries the rate of MTCT was less than 2% because of widespread access and uptake of PMTCT services (WHO, CDC, 2004).

The package of PMTCT services included primary prevention of HIV infection in women, prevention of unintended pregnancy among HIV-infected women, interventions to reduce transmission from HIV-infected pregnant and lactating women to their children and care and support of women, children and families infected and affected by HIV/AIDS (The PMTCT-plus).

The goal of Kenya's PMTCT program was in line with the goal set out at the United Nations General Assembly Special Session(UNGASS)on HIV and AIDS in 2001, to reduce the proportion of infants infected with HIV by 20% by the year 2005 and then by a further 50% by 2010. In 2006, worldwide, less than 10% of pregnant women testing

HIV-positive received ARV drugs for PMTCT. Globally, there had been efforts to reduce the risk of mother to child transmission (MTCT) of HIV through provision of organized effective and quality comprehensive MCH services. The latest information showed that only 50% of pregnant globally accessed PMTCT services (UNAIDS AIDS Global report, 2012).PMTCT became an important intervention in the prevention and control of HIV and AIDS in both developed and developing countries, with commitment being made to improve maternal and child health and survival(WHO, 2005).

Various interventions had been put in place to take care of the emerging challenges and constraints to MTCT across the country (MOH/NASCOP, 2009). The PMTCT guidelines were part of the implementation instruments towards universal access to PMTCT services and response to the call to action towards HIV-free and AIDS- free generation. Experts agreed that the “state of the art” in PMTCT was changing rapidly and that recommendations were certainly altered with advances in medical science and as more programme experience is documented and disseminated. The areas of ARV prophylaxis and infant feeding were particularly subject to rapid change (MOH NASCOP, 2009).This ambitious UN goal to reduce the mother-to-child transmission of HIV has not been met in much of Sub- Saharan Africa (UNGASS, 2001).When the UN reviewed its progress in 2010, it was estimated that only 53% pregnant women living with HIV in Sub-Saharan Africa had received antiretroviral drugs to prevent mother-to-child transmission. The barriers to access and use of PMTCT services were policy-related. Some of the emerging challenges of PMTCT program included late booking of antenatal clinic by known HIV-positive pregnant women and their partners, poor male involvement, inadequate supply of essential items, poor community participation, poor child health care and follow-up.

However, the overall coverage of PMTCT programmes and the uptake of services provided through these programmes including HIV testing and counseling and ARV prophylaxis was still very low(UNAIDS AIDS Global report, 2012).Utilization of health care services and consumer satisfaction were considered to be outcomes of access. Furthermore, providing better services attracted more clients and increased the use of health services (Creel, *et al,* 2000:1).Client satisfaction surveys were assessment tools that measured the clients' perception of how well business delivered the key factors and conditions that drove client satisfaction and loyalty. These usually included factors like product quality, service promptness, staff-responsiveness and understanding of the clients' needs concerns and problems. Thus measuring client satisfaction could be useful way of evaluating certain aspects of quality and increases in satisfaction indicated improved quality (William, *et al.* 2001).

1.2 .Statement of the Problem.

Client satisfaction was core to quality of PMTCT services and therefore assessment of clients' satisfaction is an important component in continuous evaluation of PMTCT services delivery in order to achieve desired outcome. However, hardly any information is available on whether HIV-positive postnatal clients were satisfied with PMTCT services. Furthermore; a satisfied client is more likely to develop a deeper and longer lasting relationship with their medical provider, leading to improved compliance, continuity of care and ultimately better health outcomes (Fitzpatrick1991). This study was to provide more information on the clients' view points about PMTCT services received in Kenyatta National Hospital in order to benefit clients, service providers and

stakeholders of PMTCT program. The study is aimed at establishing strategies for performance and quality improvement in PMTCT program.

1.3 Justification or Purpose of the study;

Client satisfaction was core to quality of PMTCT services; even the most technically competent care was meaningless if it did not satisfy the potential clients. Satisfied HIV infected postnatal mothers, their partners and caregivers of HIV exposed infants and young children promptly generated demand for the PMTCT services. In general satisfaction influenced whether a person sought PMTCT services, complied with treatment and maintained a continuing relationship with practitioners (Larsen ,et al, 1976). There was generally a slow uptake of client satisfaction in the developing world, and in particular countries like Kenya where a big imbalance of power between PMTCT providers and potential users of PMTCT services still existed. As a country, Kenya was still grappling with how to improve utilization of health services that could lead to improvement of health status. The low uptake of PMTCT services in developing countries like Kenya could be attributed to poor clients' perception of the quality of PMTCT services, different levels of client's satisfaction and challenges in infrastructure, supply of required resources and processes that adequately support the PMTCT plus programmes. When there was a problem, such as low uptake of PMTCT services appropriate evaluation was carried out in order to improve the process, outputs or outcomes and impact (UNAIDS Global AIDS report, 2012). Understanding, documenting and raising awareness with potential PMTCT users on satisfaction and its dimensions to redress this imbalance was important to bring PMTCT providers accountable to clients. The PMTCT providers and partners wished to assess client satisfaction in order to review

and obtain baseline data for future performance assessments. This survey was done in order to provide answers to the questions related to clients' satisfaction with PMTCT services. It was important to determine and address factors that lead to satisfaction or dissatisfaction so that services could be improved eventually.

1.4. Research Questions

1. To what extent are HIV-positive postnatal clients accessing PMTCT services?

2. To what extent are HIV-positive postnatal clients satisfied with PMTCT services?

3. What are the factors that influenced HIV-positive postnatal clients' satisfaction in PMTCT programmes?

4. What strategies could be employed to achieve desired level of the HIV-positive postnatal clients' satisfaction and increase the uptake or utilization of PMTCT services?

1.5 General objective

To establish the level of HIV-positive postnatal clients' satisfaction with PMTCT services offered in post pregnancy clinic at Kenyatta National Hospital, possible influencing factors and clients' proposed improvement strategies.

1.5 .1 Specific objectives:

a). To identify the socio-demographic characteristics of HIV-positive postnatal mothers and partners attending PMTCT services.

b). To determine the levels of HIV-positive postnatal mothers' satisfaction with PMTCT services.

c).To establish the factors associated with HIV-positive postnatal mothers' satisfaction in use of PMTCT services.

d). To identify the strategies that could be employed to achieve desired level of HIV-positive postnatal mothers ‘satisfaction in PMTCT programme.

1.5.2 Null hypothesis

There is no relationship with clients’ satisfaction level and the PMTCT services offered at Kenyatta National Hospital.

1.6 Significance and Anticipated Output:

Currently only 50% of pregnant women globally access PMTCT services (UNAIDS Global AIDS Report, 2012).Client satisfaction is the extent to which a program fulfilled clients’ treatment expectations. Three dimensions of satisfaction identified by Davis and Hobbs included; access to care, physical environment and care received (Davis and Hobbs, 1989). It is important to address factors leading to dissatisfaction so that services could be improved. The clients’ satisfaction assessment was used as a tool to measure the PMTCT client’s perception of how well the PMTCT program delivered the key factors and conditions that drove client satisfaction and loyalty. The tool also measure clients’ perception of health provider’s performance relative to client’s priorities and priorities for PMTCT services improvement. The study generated information about various dimensions in the delivery of PMTCT services such as client satisfaction with privacy, waiting time and counseling in PMTCT, quality of services, services promptness, average waiting time for MCH integrated services, staff responsiveness and understanding of the PMTCT clients needs, concerns and problems. Similarly, the survey assessed some of the emerging challenges that affect uptake of PMTCT services and service satisfaction as well as recommendations to increase the clients’ confidence, enhance client satisfaction and improve the clients’ uptake of PMTCT services in future.

1.7. Limitations and assumptions:

1.7.1 Limitations

The low turnout of the HIV-positive postnatal clients made the study to take longer time than expected. The researcher encountered difficulties in combining data collection and employment responsibility. The research assistants had difficulty experience in their endeavor to secure private rooms for either exit interviews or focus group discussions. Similarly, research assistants also encountered difficulties in convening members of focus group discussions. A number of the study participants failed to return their questionnaires and this gave the research assistants challenges of recruiting more in order to attain the required sample size.

1.7.2 Delimitation

The research targeted HIV-positive lactating or non-lactating HIV-positive mothers attending post pregnancy clinic at Kenyatta National Hospital. The HIV- negative postnatal clients were not included in the study because they were not able to give a comprehensive assessment report on PMTCT services since they were only done HIV counseling and testing during prenatal period.

1.7.3 Assumptions

One of the very highly rated assumptions was that the targeted HIV-positive postnatal clients would refuse or decline to participate in the study. It was also assumed that recruitment of the study subjects would be faced with many difficulties due to stigma related issues, limited physical space for interviews and meetings, client feeling uncomfortable to participate and large number of partially answered questionnaires. Since post pregnancy clinics were held specifically on Fridays and it was assumed that only few respondents would be enrolled per session. It was an assumption that PMTCT health providers would encourage clients to participate in exit interviews or focus group discussions.

1.8. Conceptual framework.

A conceptual framework for the study of access to medical care provided the conceptual model for testing use of PMTCT services (utilization) and satisfaction with the services. So, the framework was health services utilization model which was used to study the access concept. It had largely been used to study access to medical, dental and hospital services. The main assumptions of this framework were as follows: An individual's potential to enter or have access to health services was determined by the characteristics of the healthcare delivery system as well as healthcare consumer's needs, desires and resources. And the actual entry or access into the healthcare system was an indicator of healthcare utilization and satisfaction with the care received. Utilization of healthcare services and consumer satisfaction were considered to be outcomes of access. In addition, utilization of healthcare services was conceptualized as influencing satisfaction with the services, and the degree of satisfaction experienced influenced the frequency with which healthcare services were used(Aday and Andersen in 1974).

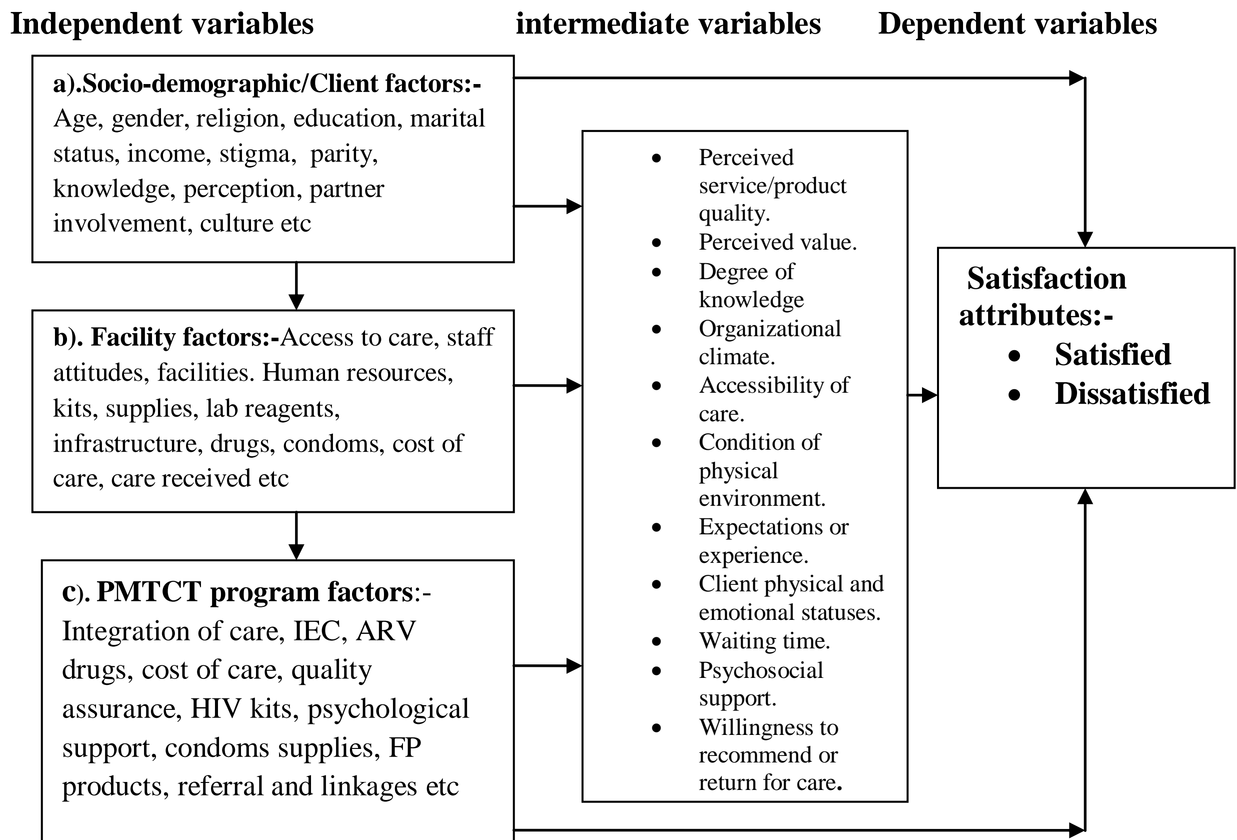

Figure 1:1 Conceptual Framework

1.9 Operational definitions of terms

The terms, phrases and abbreviations used in the study were defined as follows:-

Acquired- not inherited.

AIDS-Acquired Immunodeficiency Syndrome- refers to the most advanced stage of HIV infection. A condition where a person's immune system is compromised.

ART- refers to Antiretroviral Therapy. ART is part of the comprehensive care of HIV infection. ART halts viral replication preventing further disease progression.

ART adherence- refers to the act or quality to stick to antiretroviral therapy. Steady devotion towards achieving something and appropriately. Acceptance of an active role in one's own health care. Example, above 95% ART adherence is needed to achieve undetectable levels of viral load and durable suppression of HIV.

ART Compliance- refers to the act of conforming and lack of sharing in the decision made between health provider and client requiring ART

ARV prophylaxis-refers to giving ARVs to babies of HIV-positive women to reduce the risk of HIV infection and is initiated within 48 hours following delivery.

ARVs-refer to antiretroviral drugs that provide therapy for durable suppress HIV replication.

Attitude- Way of thinking or acting in relation to a given circumstance, In this case it referred to how the care givers related to the clients.

Client -A patient is anyone or any individual who receives a service or who is an actual, potential or future user of the health service and its various services.

Client/Customer Dissatisfaction- refers to act of feeling unhappy or not pleased with services/goods provided to clients. Dissatisfied client/customer disregard the care,

services and goods given to clients.

Client/Customer Satisfaction- refers to the act of fulfilling a need or desire of a client/customer seeking for services or purchase of goods/products/services. Satisfied client or customer achieves good feeling about certain services or goods. For the purpose of his study, it will refer to the gap between what clients expect to receive as a service and what they actually get.

Comprehensive approach- refers to provision of treatment, care and support of clients infected with HIV, their infants and families.

Deficiency- Shortage of body essential requirements e.g. White blood cells, Vitamins, proteins, red blood cells etc.

Discrimination- The treatment of an individual or group with partiality or prejudice. Client's expressions were used to measure this situation.

Good- Something satisfactory and of an acceptable standard.

HIV Counseling-refers to confidential dialogue between an individual and a healthcare worker to help the client examine his/her risk of acquiring or transmitting HIV infection.

HIV- Human Immunodeficiency Virus. HIV weakens human immune system.

HIV Testing- refers to process that determines whether a person is infected with HIV.

HIV and AIDS care- In this study it will include counseling people, who are HIV-positive, determining the stage of illness (CD4 count, presence of opportunistic infections), evaluating eligibility for Antiretroviral Therapy (ART), giving ART, giving cotrimoxazole prophylaxis (Septrin) and treating opportunistic infections like tuberculosis, as well as cancers and sexually transmitted infections.

HIV-affected- refers to someone who is suffering because of caring HIV-positive partner, relative, friend etc.

HIV and AIDS counseling- Confidential dialogue between client and care provider aimed at enabling the client to cope with stress and take personal decisions related to HIV and AIDS. This was measured by directly asking the client whether they had gone through both pre and post counseling.

HIV Counseling and Testing- refers to Voluntary HIV Testing with full informed consent and confidential pre-and post-test counseling.

HIV Disclosure- Refers to an HIV positive woman openly declaring her HIV status to close relatives or the community.

HIV-infected – refers to someone who has become infected with HIV**.**

HIV-Positive- refers to an HIV-infected person who has tested positive for HIV.

HIV Stigma- prejudice, negative attitudes, abuse and maltreatment directed at people living with HIV and AIDS.A rated checklist was used to obtain responses to this effect.

Infant – refers to a child below one year.

Immune system- The body's defense against infection and disease.

Immuno- Related to the immune system.

Level of Knowledge on HIV and AIDS transmission - A measure of how much the HIV positive women know on the mode of HIV transmission and prevention.

Living together with partner- A situation encountered by respondent who is married or cohabiting with partner.

Married – Lives together as wife and husband or lives apart but as married partners.

MTCT- refers to mother-to-child transmission of HIV infection and is a vertical transmission of HIV from a mother who is HIV-infected to her infant. MTCT is the main transmission route for HIV infection in infants and children.

Not living with partner - This is a situation encountered by single parent before marriage, after disagreement with spouse leading to divorce, separation and after death of spouse leading to widowhood.

Opportunistic infections (OIs)- refers to frequent illnesses in HIV-infected persons that cause vast majority of the morbidity and mortality associated with HIV.

Pandemic- A disease prevalent throughout an extensive region, country, or throughout the world. The prevalence statistics were obtained from National AIDSControl council.

Perception- Personal insight about a specified phenomenon. An interview schedule was used to obtain information on how the clients perceived the services.

PMTCT Services- the package of PMTCT services that include primary prevention of HIV in women, prevention of unintended pregnancy among HIV-infected women, interventions to reduce transmission from HIV-infected pregnant and lactating women to their children and care and support of women, children and families infected and affected by HIV.

PMTCT-Plus-refers to all the strategies involved in the implementation of comprehensive approach in PMTCT.

PMTCT (Prevention of Mother-to-Child Transmission of HIV) - refers to comprehensive, family-centered spectrum of clinical and supportive services provided in

conjunction with public initiative to prevent the transmission of HIV from a woman to her infant.

Post pregnancy care- Care given to HIV-positive mothers and their HIV exposed children after postnatal care. It may take a period of two (2) years.

Prevalence of HIV and AIDS- Number of people with HIV and AIDS in a specified population at a specified time.

Private health facilities- The health facilities that are owned and run by private individuals or organizations and offer HIV and AIDS care. They can be private for-profit or private not-for –profit making.

Public health facilities- The health facilities that are owned and run by the government and offer health services including PMTCT services.

Quality- Ministry of Health defines quality as “Doing the right thing right, right away.” In this survey it will also refer to “How good the PMTCT services are to the clients?”

Regimen- Guidelines on medicine and diet specific in HIV and AIDS care.

Satisfaction- The feeling that a person gets when he or she achieve, or what they wanted to happen do happen. This was established by asking the client directly.

Service providers- In this study it will mean facilities providing HIV and AIDS care, as well as the staff directly involved in this work – doctors, nurses, counselors, laboratory technicians and managers.

Single – Never been married, divorced, separated, or widowed client.

Statistical Significance- The probability that the results observed during the study was not likely to be due to chance alone. The threshold for statistical significance is an arbitrary value called p and is usually set at 0.05 or 5% for social sciences. If the probability that the observed value was due to chance is equal or less than the set p value (0.05), the result is considered statistically significant.

Stigma – it is a deep rooted belief in the mind and which is related to contextual factors existing in the society towards any particular human behavior.

Syndrome- a group of symptoms or illnesses that occur as a result of the HIV infection.

Tertiary level of education - Either pre- university college education or university education.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction.

This chapter provided important information on HIV and AIDS pandemic, Prevalence of MTCT, Prevention of mother-to child transmission (PMTCT) of HIV/AIDS, goals for national PMTCT program, utilization and quality of PMTCT services, previous studies on clients' satisfaction with PMTCT services and associated factors etc.

2.2 HIV and AIDS pandemic.

In 1981 the world was told of a new pandemic, a Human Immunodeficiency Virus (HIV) that was easily transmitted through heterosexual contact, prenatal transmission (MTCT) and blood transmission. HIV and AIDS pandemic was the single most important challenge the world was facing today. The search for a HIV and AIDS vaccine and for cure had been futile. An estimated 630,000 children world-wide became infected with HIV in 2003 and most of these infections were through MTCT (Pathfinder, 2004).

PMTCT provided an opportunity for preventing new pediatric HIV infections as well as for reaching the 10 to 20% of HIV positive pregnant women who met WHO eligibility criteria for initiating ART for their own health. There were PMTCT guidelines to improve the uptake, quality and effectiveness of PMTCT services in Kenya (MOH-NASCOP, 2009).

In many developing countries with up-scaled PMTCT interventions there were reports of improved maternal and child health and survival. Effectiveness of PMTCT required many factors and conditions that drove clients' satisfaction. The level of clients and patients satisfaction had been found to be most relevant tool for getting clients and patients views on how to provide quality PMTCT services. Getting clients' perspective helped to know

whether the PMTCT program was being delivered in accordance with their needs and areas that needed improvement.

2.3 Prevalence of Mother-to-child transmission of HIV:

There were approximately 5 million children below the age of 15 years who were infected with HIV since the epidemic began and only 1 million were still alive. During 1998, 530,000African children representing 90% of the global total were infected with HIV (UNAIDS, 1998). In2003, nearly 500,000 children died of AIDS-related causes. Most children born with HIV died before they reached their fifth birthday, with most not surviving beyond two years (UNAIDS 2004).About90% of HIV infection in children was due to Mother to child transmission (MTCT) which was the predominant mode of HIV in infant and young children**.** The remaining 10 % were infection through contaminated blood or sexual abuse (MOH-NASCOP, 2002).

In sub- Saharan Africa where the vast majority of HIV-infected women of childbearing age live, MTCT rates remain high. Such high rates persisted mostly because of lack of access to existing prevention interventions including HIV voluntary counseling and testing(VCT), antiretroviral drugs, elective caesarean sections, replacement feeding options and failure in exclusive breastfeeding for a period of six months(UNAIDS, 1998).The prevalence of HIV infection among pregnant women in Kenya was estimated at 13% in 2002**.** Infants and young children under 15 years account for 16% of all new HIV infections mainly as a result of MTCT (MOH -NASCOP, 2009).

2.4 The Goal of National PMTCT program.

The goal of national PMTCT program was in line with the goal set out at the United Nations General Assembly Special Session(UNGASS) on HIV and AIDS in 2001, to

reduce the proportion of infants infected with HIV by 20% by the year 2005 and 50% by 2010(UNGASS, 2001). Currently more than 50% of all pregnant women in Kenya received PMTCT services (MOH-NASCOP, 2009). Recent research had shown that the risk of transmission of HIV from mother to child could be reduced by 50-60% after taking PMTCT interventions?

Thus, commitment to providing a range of core MTCT interventions was required to memorably reduce the incidence of MTCT of HIV (Ibid, 2004). Analysis of effectiveness of the various approaches needed to manage risks of MTCT provided valuable insights that necessitated the adoption of more efficacious care and treatment regimens. These insights had informed the development of new guidelines that enhanced the capacity of health care providers to give more efficient and effective services to HIV-positive expectant mothers, postnatal mothers and newborns (MOH-NASCOP, 2009).

2.5 Accessibility and Utilization of PMTCT services.

Utilization of PMTCT services was partly influenced by access to essential maternity services such as ANC, delivery and postnatal care (WHO Bulletin, 2001). Mechanisms of maternal health services in turn increased utilization of PMTCT services and client satisfaction.

Although pharmaceutical company donations, donor support and other government initiatives helped to expand access to HIV testing for pregnant women and used of antiretroviral drugs which reduced the chance of HIV transmission, still only 10% of pregnant women globally had access to these drugs and PMTCT services (Policy project, 2004).

Studies had shown that the utilization of PMTCT services by the pregnant women was influenced both by factors related to the health system such as accessibility of PMTCT services and mitigation of the effect of socio-economic and cultural factors**.** The barriers to access and use of PMTCT services were policy-related. Some of the factors influencing utilization of PMTCT services among pregnant women attending ANC services included human resource constraints, lack of staff training, negative staff attitudes, insufficient budgetary allocation and supplies, inadequate counseling rooms, cleanliness, long waiting time, insufficient commodities, limited access to PMTCT information and services, HIV and AIDS related stigma and discrimination in the community, gender inequality, low male involvement, inadequate knowledge, care from traditional and religious healers, accessibility and affordability of PMTCT services were the major constraints for low utilization or uptake of PMTCT services.

Though PMTCT services were available at the county level across the country, gaps remained. Plescia, et al (2001) reported that 33% of respondents cited lack of money as an important barrier to the use of health services. Other factors which affected utilization of PMTCT services included HIV-related stigma, unfavorable attitudes and beliefs directed towards PLHIV (Mrisho, et al, 2009).

2.6 Quality of PMTCT services.

Quality could be defined from the provider or client's/ patient's point of view but more often from the latter. The WHO definition of quality stated that 'Quality of healthcare consisted of the proper performance (according to standards) of interventions that were known to be safe, affordable to the society, and that had the ability to produce an impact on mortality, morbidity, disability and malnutrition' (WHO, 1988).

Studies also showed that when the quality of a product or service satisfied a customer, he returned and also recommended the product or service to others (WHO, 1996). In contrast, dissatisfaction and poor quality care led to migration of clients to other clinics or providers. Studies both in developed and developing countries shared some common views as to what constituted quality. These were: respect for clients (Schuler, et al; 1994), understanding their situation and needs (Hashemi, et al; 1995), provision of complete accurate information (Indonesia, 1996. Survey Report) and technical competence (Verot, 1993), others included access (United Nations, 1995), fairness (Barrett and Stein, 1998) and result (Ndhlovu, 1995).

Many of the health providers believed that clients' views had validity even if they conflicted with professional judgment (Makoul, et al, 1995). Quality of care was a multidimensional concept. Some of the dimensions include skills of health care providers, sufficient staff, affordability and acceptability of services, interpersonal relations or communication, and privacy during consultation, availability of services and availability of essential supplies such as drugs (Atwell, *et al*, 1999).

Some of the challenges in providing quality healthcare include consumer's demands, professional demand for excellence and high cost of healthcare and demographic shifts (Gerteis, 2001) .The quality of interaction between the HIV and AIDS patients and the healthcare service providers to a greater extent influence the clients' satisfaction with the services delivered. Patients in hospital tend to be in a state of emotional dependence on health workers, their sense of gratitude and fear of alienation from those who are looking after them may stifle grievances and complaints.

Patients are the best source of information about a hospital's service delivery system; their experiences often reveal some flaws in the operating system and can stimulate important insights into amendments that may deem necessary to the health institution. A client enters a service setting with needs, wants and expectations, the extent to which the provider fulfils them define the degree to which the client is satisfied. Relative success or failures on these three dimensions dictate the relative satisfaction of the client (Fletcher, 1972).

2.7 Client satisfaction and associated factors;

Client satisfaction was core to quality of PMTCT services; even the most technically competent care was meaningless if it did not satisfy the potential clients. In general satisfaction influenced whether a person sought PMTCT services, complied with treatment and maintained a continuing relationship with practitioners (Larsen, et al, 1976).Nair and Andrew state that the health service market has today changed. Client satisfaction was core to quality of PMTCT services; even the most technically competent care was meaningless if it did not satisfy the potential clients (Nair and Andrew, 2005).

In general a seller's market to a buyer's market where the customer (patient) is an important factor. A satisfied customer will be more likely to continue to use the facility and tell others to do so too. Nair therefore argued that health facilities have to develop technologically in order to achieve patient satisfaction. This article therefore argues that achieving a level of good patient satisfaction depends on building 'bridges of trust' between the health service provider and the community it serves. Such bridges inculcate a sense of worthiness and good levels of satisfaction with the services provided to the community. It must be realized that the community do not just flock to health facilities

because it is cheap, but because of its good name and good image as well as the interpersonal dynamic between patient and health provider.

There was generally a slow uptake of patient satisfaction in the developing world, and in particular countries like Uganda where a big imbalance of power between PMTCT providers and potential users of PMTCT services still existed. Understanding, documenting and raising awareness with potential PMTCT users on satisfaction and its dimensions to redress this imbalance brought PMTCT providers accountable to clients.

As a country, Uganda was still grappling with how to improve utilization of health services that could lead to improvements of health status. Some of the services like deliveries in health units that were probably more sensitive to determinants of satisfaction had remained low at 41% at national level but lower (less than 40%) in most regions of the country (MoH, UBOS and ORC Macro,2006).

Improved quality of care remained a major aspiration of the HSSP II and clients' satisfaction was one of its indicators for measuring quality of PMTCT services delivered. As of now there was no national baseline information of this important performance parameter. The Ministry of Health with its partners wished to assess client satisfaction as part of the HSSP II mid- term review and obtain baseline data for future performance assessments.

According to some reports, delivery of health services was expected to respond to preference and client demand. Client satisfaction surveys were assessment tools that measure the clients' perception of how well business delivers the key factors and conditions that drove client satisfaction and loyalty. In many developing countries with up-scaled PMTCT interventions there were reports of improved maternal and child health

and survival. Effectiveness of PMTCT required many factors and conditions that drove client's satisfaction. The level of clients and patients satisfaction had been found to be most relevant tool for getting clients and patients views on how to provide quality PMTCT services. Clients had needs, concerns and expectations requiring various interventions.

Healthcare administrators who designed an outpatient satisfaction measure for the rehabilitation services department of University Hospital- University of British Columbia, defined client satisfaction as the extent to which a program fulfilled clients' treatment expectations (Davis and Hobbs, 1989). Davis and Hobbs had identified the various components of client satisfaction to allow an accurate measurement. These components were classified into three dimensions of satisfaction; Access to Care(e.g. signs and direction to treatment facility, waiting room time, clinic hours); Physical Environment(e.g. Cleanliness of reception area noise level and condition of treatment space); Care received (i.e. human, clinical and outcome aspects). Davis and Hobbs used this operational definition to devise a conceptual framework from which to design a client satisfaction questionnaire (Davis &Hobbs, 1989).

A study done in Tanzania on clients' satisfaction for PMTCT services in Dodoma Rural District found that most women had some information on PMTCT before attending ANC, mostly through media. 88% said that they had been given enough information to make a decision about HIV testing. Although the majority of women interviewed were satisfied with the counseling and counselor interaction, 12% said that they would prefer to see a different counselor. 98% said that they would recommend HIV testing to a pregnant friend or relative. Similarly a quarter of the clients were not satisfied either with the

counseling they received on HIV, privacy or waiting time they spent while accessing services. Some of the reasons contributing to dissatisfaction included inadequacy in individual counseling, inadequate on site test supplies and equipment and cost incurred when travelling to seek for PMTCT services from a referral or satellite health facility(Lyatuu, et al.2008).

Clients satisfied with the care they received had been found to pay compliments, complied with instructions, kept clinic appointments and recommended the hospital to friends and family members (Larson and Ferketich, 1993; Kotler and Armstrong, 1997). In contrast, those not satisfied had been found to complain, took legal actions, changed providers or even left the orthodox healthcare services for complementary therapies or alternative medicine (Luthert, 1990: World Bank Report, 2000: Jegede, 2001).If the user's expectations were exceeded by their perceptions of the service they had received then the user was satisfied or even delighted. If their perceptions of the service fell short of their expectations then the result was dissatisfaction.

Some characteristics were associated with general patient satisfaction and these included demographic factors, social economic status and general health status. In addition to these, satisfaction was also influenced by the characteristics of the health provider such as experience, age and gender. Other determinants included the reliability of services, or the assurance that services were provided in a consistent and dependable manner; responsiveness of services or the willingness of providers to meet client's needs; courtesy of providers and security of services, including the security of the records (East African Journal of Public Health, 2008).

The dimension of consumer satisfaction as hypothesized were satisfaction with convenience of care, availability, cost, provider characteristics such as courtesy, information provided regarding the illness, and health care consumer's overall assessment of the quality of healthcare received (Aday and Andersen, 1974).

Some of the causes of client dissatisfaction with services as explored during FGDs included: very time-consuming due to long waits, delays, high cost of seeking services, unfriendly providers, provider incompetence, poor hours of operation, facility too far, lack of drugs, limited infrastructure such as laboratory facilities, equipment, supportive environment and shortage of supplies such as HIV test kits, reagents, consumables etc.

2.8 Health seeking behaviors and cultural beliefs:

Couples were allowed to know their HIV status during preconception period and this was facilitated by voluntary counseling and testing services in modern medical clinics. According to the World Health Organization guidelines, a pregnant woman's HIV status was determined in her first trimester so as to provide optimal PMTCT services as from 14 weeks.

HIV and AIDS-related stigma and discrimination, unfavorable attitudes and beliefs towards the PLHIV, gender inequality and low male involvement were some of the factors that discouraged pregnant women from seeking PMTCT services early. Some cultural factors affected the access and uptake of PMTCT services. For instance, Swazi's tradition in Swaziland discouraged women from talking about a pregnancy during the first 14 weeks, let alone going to a clinic for fear of inviting bad luck that could result in a miscarriage. Zodwa Mthetfwa, an HIV testing and counseling officer at Swazi for positive living, a local support NGO, confirmed that many Swazi women avoided going

to clinics to have their babies tested. Zodwa Mthetfwa got more requests from pregnant women for midwives contact details than for clinics (Swaziland, 2010).

2.9 Organizational and structural factors.

The organization of PMTCT services included the staffing patterns and whether or not PMTCT services were integrated with other care activities. Heavy workload due to shortage of staff could not allow health workers adequate time to examine clients or patients. In addition, the client could not be given enough time to report all his/ her problems. In situations such as this, even the provision of basic information about the problem was lacking or inadequate (WHO, 1991 and Hanson et al, 1997).

Significant proportions of pregnant women were giving birth at home and so were not using PMTCT services. A rise in home deliveries appeared to be a direct result of appalling conditions at under funded clinics and hospitals; leaking roofs, unreliable water supplies and lack of beds at clinics or hospitals were contributing to the problem of burnout among nurses. Women were refusing to come to some clinics and hospitals because of the poor environment, physical space, staff numbers and attitudes of the health workers (Sophia, 2010).

2.10 Technical competence of PMTCT staff.

The mini-survey among facility–based health workers revealed many gaps in knowledge and confidence regarding the provision of pediatric HIV testing, care and treatment, including pediatric HIV diagnosis protocols, drug management and child counseling (Karusa Kiragu et al, 2008). Poor staff attitudes towards clients such as rudeness and impatience were reported as major barriers to the use of public health care services (Ngugi *et al,* 1993).Other factors that were related to service delivery that discouraged

the use of PMTCT services were inappropriate actions taken by health workers such as delays in referring clients/patients and delays in diagnosis and treatment (Ayeni, Ruston& Mc nutty, 1987).

Client satisfaction can be affected by incompetence of health providers where the client lost confidence in the health workers and the services in general (Attawell and Grosskurth, 1999). Healthcare provider's cultural background and beliefs influenced provision of care. Healthcare providers behavioral attributes such as respect, politeness, provision of privacy and reduction of clients' waiting time influence clients satisfaction with care (Population Council Report, 1998).

Thorakron argued that listening to patients is important and that encourages Health Care providers to invest in program that determine how their patients evaluate their experience at Health Care service centre and what could have been done to improve the experience. This he argued, permits comparison with other facilities and depicts trends in patient evaluations of a Health Care provider (Assumptions Thorakron, 1990).

Moreover, the influence of language on client perception of the service provision is relatively unexplored in health research studies. This is informed by the fact that national surveys in Kenya have highlighted the levels of satisfaction by a cross-section of patients attending public hospitals (John, 1994).

2.11 Communication practices in PMTCT services.

Communication plays a key role in PMTCT services delivery especially among HIV nursing mothers and partners who need to keenly adhere to PMTCT policy guidelines in order to prevent mother to child transmission during infant and young child feeding.

Communication allows for the identification of quality gaps, reinforcement of core values and provision of information for advocacy, benchmarking and change management. Communication is an interaction, where information is imparted from various parts of the organization to staff within the organization, to the communities being served and to other stakeholders and policy makers.

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CHAPTER THREE: MATERIALS AND METHODOLOGY

3.1 Introduction.

This chapter describes some of the relevant aspects of the research methodology such as design, variables, study area, target population, sampling technique, sample size, research instrument, validity, pilot study, reliability, data collection method, data analysis and ethical consideration.

3.2 The research design

A cross-sectional survey design was used to gather qualitative and quantitative statistical information concerning effectiveness of PMTCT services and levels of service satisfaction among the PMTCT clients attending post pregnancy clinic in KNH.

3.3 Variables:

3.3.1 Dependent Variable

Satisfaction with PMTCT services was used as the dependent variable for the study. Several PMTCT services were grouped into specific categories. A series of questions for each category was put forward and clients rated their satisfaction. This enabled development of quantitative scores for each category for analysis.

3.3.2 Independent variables: The independent variables for the study included socio-demographic factors (age, gender, marital status, level of education, parity, occupation/employment, main source of income, amount of household income, assets, distance from residential to the facility), satisfaction with various PMTCT services(registration and booking services, HIV counseling and testing, laboratory services, psychosocial support, child healthcare, adherence counseling, infant and young child feeding counseling, pharmacy services, infant and young child HIV screening, comprehensive care, prevention of HIV infections and safer sex promotion),clients' related factors(level of knowledge on risk factors associated with HIV transmission, clients' perception, behaviors/cultural beliefs, financial potential, attitudes on PMTCT,

fear of HIV status/disclosure, partner involvement, psychosocial support etc), health facility related factors (access to PMTCT services, waiting time, client-provider relation/communication, resources/infrastructure, providers' attitudes, professional practice, HIV counseling and testing, counseling on stigma, daily evaluation of PMTCT services etc), PMTCT program related factors (psychosocial support, integration and packaging of services, information, education and communication, quality services, free services, referral and linkages of services etc).

3.4 The study Area or Location.

The study was carried out in post pregnancy clinic that provide integrated PMTCT services in Kenyatta National Hospital. KNH is the public referral and teaching public hospital in Kenya and has a long history that dates back to the year 1901.KNH is located two (2) kilometres from Nairobi City Centre along Ngong Road. KNH provided specialized and general health care to referral patients (30%), accident and emergency patients as well as self-referred sick people from poor, low and middle level socio-economic classes in Nairobi City and its immediate environs who account for seventy percent (70%).Postnatal clinic is one of the clinics in the Reproductive Health department where patients and infants discharged from KNH maternity wards after delivery can have their health monitored for a specified period.

3.5 The target population.

The study population was HIV-positive postnatal women attending post pregnancy clinic at Kenyatta National Hospital, Kenya.

3.5.1 Inclusion criteria;

Those HIV-positive postnatal mothers aged between 20-49 years, with infants of 3-18 months of age and had consented to participate in the study.

3.5.2. Exclusion criteria;

Those HIV-positive postnatal mothers aged below 20 years and above 49 years, with infants below 2 months and above 18 months of age, eligible clients who were too ill and those who did not consent to participate in the study.

3.6. Sampling Techniques and Sample size.

3.6.1 Sampling Technique.

Clients were selected by simple random sampling using clients' daily attendance register at post pregnancy clinic as a sampling frame. These were HIV-positive postnatal clients with adequate history of receiving PMTCT services or had attended at least three clinic visits. Similarly, members of groups of psychosocial support group meetings were selected and involved in focused group discussions.

3.6.2 Sample size

The sample size for clients' exit interview was determined using a single population proportion formula by taking an assumption that 50% of the clients would be satisfied by PMTCT services (to get a conservative estimate of the sample size as there was no information on the proportion of clients satisfied with PMTCT services in Kenya), with 5% precision, 95% confidence and possible non-response of 10%. The researcher used the following formula to determine the sample size of the population proportion:-

$n = Z^2pq/e^2$ (Cochran, 1963)

n-was the size of the sample.

Z-was an abscissa of normal curve that cuts off an area at the tails (1-equals desired confidence level e.g. 95% or 1.96).

e-the desired level of precision expressed as decimal e.g. 0.05

P-was an estimated population proportion of an attribute present expressed as decimal (0.10 used for sample size needed).

q-(1-p)

n= $(1.96)^2 \times (0.10) \times (1-0.10)/0.05^2$ =138.2976. The survey needed a sample of **139** clients.

3.7 Construction of research Instruments.

A self- administered questionnaire consisting of mixture of open-ended and structured questions was prepared for data collection. The questionnaires was pre-tested and revised twice before data collection. The researcher analyzed the comments in the complaints and compliments register for a number of months and this was the reliable source for topics of focus group discussions.

3.8 Pilot study.

The interview schedule was pre-tested in maternity wards that dealt with HIV and AIDS infected postnatal mothers at Kenyatta National Hospital. The interview schedule was revised in accordance with the feedback obtained from the pre- test exercise. This helped in identifying deficiencies within the questionnaires for example, unclear directions, language, terms, and insufficient space to write the response, clustered questions and wrong phrasing of questions.

3.8.1 Validity.

The researcher selected four (4) health care providers from Comprehensive Care Centre, antenatal clinic, labor wards, prenatal and postnatal wards in KNH to examine the pre-tested questionnaires individually and provide feedback on the relevance of the content used and justify whether it measured what it was supposed to measure. The vague questions were rephrased until they conveyed the same meaning to all targeted subjects.

This enhanced validity and reliability of the questionnaires. Their recommendations were incorporated in the final questionnaire.

3.8.2 Reliability of measurement.

The four (4) copies of validated questionnaires were given to identical PMTCT clients from Post pregnancy clinic for answering. A repeat of the same activity was done after two weeks and their responses were scored manually. Thereafter, a comparison between the two sets of test-retest method was done to establish the consistency of the content in eliciting the same responses every time the tool was administered. A correlation coefficient of about 0.8 was considered high enough to judge the tool as reliable for the study.

3.9. Data collection technique. A total of 139 clients for exit interviews and three focused group discussions (FGDs) were sampled.

3.9.1. Exit interviews

The research assistants comprising of midwives and PMTCT counselors recruited participants from post pregnancy clinic were trained on how to sensitize PMTCT clients attending post pregnancy clinics in KNH about the ongoing research and then recruit the potential clients to participate. The eligible and interested clients were given consent forms to sign before participation. The consent form stipulated on how confidentiality was to be maintained. The research assistants provided participants with pens and pencils to fill self-administered questionnaires. A total of 139 HIV-positive clients were provided with self-administered questionnaires for exit interviews. The participants who required assistance in interpretation and filling of questionnaires were also supported by research assistants.

3.9.2 Focus group discussions

The participants for focus group discussions were selected through use of simple random technique from audiences who attended both post pregnancy care/child health care and psychosocial support group meetings. A total of three focused group discussions of six to twelve participants were conducted in three different days of psychosocial group meetings. A focus group discussion checklist was used in three groups. A PMTCT counselor served as moderator while skilled healthcare provider served as the author. The moderator was responsible for conducting discussions according to the checklist guide and keeping conversation flowing. The discussions were conducted by a moderator in English and Kiswahili and each session took between 45-90minutes. The author wrote the information that arose from the conversations in terms of transcriptions. In this study, information obtained from the FGDs was used to complement the quantitative method. The relevant themes in the checklist guide were related to quality of PMTCT services, clients' views on health-providers attitudes, infrastructural attributes and satisfaction with PMTCT services.

3.10 Data analysis

Data was coded, sorted and entered into the computer and processed using SPSS software version.22. Descriptive statistics performed included determining the proportions, percentages, means, standard deviations (SD) and presented in frequency tables, pie charts, bar charts etc. Chi-square test was used to test the presence of significant association between the variables. The bivariate analysis involved comparing each independent variable with client's satisfaction with PMTCT services. The significance of the associations was tested using Chi Square and an association was statistically

significant when the p- value was less than 0.05 ($p < 0.05$). The variables with a p- value < 0.05 in the bivariate analysis were included in the multiple logistic regression analysis where odds ratio and associated confidence interval (95% CI) was used to measure the strength of association between the independent variables and satisfaction with PMTCT services. Responses from open-ended questions were analyzed in form of transcripts. FGDs were analyzed qualitatively according to emerging themes and then used to supplement, explain and interpret quantitative data.

3.11 Logistical and ethical considerations.

The clearance was acquired from KU Graduate School, KNH-UON Research Ethical Review Committee and Ministry of High Education and Technology prior to the research undertaking. The research assistants were identified and trained on how to carry out the study. The research coordinator visited research venue to seek permission from officer in charge and also introduced the research assistants to the PMTCT staff on the ground. The consent forms were designed and included in the front page of each questionnaire. Research assistants informed all study participants about their rights and risks of participating in the study. The research respondents were invited voluntary to sign consent forms under no coercion before being given self-administered questionnaires. Written informed consent was obtained from the survey participants. Respondents who declined to participate in survey were reassured and given optimal care in all service delivery points with no damaged client- provider relationship. The signed informed consent sheets were detached from the self-administered questionnaires and kept in separate location so that they could not be linked. The study participants were involved in both exit interviews and focused group discussions during psychosocial support group

meetings assisted by designed focused group discussion checklists. Throughout this study, privacy and confidentiality were emphasized and that participants views were not shared in the clinic. All participants were not identified by name and research materials were maintained in locked cabinets with access only by study staff.

CHAPTER FOUR: RESULTS

4.1 Introduction.

This chapter presents detailed analysis of the data, interpretation and explanation of the findings with regard to stated objectives. The chapter is divided into five sections based on the study specific objectives; Socio- demographic information of the respondents; impact of socio-demographic characteristics on clients' satisfaction with PMTCT services; Overall rating of clients' satisfaction with various PMTCT services; factors that influenced clients' satisfaction with PMTCT services and proposed strategies for improving clients' satisfaction in PMTCT services.

4.2 The respondents' socio-demographic characteristics.

A total of 139 HIV positive nursing mothers attending post pregnancy clinic participated in the exit interviews which was the main method of data collection as shown in table 4.1 below. The survey results indicated that more than sixty seven percent (67.7%) of the respondents were above 30 years old. More than three quarter (76%) of the respondents were married and this implies that majority of them were of the age one gets married. A greater number of the respondents (66.7%) had between 2 and more children, 62% had college or university level of education, 69.1% were employed and 64% had household incomes of less than Kshs.20, 000.More than three quarter (76.6%) of the respondents depended on their spouses for financial support. Majority of the respondents (100%) had mobile phones, 86% were living in residential houses with electricity supply, 81% had television sets, 72% had radios in their homes and64% had water within their dwellings in form of own household taps or communal taps. Over half of the respondents (60.8%) were living within a radius of 10 kilometres and only 17.3% of the respondents lived beyond a distance of 10 Kilometres from Kenyatta National Hospital (table 4.1).

Table 4.1: Baseline characteristics of the respondents (n=139).

Variables	Frequency (n=139)	Proportion (%)
Age		
20-24	12	8.6
25-29	33	23.7
30-34	49	35.3
35 and above	45	32.4
Marital status		
Married	106	76
Single	33	24
Education background/highest level of school attended		
Primary	22	16
Secondary	31	22
Tertiary i.e. pre-university college or university	86	62
Parity-Number of child births		
0-1	46	33.1
2-5	66	47.5
6 and above	27	19.4
Employment/occupation status*		
Self employed	57	41
Formal employment	39	28.1
Unemployed	35	25.2
Main source of household income		
Self	38	27
Spouse	101	73
Household income levels per month*		
Below Kshs 10,000	37	26.6
Kshs 15,000-20,000	26	18.7
Above Kshs 20,000	16	11.5
Categories of Assets**		
Residential with electricity supply	120	86
Mobile phones	139	100
Television sets	112	81
Radios	100	72
Kshs10,000-14999	26	18.7
Fridges	79	57
Own residential houses	13	9
Sources of household water		
Own house taps	42	30.2
Communal taps	47	19.4
Other sources (e.g. roof catchment etc)	23	16.5
Distance from residence to facility*		
Less than 10 kilometers	109	78.4
More than 10 kilometers	24	17.3
Missing responses	6	4.3

***There were missing responses. **The multiple responses were allowed**

4.3 Clients' satisfaction with PMTCT services.

Several variables were used to assess clients' satisfaction with PMTCT services. These included levels of satisfaction, overall satisfaction, categories of PMTCT services and factors influencing clients' satisfaction. The results of satisfaction with respect to each variable are presented in Tables 4.2, 4.3, 4.4, 4.5, 4.6, 4.7 and Figure 4.1below.

4.3.1 Levels of clients' satisfaction with PMTCT services

Table 4.2: Levels of clients' satisfaction with PMTCT services

Variables	Number of respondents (139)	Percentage (100%)
Dissatisfied	5	3.6
Somewhat dissatisfied	13	9.4
Neutral or I don't know	35	25.2
Somewhat satisfied	42	30.2
Satisfied	44	31.7

Table 4.2 represents the percentages of respondents according to levels of satisfaction with PMTCT services at the post pregnancy clinic. The results showed that 44(31.7%) were satisfied, 42(30.2%) were somewhat satisfied, 35(25.2%) were neutral, 13(9.4%) were somewhat dissatisfied and 5 (3.6%) were dissatisfied with PMTCT services. At the end of the questionnaire, there was a question asking the respondents about overall satisfaction. This question was not measured on a likert scale and was phrased as; overall, are you satisfied or dissatisfied with the PMTCT services at post pregnancy clinic?

4.3.2Overall clients' satisfaction with PMTCT services

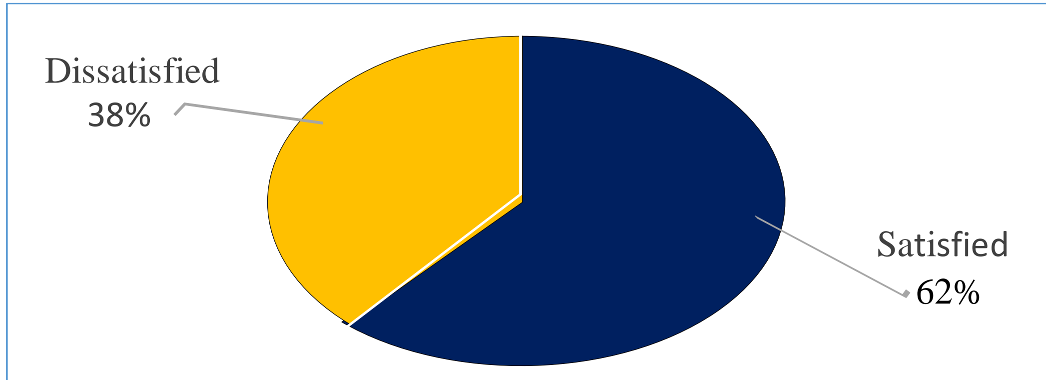

Figure 4.1: Overall clients' satisfaction with PMTCT services.

The figure 4.1 presents an overall clients' satisfaction with PMTCT services offered at post pregnancy clinic at Kenyatta National Hospital. The survey results indicate that majority of therespondents86 (62%) were satisfied with PMTCT services and perceived the services to be good. However, more than one third of respondents 53(38%) were dissatisfied and perceived the PMTCT services to be either average or poor.

Table 4.3 Clients' satisfaction with categories of PMTCT services.

Categories of services*	Satisfied	Dissatisfied	p value
1 .Registration and appointment:			
Reception and Guidance	58(42%)	81(58%)	x^2=4.114
Organization of services.	82(59%)	57(41%)	df=2,P< 0.05
Waiting time	37(27%)	102(73%)	
2. **HTC services:**			
Counseling process and HIV status disclosure opportunities	94(68%)	45(32%)	x^2=51.68
Privacy and Confidentiality	23(16%)	116(84%)	df=1,p<0.01
3. Adherence counseling:			
Accessibility	100(72%)	39 (28%)	x^2=5.912,
Staff attitudes	119(86%)	20(14%)	df=1,p<0.02
4. Psychosocial support services:			
Accessibility	89(64%)	50(36%)	x^2=9.812,
Partner involvement	63(45%)	76(55**%)**	df=1,p<0.01
5. Child healthcare:			
Accessibility	101(73%)	38(27%)	x^2=18.061
Clinical effectiveness/outcome	128(92%)	11(8%)	df=1,p<0.01
6. Infant and young child HIV screening:			
Clinical effectiveness/outcome	125(90%)	14(10%)	x^2=16.524
Humanity of care	98(71%)	41(29%)	df=1,p<0.01
7. Laboratory services:			
Accessibility	70(50%)	69(50%)	x^2=5.304,
Quality services	89(64%)	50(36%)	df=1,p<0.05
8. infant and young child feeding counseling:			
Accessibility	111(80%)	28(20%)	x^2=8.625
Counseling effectiveness	89(64%)	50(36%)	df=1,p<0.1
9.Pharmacy services:			
Effectiveness of adherence Counseling	108(78%)	31(22%)	x^2=12.617,
Availability of drugs and regimens	129(93%)	10(7%)	df=1,p<0.01
10. Prevention of new HIV infections and condoms supply:			
Availability of quality PMTCT information	65(47%)	74(53%)	x^2=11.495
Accessibility of condoms	93(67%)	46(33%)	df=1,p<0.01
11. Comprehensive care	86(62%)	53(38%)	
Expected service outcome	107(77%)	32(23%)	
Availability of PMTCT products	94(68%)	45(32%)	x^2=8.97
Staff attitudes	115(83%)	24(17%)	df=6,p<0.06
Waiting time	37(27%)	102(73%)	
Clinic environment	91(66%)	46(34%)	

*__Multiple responses were allowed.__

As indicated in table 4.3 above, the researcher also collected information on the views of the respondents on various categories of PMTCT services offered at the post pregnancy

clinic. The results showed that majority of the respondents were satisfied with pharmacy services due to availability of drugs and regimens, child healthcare and HIV screening due to clinical effectiveness or outcome and adherence counseling due to staff positive attitudes. However, a significant number of respondents were dissatisfied with various categories of PMTCT services due to inadequate privacy and confidentiality, long waiting time, inadequate partner involvement and inadequate PMTCT information and health education materials. There was a statistically significant relationship between satisfaction with PMTCT services and waiting time, pharmacy services, child healthcare and HIV screening, adherence counseling, psychosocial support services and PMTCT information and health education materials(x^2 =4.114,df=2,p<0.01; x^2 =12.617,df=1,p<0.01; x^2 =18.061,df=1,p<0.01; x^2 =5.912,df=1,p<0.02; x^2 =9.812, df=1,p<0.01 andx^2=11.495,df=1,p<0.01 respectively).This meant that respondents, who registered satisfaction with PMTCT services were promptly attended, had their children proven HIV negative, received all the required drugs and were adequately counseled by health providers with positive attitudes and counseling skills.

4.4 Factors influencing clients' satisfaction with PMTCT services in Post pregnancy care clinic at KNH.

4.4.1 Socio-demographic characteristics of respondents and clients' satisfaction

This section presented the association between age, level of education, marital status, religious background, main source of income, household income, level of knowledge and clients' satisfaction with PMTCT services. The survey findings were as shown in table 4.4 below.

Table 4.4.Association between baseline characteristics and client satisfaction with PMTCT services.

Variables	Satisfied	Dissatisfied	P value
Age:-			
Below 35	57(61%)	3 (39%)	x^2= 7.972
35 and above	38(84%)	7(16%)	df=1,p<0.01
Marital status			
Married	93(88%)	13(12%)	x^2=4.719
Single	24(73%)	9(27%)	df=1,p<0.05
Level of education			
Primary	16(73%)	6(27%)	x^2=4.099
Secondary and above	104(89%)	13(11%)	df=1,p<0.05
Parity:-			
	134(75%)	12(25%)	x^2=4.87
2 and above	84(90%)	9(10%)	df=1,p<0.05
Employment status*			
Employed	83(76%)	13(24%)	x^2=2.719
Unemployed	26(89%)	9(11%)	df=1,p<0.10
Source of income			
Self	27(71%)	11(29%)	x^2=1.442
Spouse	80(76%)	21(24%)	df=1,p>0.10
Household Income*			
>Kshs 20,000	33(79%)	9(21%)	x^2=5.849
<Kshs 20,000	35(56%)	28(44%)	df=1,p<0.02
Distance from residence to facility*			
< 10 kilometres	93(85%)	16(15%)	x^2=1.52
> 10 kilometres	18(73%)	6(27%)	df=1,p>0.10
Level of Knowledge			
Good	38(89%)	6(11%)	x^2=8.058
Average	36(58%)	26(42%)	df=2,p<0.011
Poor	20(58%)	14(42%)	

***There were missing responses.**

Table4.4 presents the results of the association between respondents' background characteristics and satisfaction with PMTCT services. The survey results indicate that being knowledgeable about PMTCT, relatively older with high monthly income, married, educated and with many children significantly influenced satisfaction with PMTCT

services(x^2 =8.058 df=2,p<0.011; x^2 =7.972,df=1,p<0.01; x^2 =5.849,df=1,p<0.02; x^2 =4.87,df=1,p<0.05; x^2 =4.719,df=1,p<0.05respectively). These results imply that clients who are relatively older, married, educated, knowledgeable and with stable income keenly adhered to PMTCT protocol, safer sexual relationships and safe infant feeding options for better outcome i.e. HIV negative status for all the HIV exposed infants.

4.4.2 Clients' related factors that influenced satisfaction with PMTCT services.

Table 4.5.Association between clients' related factors and satisfaction

Variables	Satisfied	Dissatisfied	P value
Clients' knowledge:-			
Adequate	45(69%)	20(31%)	x^2=7.648
Inadequate	34(45%)	40(54%)	df=1,p<0.01
Clients' perception			
Good quality	67(68%)	31(32%)	x^2= 7.283
Poor quality	18(44%)	23(56%)	df=1,p<0.01
Behaviors/cultural beliefs**			
Uptake of clinic services	100(72%)	39(28%)	x^2= 0.209
Self referred	80(76%)	25(24%)	df=2,p>0.10
Referred from other facilities	20(59%)	14(41%)	
Clients' financial potential*			
High income	12(60%)	8(40%)	x^2=0.460
Moderate income	38(79%)	10(21%)	df=2,p>0.10
Low income	27(73%)	10(27%)	
Clients' attitudes			
Positive attitudes	60(74%)	21(26%)	x^2=9.002
Negative attitudes or Stigma	28(48%)	30(52%)	df=1,p<0.01
Stigma /HIV disclosure			
Coping mechanism	59(65%)	31(35%)	x^2=21.411
Fear partner reaction and Stigmatization	12(24%)	37(76%)	df=1,p<0.01
Partner involvement			
Involved	60(62%)	36(38%)	x^2=9.117
Not involved	15(35%)	60(43%)	x^2=3.685
Partner support	63(45%)	76(55%)	df=1,p<0.05

***There were missing responses. **The multiple responses were allowed.**

Table 4.5presents the results of the association between clients' related factors and satisfaction with PMTCT services. The survey results indicate that counseling on HIV related stigma and HIV status disclosure, partner involvement, attitudes towards PMTCT, clients' knowledge on PMTCT, Clients' perception on quality of services and psychosocial support significantly influenced satisfaction with PMTCT services (x^2=21.411,df=1,p<0.01;x^2=9.117,df=1,p<0.01;x^2=9.002,df=1,,p<0.01;x^2=7.648,df=1,p<0.01; x^2= 7.283, df=1,p<0.01; x^2=3.685,df=1,p<0.05respectively).These results imply that properly counseled clients on HIV related stigma got relevant knowledge, good perception, positive attitudes and self-confidence that enables them involve partners during HIV status disclosure, reduce fear of partner's reaction and cope with prevailing situation in order to live positively and utilize adequately PMTCT services. The clients who successfully disclosed their HIV status to partners, family and friends gathered support to access PMTCT services without blame and recrimination.

4.4.3. Health facility related factors that influenced clients' satisfaction with PMTCT services.

Table 4.6 Association between health facility- related factors and satisfaction

Variables	Satisfied	Dissatisfied	P value
Access to PMTCT Services			
Easy	76(76%)	24(24%)	x^2=11.416
Difficult	18(46%)	21(54%)	df=1,p<0.01
Client-provider relations/ Communication			
Appropriate	57(53%)	50(47%)	x^2=24.384
Inappropriate	8(25%)	24(75%)	df=1,p< 0.01
Resources/infrastructure			
Adequate	79(89%)	10(11%)	x^2=29.973
Inadequate	23(46%)	27(54%	df=1,p< 0.01
Health providers attitudes			
Kind &polite	103(90%)	16(10%)	x^2=27.6
unkind& rude	7(35%)	13(65%)	df=1,p<0.01
Professional practice			
Appropriate	57(53%)	50(47%)	x^2=7.908
Inappropriate	24(75%)	8(25%)	df=1,p< 0.01
Waiting time			
Appropriate	27(54%)	23(46%)	x^2=29.973
Inappropriate	10(11%)	79(89%)	df=1,p< 0.01
Counseling and testing			
Adequate	78(80%)	16(20%)	x^2= 24.0
Inadequate	19(20%)	26(80%)	df=1,p<0.01
Counseling on stigma			
Adequate	58(65%)	31(35%)	x^2=14.148
Inadequate	16(32%)	34(68%)	df=1,p< 0.01
Daily services evaluation			
Essential	57(88%)	8(12%)	x^2=7.908
Not essential	50(78%)	14(22%)	df=1,p< 0.01

Table 4.6presents the results of the association between health facility-related factors and satisfaction with PMTCT services. The survey results indicate that resources and infrastructure, waiting time. Health providers' attitudes, counseling and testing, Provider-client relations and communication and counseling on stigma significantly influenced satisfaction with PMTCT services (x^2 =29.973,df=1,p<0.01; x^2 =29.973,df=1,p<0.01;

x^2 =27.6, df=1, p<0.01; x^2 =24.384, df=1,p< 0.01; x^2 = 24.0, df=1,p<0.01;x^2=14.148,df=1,p< 0.01 respectively). These results imply that clients who waited for long to be served were greatly dissatisfied with PMTCT services. This was also elaborated during the focused group discussion where clients said that waiting time was invariably long representing not just a delay but also an increase in the opportunity cost of seeking PMTCT services. This implies that essential resources and infrastructure, professional expertise, providers' kindness, politeness and effective communication are essential aspects in the provision of improved quality PMTCT services.

4.4.4. PMTCT programs related factors that influenced clients' satisfaction.

Table 4.7 Association between PMTCT programs related factors and satisfaction

Variables	Satisfied	Dissatisfied	P value
Integration/packaging			
Appropriate	79(87%)	12(13%)	x^2=16.213
Inappropriate	27(56%)	21(44%)	df=1,p<0.01
Information, education and communication strategies			
Effectiveness	45(69%)	20(31%)	x^2=13.675
Ineffectiveness	28(38%)	46(62%)	df=1,p<0.01
Professional practice			
Appropriate	57(53%)	50(47%)	x^2=7.908
Inappropriate	8(25%)	24(75%)	df=1,p<0.01
Quality PMTCT services			
High	38(75%)	13(25%)	x^2=9.445
Low	37(48%)	51(52%)	df=1,p<0.01
Free PMTCT services			
True	76(75%)	25(25%)	x^2=6.610
False	20(53%)	18(47%)	df=1,p<0.01
Psychosocial-support services			
Adequate	79(89%)	10(11%)	x^2=29.973
Inadequate	23(46%)	27(54%)	df=1,p<0.01
Referral and linkages			
Appropriate	73(80%)	18(20%)	x^2=5.999
Inappropriate	28(58%)	20(42%)	df=1,p<0.02

Table 4.7 presents the results of the association between PMTCT programs related factors and satisfaction with PMTCT services. The survey results indicate that adequate psychosocial-support services, appropriate integration and packaging of related services, high quality PMTCT services, effective information, education and communication strategies significantly influenced clients' satisfaction with PMTCT services(x^2=29.973,df=1,$p<0.01$;x^2=16.213,df=1,$p<0.01$:x^2=13.675,df=1,$p<0.01$;x^2=9.445, df=1,$p<0.01$etc respectively).This implies that the clients who participated in PMTCT program were satisfied with quality of integrated care received from the health workers, accurate information on HIV transmission obtained during infant nutritional counseling, adequate psychosocial support during peer support group meetings and counselor's support to disclose HIV positive status to their partners, families and significant other

4.4.5Clients' possible reasons for satisfaction with PMTCT services

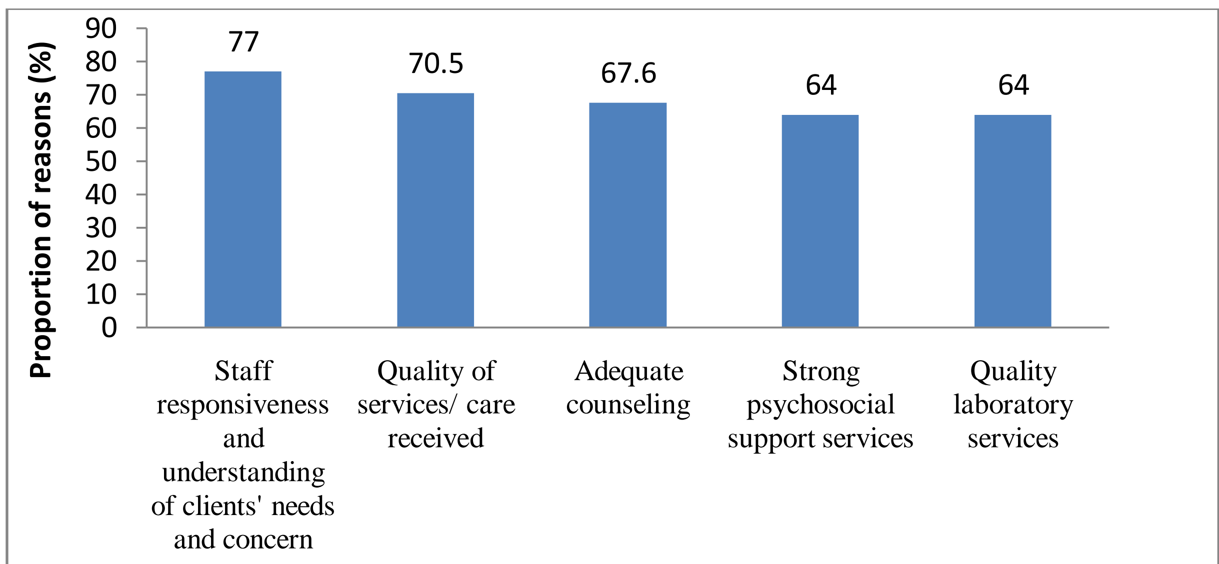

Figure4.2. A list of commonly cited reasons for satisfaction with PMTCT services at post pregnancy clinic.

Figure 4.2presents the results of the most commonly cited reasons for satisfaction with PMTCT services. The survey results indicate that majority of the clients were satisfied with PMTCT services due to staff understanding of clients' needs, desires, expectations and concerns (77%), quality of services or care received(70.5%), adequate counseling (67.6%),strong psychosocial support services(64%) and quality laboratory services(64%) as shown in figure 4.2 above.'

4.4.6. Clients' possible reasons for dissatisfaction with PMTCT services

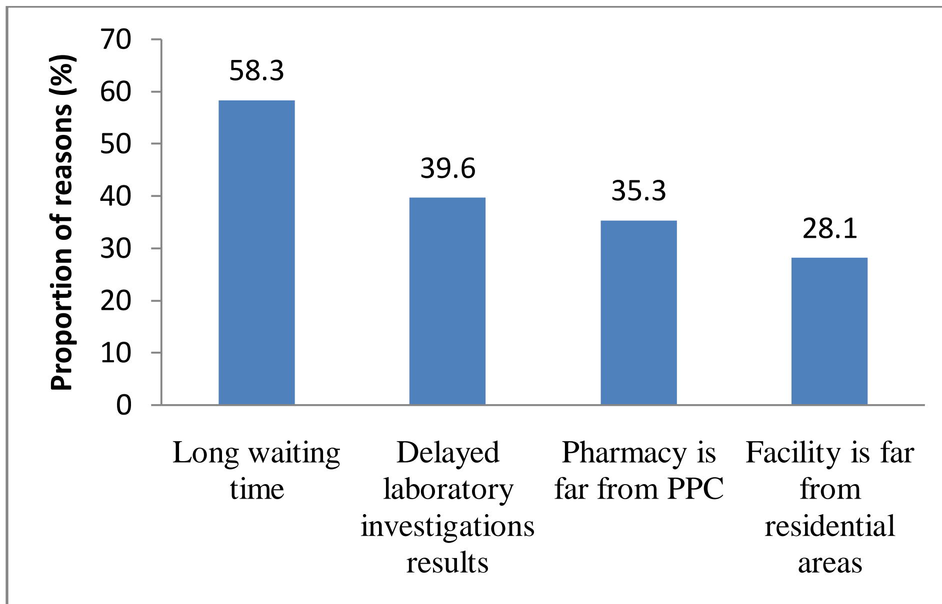

Figure 4.3. A list of commonly cited reasons for dissatisfaction with PMTCT services at post pregnancy clinic.

Figure 4.3 presents the survey results of the most commonly cited reasons for dissatisfaction with PMTCT services. The survey results indicate that more than a half of the respondents (58.3%) were dissatisfied with PMTCT services offered at post pregnancy clinic due to long waiting time while more than a quarter of the respondents (39.6%) were dissatisfied due to delayed laboratory investigations results. Furthermore, other reasons for clients' dissatisfaction with PMTCT services included pharmacy being

located far from the clinic(35.3%), facility being far from residential zones(28.1%), frequent failures of computer network, inconsistent clients flow and orderliness, inadequate counseling rooms, makeshift pharmacy, limited onsite laboratory test supplies and equipment, inadequate privacy and confidentiality, inadequate infrastructure, inadequate partner involvement, limited information on prevention of new HIV infections, lack of condom dispensers, shortage of experienced health providers, high fare and transport expenditure etc.

4.4.7. Logistic regression analysis results of clients' satisfaction.

Table 4.8: Variables found to be influencing clients' satisfaction with PMTCT.

Independent Variables	Odds Ratio 95%CI	P-value
Client's knowledge of HIV	2.65(1.95-3.34)	P<0.02
Stigma on HIV disclosure	5.97(4.91-6.65)	P<0.01
Health providers attitudes/		
Communication	9.27(8.41-10.13)	P<0.01
Waiting time	9.27(8.41-10.14)	P<0.01
Psychosocial support	9.27(8.41-10.13)	P<0.01
Resources/infrastructure	0.624	p<0.01

Table 4.8presents the results of logistic regression analysis performed to assess the effect of factors that were identified to be associated with clients' satisfaction with PMTCT services. The model revealed clients' level of knowledge of HIV, resources and infrastructure, waiting time, health providers' attitudes /provider-client communication,

psychosocial support and stigma on HIV being significant($p < 0.01$).The odd of long waiting time was 9.27 times more likely to influence clients ‘satisfaction with PMTCT services as compared to clients who were promptly served. The odd of being served in a situation of inadequate resources and infrastructure was 9.27 times more likely to influence clients’ satisfaction with PMTCT services especially when this is associated with delayed laboratory investigations, The odd of being served by health providers with negative attitudes was 9.27 times more likely to influence clients’ satisfaction with PMTCT services as compared to clients who were served by health providers with positive attitudes towards the care given. The odd of not involving clients and partners in psychosocial support services was 9.27 times more likely to influence clients’ satisfaction with PMTCT services as compared to those involved. Overall, the survey results rejected the null hypothesis that all the HIV-positive postnatal clients are not satisfied with PMTCT services offered at post pregnancy clinic.

4.5. Strategies to achieve desired level of clients' satisfaction with PMTCT services.

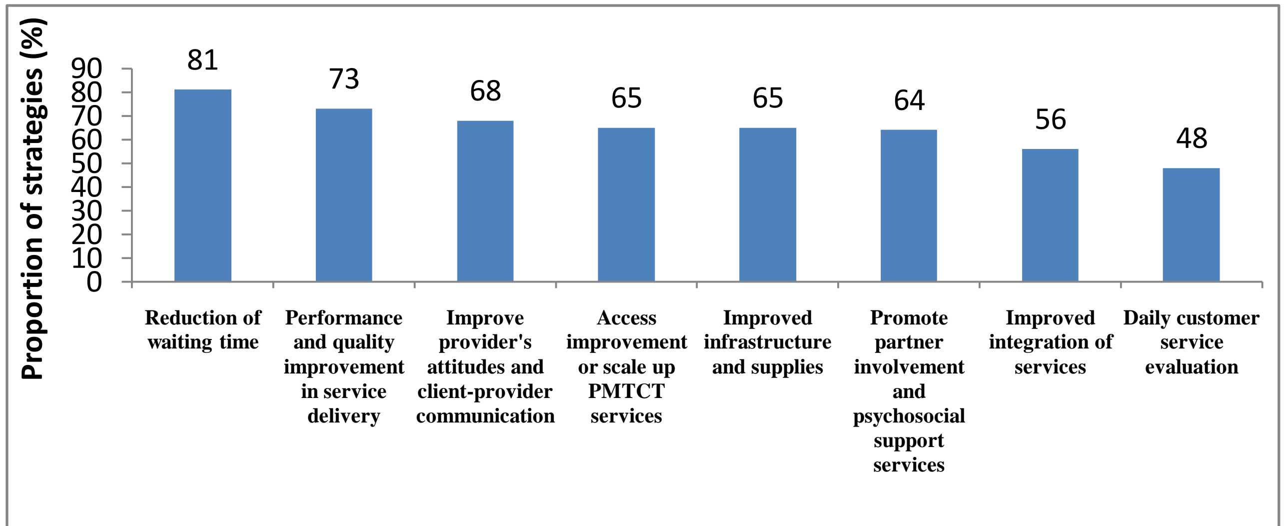

Figure 4.4.A list of strategies for achieving desired level of PMTCT clients' satisfaction.

Figure 4.4 presents the most commonly cited strategies for achieving desired PMTCT clients satisfaction such as reduction of waiting time (81%), performance and quality improvement in service delivery (73%), improvement of providers' attitudes and client-provider relationship (68%), improvement of infrastructure and supplies (65%), access improvement or scaling up PMTCT services (65%), promotion of partner involvement and psychosocial support services (64%) etc. The study findings imply that different strategies are required to achieve optimal clients' satisfaction and desired outcome in PMTCT program. The study findings concur with a similar study in Tanzania where HIV positive pregnant women were refusing to attend clinics and hospitals because of the poor environment, physical space, staff numbers and attitudes of the health workers (Sophia, 2010).

CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATION.

5.1 Discussion of the survey findings.

The survey revealed categories of PMTCT services that clients received in post pregnancy clinic such as registration and booking of PMTCT services, post pregnancy care, child healthcare, infant and young child nutritional counseling, psychosocial support services, adherence counseling, pharmacy services, infant and young child HIV testing, laboratory services, HIV and AIDS counseling and testing other family members and information, education and communication related to HIV prevention. Some of the interviewed clients felt that their privacy and confidentiality in HIV counseling and testing was not properly maintained. This is a sad state of affairs at the clinic which need urgent action to restore confidence in PMTCT services offered to the affected clients. It was also observed with concern that clients had to move outside the clinic to get some services which was rather tasking and difficulty for them because majority were accompanied by infants.

5.1.1 Clients' satisfaction with PMTCT services

It is known that counseling on PMTCT, child healthcare and quality laboratory services are the most important services out of the package of PMTCT services to be offered to all HIV- positive nursing mothers visiting post pregnancy clinics. This survey deployed a multidimensional approach to understand clients' satisfaction with PMTCT services. Overall, the survey results shows that among 139 interviewed clients only 62% were satisfied with PMTCT services while over one third(38%) was dissatisfied despite the fact that they were all given equal chance of accessing a package of free PMTCT

services at post pregnancy clinic. This is inconsistent with results of two previous studies conducted in Kenya and Tanzania where 97% and 76% of the clients respectively were satisfied with PMTCT services (Moth, *et al.* 2005; Lyatuu, *et al.*2008).

The survey results revealed that a significant proportion of clients who access PMTCT services at the facility are satisfied with the staff understanding of clients' concerns, desires and expectations, quality of services/care received, kindness and politeness of health providers, psychosocial support, laboratory services and counseling process during children HIV status disclosure. This high proportion of satisfied clients might be due to the fact that clients may not report dissatisfaction with services even when services seem to be poor. However, the survey also revealed that more than one third of the clients are not satisfied with PMTCT services due to long waiting time, lackadaisical, disrespectful attitudes and behavior of some health providers, inadequate privacy and confidentiality, inadequate couple counseling, low partner involvement, delayed laboratory investigations, inadequate PMTCT information materials, out of stock drugs, unfriendly language of few staff in the facility and cost incurred by clients when travelling to seek PMTCT services. Majority of the dissatisfied clients were repeat clients who visit the clinic often for medication, child healthcare and adherence counseling for a long time.

5.1.2. Factors influencing clients' satisfaction with PMTCT services

The survey results revealed that achievement of quality of PMTCT services was a multidimensional concept. Thus, achieving effectiveness of PMTCT required many factors and conditions that drive client's satisfaction. The survey results revealed that clients' satisfaction with PMTCT services at post pregnancy clinic was greatly influenced

by clients' socio-demographic factors, clients' related factors, facility related factors and program related factors.

5.1.2.1. Clients' socio-demographic factors

With respect to clients' socio-demographic characteristics analyzed, clients who were relatively older, married, educated, earning higher household incomes and had more than two children were more likely to be satisfied with PMTCT services as opposed to their counterparts. Indeed as postulated by many PMTCT experts, married clients or couples have higher affinity for PMTCT services that can successfully protect their children. Similarly, the survey results established that learned clients were satisfied with care received probably because they had abundant awareness of the PMTCT and how to prevent HIV infection by maintaining safer sexual relationships and other PMTCT measures. The survey results are consistent with findings of several previous studies suggesting that educated women may be more aware of the basics of HIV, knowledge of mother to child transmission of HIV, PMTCT, ARVs and opportunistic infections and therefore they will be more inclined to use PMTCT services than the less educated (Msamanga, et al. 2004).On the contrary, some clients with more years of education may falsely view themselves as more knowledgeable on PMTCT and therefore decline participation to adherence counseling sessions and this may lead to poor outcome.

The survey also demonstrated significant role played by a stable household income. The families with high household incomes registered high level of satisfaction with PMTCT services than their counterparts. The survey established that even though the cost of providing PMTCT services is theoretically free (covered by government and donor

agencies), potential clients still have to find money to pay for high costs of transport, modified nutritional materials, drugs for treating opportunistic infections, consumables and other prerequisites. This implies that clients with stable economic status (occupation) and higher monthly income are motivated to use PMTCT services more frequently than their counterparts. The survey results indicated that lack of fares had prevented clients from accessing PMTCT services promptly. This was captured during the focus group discussion where a 26 year old participant had this to say: *'Post pregnancy care is offered freely by PMTCT program and therefore clients only incur their transport cost'.*

5.1.2.2. Health facility related factors

When facility related factors were analyzed, health providers' attitudes, counseling on HIV related stigma, provider-client relations and communication registered the satisfaction while long waiting time, inadequate privacy and confidentiality registered dissatisfaction with PMTCT services. Satisfaction with PMTCT services was attributed to adequately trained health providers, availability of modern infrastructure and essential supplies such as drugs, condoms, HIV test kits, family planning products, cervical screening kits, laboratory and administrative requirements. This meant that skilful health providers were able to understand easily clients' needs, concerns, desires and expectations. Furthermore, majority of the interviewed clients were satisfied with the way health providers treated them in a friendly, respectful and empathetic manner. The clients revealed that they were respected, handled with dignity, talked to very well and accorded emotional support in all service delivery points. This was also captured during a focus group discussion where a 30 year old participant who had this to say; *'Customer is guided on where to be seen and their children'*. This implied that the clients' handling by

healthcare providers in clinical areas was good. A significant proportion of the interviewed clients were satisfied because they had positive perception of PMTCT services offered at the facility. This meant that the clients had confidence in the quality of PMTCT services offered by health providers. This was captured during the focus group discussion where a 35 year old participant had this to say: *'Some of the PMTCT services providers are good and have patience when conducting adherence counseling'*. The survey respondents revealed their willingness to return for any other episode of PMTCT services in future as well as recommending the same to friends and significant others. The survey results shows that majority of the clients (72%) were satisfied with counseling in PMTCT program. This is not consistent with a previous study conducted in South Africa where 100% of the clients were satisfied with counseling done by nurses and 80% for those seen by community volunteers (Ginwalla, *et al.* 2002).

However, a significant proportion of interviewed clients were not satisfied with the waiting time for the service at post pregnancy clinic. This was attributed to large number of clients being served in post pregnancy clinic. The issue was also captured during the focus group discussion where a 35-year old participant had this to say: *'Some of the clients were dissatisfied with PMTCT services in the clinic owing to long waiting time'*. The clients' waiting time was invariably long representing not just a delay but also an increase in the opportunity cost of seeking PMTCT services. The clients were unhappy about the long periods they were kept waiting. The clients who were on formal employment were specifically bitter because they reported that they were experiencing problems at their work places as a result of giving the same excuse all the time they visited the clinic. It could be that clients felt this way because they did not understand

what every health practitioner had to do. The clients could wait up to three hours and this was longer than recommended time of one hour (MOH, Kenya, 2004). Waiting time has been found to be a critical factor in determining clients' satisfaction with various types of health services (Mfinanga et al. 2008, Wouters et al. 2008).This is probably because waiting time is associated with quality of services provided. In the context of waiting time, the survey results concur with a study conducted in rural Bangladesh which reported that 28.2% of clients were not satisfied with the waiting time (Aldana et *al,* 2001).

5.1.2.3. PMTCT program related factors

Among the various categories of PMTCT services assessed in the program, pharmacy services, child healthcare, adherence counseling and infant and young child HIV screening registered satisfaction while comprehensive care, laboratory services, registration and appointment services registered dissatisfaction with PMTCT services. The survey results revealed that satisfied clients were among those adequately counseled on HIV related stigma in order to achieve self-confidence to adhere to lifelong treatment, disclose HIV status to partners and families, reduce fear of partner's reaction and attend promptly child healthcare clinic for best clinical outcome (HIV negative results for children born by HIV positive mothers).

The study results revealed that adequate counseling on HIV related stigma, HIV status disclosure, partner involvement, positive clients' attitudes and perception towards PMTCT services and psychosocial support registered satisfaction with care received.

In context of continued HIV-related stigma, disclosure of HIV positive status demands immense confidence and self-determination. Disclosure of HIV-positive status to the partner was usually a major condition for successful ART adherence. Husband involvement had many downsides. For example, if the client's HIV- positive status was known to the husband and assuming the husband was tested HIV negative the scenario was harmful for the client because she could easily face rejection or divorce in the absence of family and community support. The survey results revealed that clients who had fear of partners' reaction and stigmatization after confirmation of HIV positive status delayed in decision making and disclosure of HIV status to their partners, families and significant others who would support them at the time of need. The survey results also revealed that stigma reduced clients' ability to disclose HIV status and this may delay partner involvement in PMTCT. The survey report revealed that disclosure of HIV-positive status to a partner had a bearing on and an obstacle to ART adherence. The survey results revealed that clients who experienced stigma were not confident enough to use PMTCT services. These findings was consistent with a study done earlier in Kenya which revealed that where women were supported and accompanied by their male partners they were more likely to consistently visit antenatal and post pregnancy care clinics (Kiarie, *et al,* 2005).

Involved couples could easily deal with some adherence challenges in the recommended treatment regimen for life and infant feeding options. This was captured during a focus group discussion session where a 34-year old participant who had this to say; '*There is continued psychosocial support group meetings and counseling among clients and their*

partners'. This implies that clients require adequate counseling to enable them get self-confidence on how to handle HIV related stigma during decision making.

The study results shows that a significant proportion of respondents were satisfied with appropriate integration, packaging and organization of PMTCT services wholesome incidences of low quality of care, unprofessional practice, inadequacy of effective PMTCT messages and unfriendly language from certain providers registered dissatisfaction with PMTCT services. Majority of the satisfied respondents confirmed their willingness to use PMTCT services again in future and also to recommend the same services to friends and significant others. This is consistent with a study which demonstrated that when the quality of a product or service satisfied a customer, the customer returned for the same service later and also recommended the product or service to others (WHO.1996 and Kotler. 1997).

The survey results revealed that the consultation fees for all PMTCT services were paid by PMTCT program and the staff adhered to PMTCT protocol in the provision of essential free services. This was captured during a focus group discussion where a 40-year old participant had this to say; *'It was stated that all the PMTCT services will be paid by PMTCT program and that clients will only incur their transport cost'. 'So far there are no incidences of corruption reported in these services'.* Nevertheless, the survey findings revealed that clients are still not adequately satisfied with the quality of the free PMTCT services. This may be as a result of inadequate effective PMTCT messages, structures, supplies and skilled personnel for quality service delivery. The study results were inconsistent with a previous study which showed that limited access

and utilization of the PMTCT services is more likely associated with lack of the decision power and limited of control over the resources (Robert, et al. 2009).

The survey results also concur with a study conducted in Kenya which revealed many gaps in knowledge and confidence regarding the provision of pediatric HIV testing, care and treatment including pediatric HIV diagnosis protocols, drug management and child counseling (Kiragu, *et al.*2008*)*.

5.1.3. Strategies to achieve desired level of clients' satisfaction with PMTCT services.

Satisfaction with PMTCT services can be increased by understanding and addressing all the factors which may affect implementation of the PMTCT program activities. This study yielded a range of valuable clients' proposed improvement strategies to enable them achieves desired level of satisfaction with PMTCT services.

5.1.3.1 Reduction of waiting time.

The survey participants proposed for reduction of time wasted in long queues. To alley anxiety perpetuated by long waiting time, staff should always keep clients aware of what is happening at all times. The use of time keeping device and the record of such on a daily basis may only help the public health facility to improve on their service. This is an issue (time keeping devices) that has been shown to aid health personnel (Mannheimer, et al 1998). The success of this method will only be effective if supervisors perform their duties with due diligence. Reduction of clients' waiting time improved clients' satisfaction with care (Population Council Report, 1998).

Healthcare providers behavioral attributes such as respect, politeness, provision of privacy and reduction of clients' waiting time influence clients satisfaction with care (Population council Report, 1998).

The survey respondents suggested improved arrangement for the services in order to enable clients find and obtain required services easily, minimize long queues, clients' congestion and overcrowding. Clients who were well received and guided met their expectations promptly. Health providers should always give clients quality and quantity of information on all procedures in PMTCT services, avoid rushing to finish queues and provide supportive diagnostic facilities. The survey participants proposed the need for access improvement in PMTCT services and service promptness.

5.1.3.2 Performance and quality improvement PMTCT services.

The main reasons as to why survey participants chose the come to the Kenyatta National Hospital was good quality of care, affordability, quick service and proximity to clients' residence. The survey participants reported that many of the health providers adhered to PMTCT protocol in reference to HIV and AIDS care. Quality of care was a multidimensional concept. Some of the dimensions proposed by survey participants for performance and quality improvement in PMTCT services included improving existing infrastructure, facilities, environment, supplies, updating skills of healthcare providers, improving health providers' attitudes and provider-client communication, employment of adequate staff, improving accessibility of PMTCT services, promoting partner involvement, improving adherence counseling and psychosocial support services, enhancing affordability and acceptability of services, provision of essential equipment

and supplies such as drugs, kits, condoms etc. The study respondents evaluated the functioning of the current essential equipment and basic supplies at each level of PMTCT services delivery and identified certain gaps which led to dissatisfaction with PMTCT services. The study respondents registered great dissatisfaction due to delayed results of essential laboratory or radiological investigations. This concur with findings in a previous study in Tanzania where some of the reasons contributing to dissatisfaction included inadequacy in individual counseling, inadequacy of onsite test supplies and equipment and cost incurred when travelling to seek for PMTCT services from a referral or satellite health facility(Lyatuu.et al. 2008).

Consequently, the study respondents proposed the need for the PMTCT program management to provide and sustain basic diagnostic equipment and health supplies such as laboratory apparatus, reagents, HIV test kits, ART dugs, OIs drugs, condoms, pap kits, consumables etc. Similarly, a significant number of study participants also proposed the need for frequent staff seminars to enhance staff efficiency and reduce unprofessional behavior among health care providers. This is meant to improve health providers' attitudes and provider- client communication since they are expected to offer their services in a humane manner even under extreme pressure to cope with a heavy workload. The survey respondents suggested the need for adequate and effective HIV counseling and testing, care and treatment of HIV-positive mothers during prenatal and postnatal periods in order to achieve the desired outcome of the care including HIV-negative results for their infants. A major aspect of PMTCT clients' expectations was having an effective diagnosis of their infants HIV- negative status before discharge from child health clinic. Majority of the study respondents confirmed their likelihood of

returning for another episode of PMTCT services and that they were going to recommend the same to significant others and friends.

5.1.3.3 Improved integration and organization of relevant services

The study participants proposed for improved integration and organization of relevant services in order to achieve desired level of clients' satisfaction with PMTCT services. Clients expected assurance of privacy and confidentiality in PMTCT services which could be achieved by constructing appropriate physical structures to provide more private rooms in the facility. The participants also proposed that the makeshift pharmacy in the facility be fully integrated with maternity services in order to serve clients on full-time basis. Integration of quality PMTCT services and other reproductive services such as maternity services, preconception care, HTC, family planning, youth friendly services, cervical cancer screening, nutritional care, comprehensive care etc was paramount in promoting access to PMTCT services. The wider the range of services, the more satisfied the clients were likely to be, especially where services expected and supposed to be in place were provided simultaneously. Disclosure of HIV-positive status to the partner was usually an impediment to ART adherence and uptake of PMTCT services. These findings was consistent with a study done earlier in Kenya which revealed that where women were supported and accompanied by their male partners they were more likely to consistently visit antenatal and post pregnancy care clinics (Kiarie *et al.*2005).

The survey results revealed that disclosure of HIV-positive status to a partner had a bearing on and an obstacle to ART adherence. Involved couples could easily deal with some adherence challenges in the recommended treatment regimen for life and infant

feeding options. The survey results revealed that clients were given a take- home message about prescribed ART regimen for strict adherence and lifelong commitment to treatment, calendar for psychosocial support meetings and clinic return date or appointment date. The survey participants proposed the need for PMTCT counselors to continue encouraging and supporting HIV positive mothers to disclose their status to partners and families by probably involving their partners in the post-pregnancy services. This facilitated disclosure of HIV status among couples, adherence counseling, psychosocial support and reduction of stigma, discrimination and rejection associated with HIV. This proposal was also supported during the focus group discussion where a 34-year old married HIV positive lady and mother of two children had this to say: *'There is need for continued couple counseling, group psychosocial support meetings and counseling among clients and their partners'.* This implies that extra effort is required to enhance partner involvement in PMTCT services. This concur with a previous study done in Zambia which revealed that the counselors could promote male partners involvement by encouraging couple counseling and testing and psychosocial support services with profound insights(Bond, *et al.*2002).

The study results revealed that the costs of seeking healthcare were barriers to accessing PMTCT services. Poverty is a complex problem to address, but its deterrence to PMTCT services could be alleviated somewhat with mobile and home-based PMTCT services in order to save families transport and time costs. The survey respondents proposed that there was need for periodic evaluation surveys and feedback mechanisms, including other clients-responsive feedbacks to assess satisfaction with organization of services.

5.2 Conclusion:

From the survey findings it was evident that all HIV- positive respondents had equal access to free PMTCT services at post pregnancy clinic. Effectiveness of PMTCT services required many factors and conditions that drive client's satisfaction. Client satisfaction is core to quality of PMTCT services; even the most technically competent care was meaningless if it did not satisfy the potential clients. Clients' satisfaction is the desired outcomes of both the clients and stakeholders of PMTCT or EMTCT programs.

The survey results highlights on some the most important factors influencing clients' satisfaction with PMTCT services such as clients' related factors, facility related factors and program related factors. Similarly, the survey yielded a range of valuable clients proposed improvement strategies for achieving desired level of satisfaction with PMTCT services such reduction of waiting time, improved infrastructure, performance and quality improvement, provision of essential equipment and supplies, improved integration of essential services etc.

The survey results also gave insights on the need to always observe components of client satisfaction which were classified into three dimensions of satisfaction; access to care (i.e. signs and direction to treatment facility, waiting room time and clinic hours); physical environment (i.e. Cleanliness of reception area, noise level and condition of treatment space); care received (i.e. human, clinical and outcome aspects).

However, when the question asking about overall satisfaction was analyzed, more than a third of the respondents were not satisfied with PMTCT services due to long waiting time, delayed investigation results, makeshift pharmacy services, inadequate privacy and

confidentiality among other reasons. As a result of high number of dissatisfied study respondents, the researcher concluded that clients' satisfaction in post pregnancy clinic was sub-optimal.

Nevertheless, the study results have proven that a large proportion of the clients registered satisfaction with PMTCT services. The study results showed that the level of statistical significance (p-value) in various data analyses was below the set cut-off value of 0.05.This implied that the same scenario could frequently happen henceforth. The results form the basis for rejecting the null hypothesis and adopting the alternative.

5.3 Programmatic recommendations.

The survey revealed the need to develop and implement specific program interventions that could yield substantial improvement in clients' satisfaction with PMTCT services and desired outcomes too. Additionally, it emerged from the survey findings that there was yet a lot to be done by leading agencies in the campaign against HIV/AIDS such as NASCOP, NAC, UNAIDS, CDC, World Bank etc. Furthermore, the survey generated important insights on a range of clients-friendly strategies for performance and quality improvement in PMTCT services delivery and also devised ways of dealing with upcoming challenges in the provision of satisfying PMTCT services such as:-.

1. PMTCT program to develop strategies that ensure services are provided promptly and efficiently in order to reduce clients' waiting time and cost of seeking PMTCT services as well as avoiding delayed diagnostic investigations.

2. NASCOP/PMTCT program should develop and facilitate implementation of performance and quality improvement standards in all facilities to ensure quality

of HIV counseling and testing services as indicated in the national PMTCT guideline.

3. Deployment of the required number healthcare providers with expertise and essential resources to cope with the increased demand for PMTCT services. Whenever possible this should be coupled with training relevant healthcare providers and community volunteers or peer mentors to compliment the health care efforts. This move would reduce the waiting time during service delivery.

4. Augment community/public awareness activities aimed at educating and supporting potential clients for PMTCT program, to inform them about HIV/AIDS pandemic and consequently expand uptake of the available PMTCT services. Since majority of respondents are accessing televisions, radios and mobile phones, the information dissemination channels need to shift to using these gadgets to reach a larger audience or public in order to increase uptake of PMTCT services.

5. Decentralize PMTCT services to bring services closer to public in order to reduce the cost related to travel and time away from daily work. PMTCT program may consider utilizing mobile clinics or the services of trained CHWs to encourage prompt attendance of PMTCT services.

6. PMTCT program to encourage male/partner involvement in all PMTCT facilities. Health providers in PMTCT facilities should schedule regularly psychosocial support group meetings among registered PMTCT clients and peer mentors should help the clients who have problems of HIV status disclosure, ARV

adherence, family and social problems. The clients learn from one another on how different people live positively with HIV, strategies to achieve positive living and HIV status disclosure.

7. PMTCT program to strengthen the capacity of healthcare workers so that they can provide quality care to potential customers. Continuous staff induction and mentorship courses on customer care can improve attitudes and behaviors of healthcare workers in order to provide care with due respect and courtesy.

8. PMTCT program to computerize all integrated services or devise better ways of keeping clients records and retrieving them promptly during clients consultation sessions i.e. files, investigation results etc.

9. PMTCT program to ensure that all the outpatient PMTCT services are provided in one session or under one roof for the convenience purpose. Pharmacy services should be provided in the facility on permanent-based operations and not on make-shift basis. PMTCT program management needs to ensure clients' comfort in the service delivery points by providing comfortable seats and other relevant facilities. In the survey, the clients proposed installation of water dispensers to enable clients' access safe cold/warm drinking water, tea, coffee and porridge at a subsidized cost and this will ease taking of drugs during waiting time.

10. PMTCT program to maintain high standards of environmental cleanliness and availability of adequate utilities (water, sanitation and lighting) and security in all PMTCT facilities.

11. NASCOP/PMTCT program to encourage forums where members of public can share ideas on prevention and control of HIV/AIDS and also encourage PMTCT clients to embrace condom use or prevention with positive.

12. PMTCT services to be provided in an environment that guarantees privacy and confidentiality for mothers/partners and family members in all service delivery points.

13. PMTCT program to support family-based HIV testing approaches so that HIV-positive family members can be identified and referred timely for care.

14. Government should provide free MCH services in order to encourage early booking for prenatal care and by so doing consequently expand uptake of PMTCT services etc.

15. The PMTCT management team should if possible plan for periodic forums where clients are encouraged to air their views about the services they receive from the Post pregnancy clinic.

5.4 Further researches:

Further studies should be conducted in future to yield more insights on the causes for clients' dissatisfaction with PMTCT services:-

1. A survey to determine challenges of performance and quality improvement in PMTCT.

2. A survey to determine factors contributing to low male involvement in PMTCT.

3. A study to determine effectiveness of Kenyan publicity of PMTCT messages.

4. Periodic surveys to assess client satisfaction with PMTCT services.

5. A study to determine interventions to increase uptake of PMTCT services

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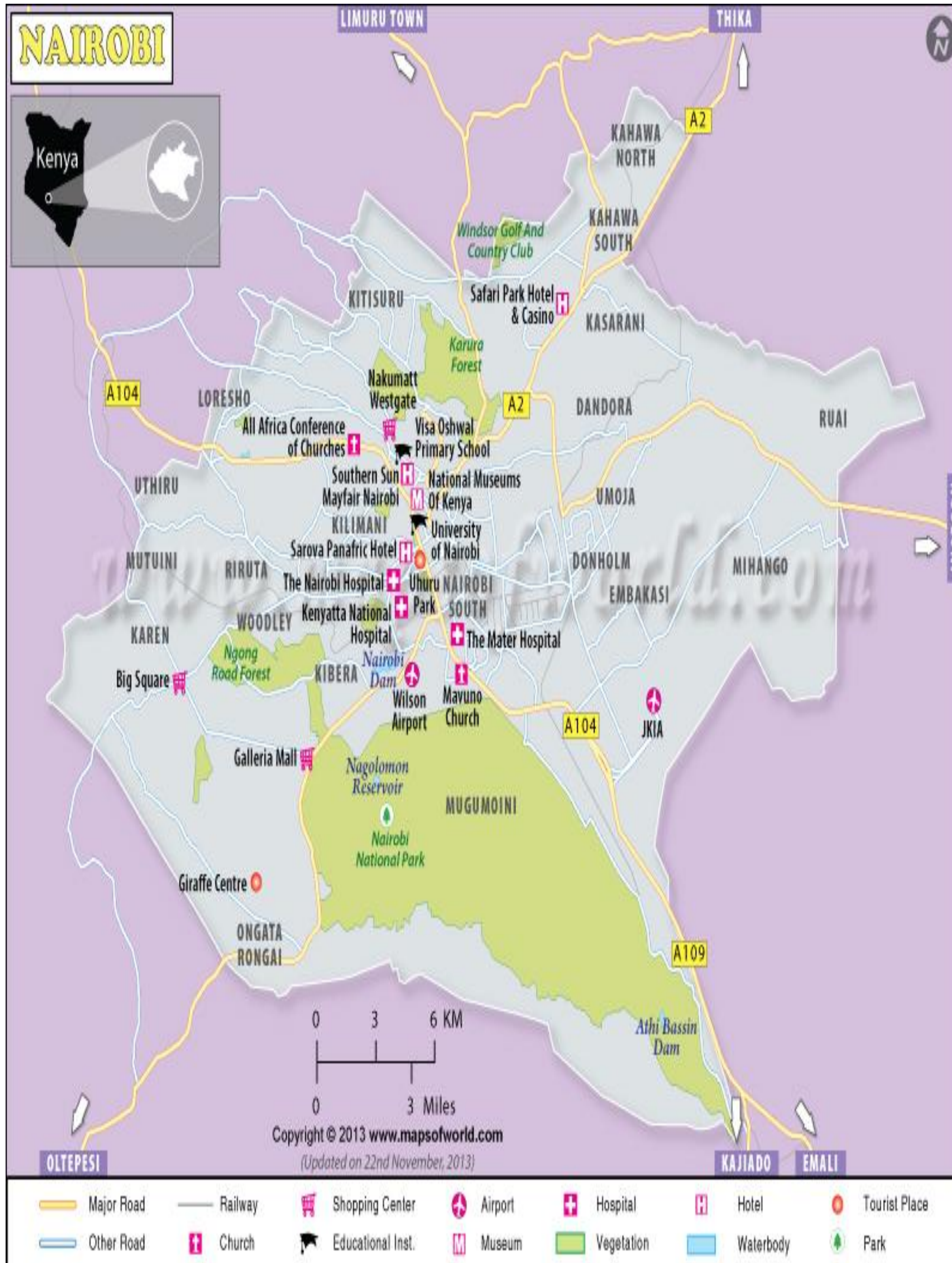
APPENDICES

Appendix 1: Study area-Location of Kenyatta National Hospital, Nairobi, Kenya.



Appendix 2: RESEARCH TOOLS.

Appendix 2a: Informed consent form (English)

Study title-Assessment of HIV-positive postnatal clients' satisfaction with prevention of mother-to-child transmission services at Kenyatta National Hospital, Nairobi, Kenya

1. **Principal Investigator:** J.M.Gikonyo -MPH student, School of Public Health, Kenyatta University.

   Contact Address: Telephone no. 0721577256 email: mwangiko@yahoo.com.

2. **Supervisors:-**

   a). Dr Daniel .N. Akunga (Department of Environmental sciences, KU) Tel. no.0722552157

   b). Prof James .N. Kiarie (Department of Obs/Gynae, UoN) Tel. no.0733771288

3. **KNH-UON Ethics and Research Committee** Tel. No. 020-2726300 ext44355/44102.

Researcher's Statement. I am asking you to participate in this survey for assessing clients' satisfaction with services for interventions to reduce mother to child transmission of HIV/AIDS. The purpose of this study is to seek for answers to questions related to clients' satisfaction and dissatisfaction with services for prevention of mother to child transmission of HIV. The survey targets only the clients receiving services at post pregnancy clinic. Participation is voluntary and information obtained will be treated confidentially. If you need assistance to fill the questionnaire, you will be given by the research Assistants. Declining to participate in the survey will not damage client-provider relationship in the service delivery point(s).

Participant's Statement. I have had a chance to ask questions for clarity of purpose. I understand that participation in the study does not entail financial benefit. I understand my treatment will not be compromised even if I decline or withdraw from the study. Having understood the above, I voluntary agree to participate in the study. I have done so under no coercion whatsoever.

Participant's Signature/ Thumb print……………….................................Tel.......................................

Assistant's Name/Signature…………………………………………….Date…................................

Appendix 2b:Maelezo ya mteja na kibali kuhusu utafitihuu.

Uchunguzi kuhusu kulidhishwa na huduma ya wazazi wanaoishi na virusi vya ukimwi na vile wanavyoweza kuzuia maambukizi kwa watoto wakati wauzazi katika hospitali kuu ya Kenyatta, Nairobi, Kenya.

Mtafiti mkuu: Mr J.M. Gikonyo (Mwanafuzi wa MPH, Chuo Kikuu cha Kenyatta).

Nambari ya simu-0721577256.

Wasimamizi;

1. Daktari D N.Akunga (Chuo kikuu cha Kenyatta) Namba ya simu-0722552157.
2. Profesa James Kiarie (Chuo kikuu cha Nairobi) Namba ya simu-0733771288.
3. Kamitii ya utafitikatiya Chuo kikuu cha Nairobi na Hospitali kuu ya Kenyatta.

Nambali ya simu (254-020) 2726300 ext 44355/44102).

Maelezo ya mtafiti:

Nawaomba mshiriki katika utafiti huu wakudadisi huduma ya kupunguza maambukizi ya virusi vya Ukimwi katika watoto kupitia wazazi wao wakati wakuzaliwa.Utafiti huu utasaidia kushambua mambo yanayombolesha ao kudunisha huduma ya kuzuia maambukizi ya virusi vya Ukimwi kwa watoto wakati wakuzaliwa na malezi.Mwenyekuhusishwalazimaajitolee. Mambo yatakayotolewa na wateja wakati wa utafiti huu yatahifadhiwa kisiri. Watafiti wasaindizi watasaidia wateja wasioweza kuandika majibu katika fomu walizopewa wajaze.

Kutokubali kuhusishwa hakutadhulumu utangamano kati ya wateja na wafanyikazi katika vituo vya huduma hii.

Maoni ya mteja: Nimekuwa na wakati wakuuliza maswali na maelezo kuhusu utafiti huu. Nimeelewa kwamba nawezakukataa kuhusishwa bila kutatiza matibabu yangu na kwamba hakuna malipo ya pesa. Baada ya kuelewa vilivyo nimekubali kuhusishwa bila kushulutishwa kwa vyo vyote.

Sahihi ya mteja/Alama ya kidole…………………….Nambari ya simu………………….

Jina/Sahihi ya mtafiti msaidizi…………………….....Tarehe………………….................

Questionnaire form

Client's personal data and knowledge on HIV/AIDS/PMTCT:

1. How old are you?(a) Less than 15 years [ ] (b).5-19 years [ ] (c).20-24 years [ ] (d).25-29 years [ ] (e).30-34 years [ ] (f).35-39 years [ ] (g). 40 and above [ ]

2. What is your gender? (a)Female [ ] (b) Male [ ]

3. What is customer base or type of customer in this service?

(a)Regular female customer [ ] (b) Male partner to customer [ ]

(c) Relative caregiver [ ] (d) Non- relative caregiver [ ]

4. What is your religion? (a)Christian [ ] (b) Muslim [ ] (c) Hindu [ ]

Other(specify)…………………………………………………………………………………

5. What is your marital status? (a) Single [ ] (b) Married [ ] (c) Widowed [ ]

(d) Separated [ ] (e) divorced [ ]

6. How many times have you given birth (Parity)?(a) 0 -1[ ] (b) 2 -5 [ ] (c) 6 and above[ ]

7. What is your level of education? (a).None [ ] (b). Primary [ ] (c).Secondary[ ]

(d). College [ ] (e). University []

8. What is your employment status? (a) Unemployed [ ] (b) Employed part-time (casual [ ] (c) Employed full-time or permanent [ ] (d) Retired [ ] (e) Student [ ](f) Housewife [ ] (g) Houseman [ ] (h) Prefer not to answer [ ]

9. What is your approximate net family monthly income (Ksh)?

(a) Above 20,000[ ] (b) 15,000-20,000 [ ] (c) 10,000-14,999[ ] (d) Below 10,000[ ]

10. Who pay the house rent? (a) Self [ ] (b) Husband [ ]

(c) Boyfriend/ partner [ ] (d) NGOs/ Good Samaritan [ ]

(e) Other (specify)……………………………………………………………………...............

11. How long have you used PMTCT services in KNH? (a) Less than 3 months [ ] (b) At least 3 months but less than 6 months [ ](c) At least 6 months but less than 1 year[]

(d) At least one year but less than 2 years [ ] (e) Above 2 years [ ]

12. How frequently do you use our PMTCT service in KNH? (a) Weekly [ ] (b) Monthly [ ] (c) 2 to 3 monthly [ ](d) 4 to 6 months [ ](e) Once/ twice per year[ ]

13. What is the location of your Residence?

(a) If you reside in Nairobi the indicate estate/Area's name**…………………………**

(b) If you reside outside Nairobi then indicate District...

14. Specify the characteristics of the people living in your house (tick where applicable.

(a) Nuclear family members [ ] (b) Relatives [ ] (c). House help [ ] (d) Friends or good Samaritan [ ] (e) others specify. ………………………………………..

15. Describe the nature of your Assets?:-(a).Domestic items [ ] (b). Radio/Television[ ] (c). Fridge [ ] (d).Vehicle[ ] (e). Parcel of land [ ] (f). Own Home [ ]

Others specify…………………………………………………………………..............

16. What is your source of water?

(a) . Own metered tape water [ ] (b).communal tap[ ] (c). bore hole water[ ]

(d) Own roof catchment's water [ ] (e) From River, lake, pond etc[ ](f)Buy water[ ] (d)Friends[ ] Others specify…………………………………………...................

17). Have you ever heard or read about HIV and AIDS? Yes [ ]

No [ ](Explain)…………………………………………………………….................

18).What is HIV?...

19).What is AIDS?...

20).Have you ever visited VCT for HIV counseling and testing? Yes [ ]

No [ ](Explain)…………………………………………………………...................

21) What are the modes of HIV and AIDS transmission?

a)………………………………………………………b)…………………………………

c)………………………………………………………d)…………………………………

22). In what ways can one avoid HIV infection?

a)………………………………………………………b)…………………………………

c)……………………………………………………….d)…………………………………

23).What are the ways to prevent mother to child transmission of HIV/AIDS?

a)…………………………………………………….b)………………………………..

c)……………………………………………………..d)……………………………......

24). Where was mother's HIV- positive status established?

In KNH, specify………………………. Outside KNH, specify……………………..

25).Do you get adequate supply of condoms and when needed? Yes [ ]

No [ ](Explain)…………………………………………………………......................

26).How long have you been on ARVs/ART?(a) Less than1 year[](b) More than1year[]

27). Have you and your partner been seeking for the following services in KNH after knowing your HIV- positive status?

Aspects of assessment	Yes=1	No=0
HIV counseling and testing of partners and children		
Psychosocial-support counseling		
Family planning		
Pre- conception care		
Antenatal care		
Delivery or maternity care		
Post pregnancy care		
Infant and young children care		
Nutritional counseling		
Comprehensive care		
Medical care		

28).What made you prefer seeking PPC/PMTCT services in KNH?

Aspects of assessment	**Yes**	**No**
Quality and specialized care		
Affordability , accessibility and low cost of care		
Proximity to my residence or home		
Quick and prompt health care service		
I usually attend for gynecological care		
I was referred from another health facility		
Self referral during antenatal care		
Technical competency of PMTCT staff or Health workers		
Appropriate infrastructure for PMTCT program		
Availability and adequate supply of relevant resources		

No(Explain)…………………………………………………………………………………....

29).Who accompanies you during PPC/PMTCT appointment clinic?

Specify your relationship…………………………………………………

30).When did you start accessing and utilizing PPC/PMTCT services in KNH?

a). During previous childbirths[ ] b). During ANC booking for the last pregnancy [ ]

c).During last childbirth in maternity ward [ ] d). Others specify…………………..

31. What is your infant feeding option?

a). Exclusive breastfeeding for at least 6 months[ ] b). Replacement feeding [ ]

c). Mixed feeding [ ]

32). Have you and your infant(s) completed course of ARV drugs for PMTCT? Yes[] No[]If 'Yes', what was the purpose for taking the ARV drugs?..

a). Prophylaxis i.e. Preventing mother to child transmission of HIV[ ]

b) Treatment i.e. taking ARV drugs to promote health for life [ ]

c). I don't know [ ]

33). Which pharmacy in KNH supplies you with ARV drugs?……………….........

34).What other PMTCT related services have you been receiving in KNH? a)……………………………………………….b)……………………………………

c)…………………………………………...d)……………………….................

35).How do you rate the cost and affordability of PPC/ PMTCT services in KNH?

Aspects of assessment	Very Expensive	Fairly Expensive	Cheap
Antenatal booking and consultation			
Return visits and transport			
ARV/ART and other drugs			
Admission and delivery services			
Consultation at PPC			

36).Have you been paying for antenatal care (ANC) services in KNH? Yes[ ]

No [ ](Explain)……………………………………………………………..

37) Have you been paying for post pregnancy (PPC) services in KNH? Yes [ ]

No [ ](Explain)……………………………………………………………

38).a. Was it easy to locate antenatal clinic/labor ward/maternity ward? Yes [ ]

No [ ] (Explain)……………………………………………………………

b. Is **it easy to access and utilize PMTCT services in KNH?** Yes [ ]

No [ ](Explain)…………………………………………………….........................

39). Do you find PPC/PMTCT services being provided in an environment that guarantees Privacy and confidentiality in KNH? Yes [ ]

No[ ](Explain)………………………………………………………………………………

STRUCTURE:

40).How do you rate the condition of venues where PPC/ PMTCT services are delivered?

Aspects of assessment	**Excellent**	**Good**	**Fair**	**Poor**
Location of sign-posts				
Easy to locate PMTCT site				
Cleanliness of facility				
Noise control measures				
Security control measures				
Clients' comfort reassured				
Facility lighting				
Clean water, sinks and toilets				

Give comments……………………………………………………………………........

41).What is the venue related barriers or challenges hampering delivery of PPC/PMTCT services?

Aspects of assessment	**Yes=1**	**No=0**
Physical environment/space for PMTCT services		
Laboratory and radiology facilities		
Computer facilities in cash point and reception		
Consultation and Delivery facilities		
Accommodation facilities		
Pharmacy facilities		
Toilet facilities		
Furniture facilities		
Clear sign and direction to the next stage/facilities		
Water supply		
Power supplies and lighting		

No (Explain)……………………………………………………………………..............

42).Where did you pay for the antenatal, maternity and post pregnancy services?

Aspects of assessment	Yes =1	No=0
Within or next to the service delivery site		
Far from service delivery site		

No (Explain)………………………………………………………………………..............

PROCESS:

43). How would you rate the following aspects of the PPC/PMTCT service delivery process?

Aspects of assessment	Excellent	Good	Fair	Poor
Reception of clients				
Priority assessment and client care				
Client flow and orderliness				
Staff readiness and attentiveness				
Client's privacy and confidentiality				
Service promptness				
Staff treat clients in a friendly, respectful and courteous manner				
Staff- client's communication				
Client's level of comfort				
Staff technical competency				
Client's satisfaction				

Give comments……………………………………………………………………………

44).How did you pay for the antenatal, maternity and post pregnancy services?

Aspects of assessment	NHIF	CASH	PMTCT Invoice/ Exempted
Antenatal clinic booking			
Antenatal care visits			
Maternity care on discharge from ward			
Postnatal or Post pregnancy care visits			

Give comments…………………………………………………………………....................

45). what are your possible reasons for not paying for the PPC/PMTCT services?

Aspects of assessment	Yes=1	No=0
PMTCT services are offered freely by government		
A Non- governmental organization paid for me		
I was exempted by KNH- PMTCT program		
I don't know the reason		

No (Explain)…………………………………………………………………………...

46). How do you rate the charges for the following PPC/PMTCT services as compared to other hospitals?

Aspects of assessment	Very high	Fairly Low	I don't Know	N/A
Registration and consultation				
Laboratory				
X-ray services				
Outpatient services				
Inpatient services				
Pharmacy services				
Administration services				

Give comments ………………………………………………………………………....

47) How would you rate PPC/PMTCT services on the following aspects?

Aspects of assessment	Excellent=4	Good=3	Fair=2	Poor=1
Staff Responsiveness and helpfulness				
Staff understanding of clients' needs				
Clear staff-clients communication				
Healthcare providers' attitudes				
Privacy and confidentiality				
Relevant Facilities				
Partner involvement				
Staff- client time utilization				
Client's choice of options				
Psychosocial support care and linkages				
Registration and payment process				
Overall care received				
Value for money spent for services				

Give comments……………………………………………………………………….....

48). Did clinicians discuss with you, your condition and treatment plan? Yes [ ]

No [ ](Explain)…………………………………………………………………………..

49).How do you rate the service rendered by the staff?

Cadre	Excellent	Good	Fair	Poor
Support Staff				
Record Officers				
Cashiers				
Midwives /Nurses				
PMTCT counselors				
Laboratory Staff				
Clinicians				
Pharmacy Staff				

If the rate is 'Poor' explain…………………………………………………………......

50).What did you like about PPC/PMTCT services?

a)…....................b)………................c)………………….....d)…………………………

OUTCOME:

51). Does KNH PMTCT-UON program provide good customer services?

1. Strong agree { } 2. Agree { } 3.Neutral { } 4. Disagree { } 5. Strong disagree { }.

Please tell us why you feel that way………………………………………………..................

52). How often does KNH-UON PMTCT program customer service exceed expectation?

1. Very frequently { } 2. Frequently { } 3.Not Sure { } 4.Infrequently { }

5. Very infrequently { } Please tell us why feel that way…………..................................

53). To what extent does KNH-UON PMTCT program provides customer service that exceeds expectation? 1. To very great extent { } 2.To great extent { }

3. To some extent { }4. To little extent { } 5. To very little extent { }

Please tell us why you feel that way………………………………………..........................

54). What is your overall satisfaction rating with PPC/PMTCT services in KNH?

1. Very dissatisfied { } 2. Somewhat dissatisfied { } 3. Neither satisfied nor dissatisfied { }4. Somewhat satisfied { } 5. Very satisfied { }

Please tell us why you feel that way…………………………………………………..............

55). How likely are you to seek PPC/ PMTCT services again from KNH?

1. Very unlikely { } 2. Somewhat unlikely { } 3. Neither unlikely nor likely { }

4. Somewhat likely { } 5. Very likely { }

56). How likely are you to recommend PPC/PMTCT services to a friend or colleague? 1. Very unlikely { } 2. Somewhat likely { } 3.Neither neither likely nor Unlikely { } 4.Somewhat likely { } 5. Very likely { }

Please tell us why you feel that way…………………………………………………........

57). What are your possible reasons for feeling satisfied?

Aspects of assessment	Yes=1	No=0
Staff understands client's needs/expectations		
Quality of the service /care received		
Service promptness or less waiting time		
Quick staff responsiveness and helpfulness		
Waiver of consultation fees in PPC		
Strong psycho- social support		
Quality laboratory services		
Integrated MCH services		
Improved infrastructure		
Improved administrative services		
Other reasons		

No (Explain) ………………………………………………………………....................

58). what are your possible reasons for dissatisfaction?

Aspects of assessment	Yes=1	No=0
Long waiting time		
Negative attitudes of healthcare providers		
Shortage of counselors		
Inadequate counseling		
Inadequate privacy and counseling rooms		
Limited laboratory facilities		
Shortage of supplies e .g tests kits, consumables etc		
Some investigations results are delayed		
High cost of accessing PMTCT services		
Pharmacy is far from ANC/PPC sites		
Facility far from residential areas.		
Other reasons		

Yes (Explain)……………..............................No (Explain)…………………...

59). Do you have any suggestions for improvement of PPC/PMTCT? ….................

NB: Research Assistant comments…………………………………………………........

FOCUSED GROUP DISCUSSION CHECKLIST:-

1. What are your perceptions of the quality of PPC/PMTCT services?

..

2. What are your views on health-providers' attitudes toward PPC/PMTCT services?

..

3. What are your views on customer satisfaction on the following aspects?

(a) Physical environment………………………………………………

(b)Staff competence and hospitality………………………………..

(c)Customer handling……………………………………………….....

(d)Psychosocial environment……………………..............................

(e)Cost of services……………………………………….....................

(f)Form(s) or practice(s) of corruption…………………………..............

4. What is your overall satisfaction with outcome in PPC/PMTCT service delivery?

…………………………………………………………………….....................

5. What did you not like in PPC/PMTCT service delivery?

……………………………………………………………………........................

6. What are your suggestions for PPC/PMTCT services improvement to achieve desired customer satisfaction?

………………………………………………………………………………..