

**EFFECTS OF STIGMA ON UPTAKE OF ANTIRETROVIRAL THERAPY AMONG
WOMEN ATTENDING PREVENTION OF MOTHER-TO-CHILD TRANSMISSION
CLINICS IN RACHUONYO NORTH SUB-COUNTY, KENYA**

BY

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DECLARATION

This research project is my original work and has not been presented for any award in any other University.

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DEDICATION

I dedicate this work to my wife Maureen Akeyo and the singer-Asaph for their support and encouragement.

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TABLE OF CONTENT

DECLARATION.....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENT.....	iv
TABLE OF CONTENT.....	v
LIST OF FIGURES.....	x
LIST OF TABLES.....	xi
LIST OF ABBREVIATIONS AND ACRONYMS.....	xii
ABSTRACT.....	xiv
CHAPTER ONE	1
INTRODUCTION.....	1
1.1 Background of the Study	1
1.2 Statement of the Problem.....	6
1.3 Purpose of the Study	7
1.4 Objectives of the Study	7
1.5 Research Questions.....	7
1.6 Significance of the Study	8
1.7 Limitations of the Study.....	8
1.8 Delimitations of the Study	9
1.9 Basic Assumptions of the Study	9

1.10 Definition of Significant Terms used in this Study	9
1.11 Organization of the Study	10
CHAPTER TWO	11
LITERATURE REVIEW	11
2.1 Introduction.....	11
2.2 HIV and AIDS Stigma in PMTCT Settings: Global Perspectives.....	11
2.3 Enacted Stigma and Uptake of Anti-Retroviral Therapy in PMTCT Clinic	12
2.4 Anticipated Stigma and Uptake of Antiretroviral Therapy in PMTCT Clinic	15
2.5 Perceived Community Stigma and Uptake of ART in PMTCT Clinic	18
2.6 Self Stigma and Uptake of ART in PMTCT Clinic.....	21
2.7 Theoretical Framework.....	23
2.8 Conceptual Framework.....	25
2.9 Summary of the Literature Review.....	26
2.10 Knowledge Gap	27
CHAPTER THREE	29
RESEARCH METHODOLOGY	29
3.1 Introduction.....	29
3.2 Research Design.....	29
3.3 Target Population.....	29
3.4 Sampling Procedure and Sample Size	30

3.4.1 Sample Size.....	30
3.4.2 Sampling Procedure	31
3.5 Research Instruments	32
3.5.1 Pilot Testing	33
3.5.2 Validity of the Instrument.....	34
3.5.3 Reliability of the Research Instrument	34
3.6 Methods of Data Collection.....	35
3.7 Methods of Data Analysis.....	35
3.8 Ethical Consideration.....	35
CHAPTER FOUR.....	37
DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION	37
4.1 Introduction.....	37
4.2 Response Rate	37
4.3 Demographic Information.....	38
4.3.1 Age.....	38
4.3.2 Marital Status of Respondents	38
4.3.3 Religion of the Respondents	39
4.4 Enacted stigma and uptake of Anti-Retroviral Therapy	40
4.4.1 Experiences of Enacted Stigma Among Women Attending PMTCT	40
4.4.2 Enacted Stigma and Time of Medication.....	43

4.4.3 Influence of Enacted Stigma on Dosage Requirements.....	45
4.4.4 Influence of Enacted Stigma on Clinical Appointments Missed	47
4.5 Anticipated stigma and uptake of Anti-Retroviral Therapy	49
4.5.1 Experiences of Anticipated Stigma among Women Attending PMTCT	49
4.5.2 Influence of Anticipated Stigma on Time of Medication	52
4.5.3 Influence of Anticipated Stigma on Dosage Requirements.....	53
4.5.4 Influence of Anticipated Stigma on Clinical Appointments Missed	55
4.6 Perceived Community Stigma and uptake of Anti-Retroviral Therapy.....	57
4.6.1 Experiences of Perceived Community Stigma Among Women Attending PMTCT	57
4.6.2 Influence of Perceived Community Stigma on Time of Medication	59
4.6.3 Influence of Perceived Community Stigma on Dosage Requirements.....	61
4.6.4 Influence of Perceived Community Stigma on Clinical Appointments Missed	62
4.7 Self Stigma and Uptake of Anti-Retroviral Therapy	63
4.7.1 Experiences of self stigma among women attending PMTCT	63
4.7.2 Influence of Self Stigma on Time of Medication	66
4.7.3 Influence of Self Stigma on Dosage Requirements	68
4.7.4 Influence of Self-Stigma on Clinical Appointments Missed	70

CHAPTER FIVE	73
SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS.....	73
5.1 Introduction.....	73
5.2 Summary of Findings.....	73
5.3 Conclusions.....	75
5.4 Recommendations.....	75
5.5 Contribution to the body of Knowledge	77
5.6 Suggestions for Further Research	77
REFERENCES	79
APPENDICES	96
APPENDIX 1: QUESTIONNAIRE FOR RESPONDENTS	96
APPENDIX II: INTERVIEW GUIDE FOR KEY INFORMANTS	101
APPENDIX III: LETTER OF INTRODUCTION	104
APPENDIX IV: RESEARCH AUTHORIZATION LETTER FROM UNIVERSITY OF NAIROBI.....	105
APPENDIX V: LETTER OF AUTHORIZATION BY NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION.....	106
APPENDIX VI: RESEARCH CLEARANCE PERMIT	107

LIST OF FIGURES

Figure 1.1Trend in Estimated Number of People Living with HIV in Kenya.....	5
Figure 2.1Conceptual Framework	25

LIST OF TABLES

Table 2.1 Types of variables used.....	26
Table 3.1 Target population.....	30
Table 3.2 Sample size determination.....	32
Table 4.1 Questionnaire Response Rate.....	37
Table 4.2 Marital Status of Respondents.....	38
Table 4.3 Religion of the respondents.....	39
Table 4.4 Education Levels of respondents.....	40
Table 4.5 Experiences of Enacted stigma.....	41
Table 4.6 Influence of enacted stigma on time of medication.....	44
Table 4.7 Influence of enacted stigma on Dosage.....	46
Table 4.8 Influence of enacted stigma on clinical appointments missed.....	48
Table 4.9 Experiences of Anticipated Stigma.....	50
Table 4.10 Influence of Anticipated Stigma on Time of Medication.....	52
Table 4.11 Influence of Anticipated Stigma on Dosage.....	54
Table 4.12 Influence of Anticipated Stigma on Clinical Appointments Missed.....	55
Table 4.13 Experiences of Perceived Community Stigma.....	57
Table 4.14 Influence of Perceived Community Stigma on Time of Medication.....	59
Table 4.15 Influence of Perceived Community Stigma on Dosage.....	61
Table 4.16 Influence of Perceived Community Stigma on Clinical Appointments Missed.....	62
Table 4.17 Experiences of Self Stigma.....	64
Table 4.18 Influence of Self Stigma on Time of Medication.....	67
Table 4.19 Influence of Self Stigma on Dosage.....	69
Table 4.20 Influence of Self Stigma on Clinical Appointments Missed.....	71
Table 5.1 Contribution to Knowledge.....	77

LIST OF ABBREVIATIONS AND ACRONYMS

ARV:	Antiretroviral drugs
AIDS:	Acquired Immuno Deficiency Syndrome
ANC:	Antenatal Clinic
ART:	Antiretroviral Therapy.
CCC:	Comprehensive Care Unit
CDC:	Centers of Disease Control and Prevention
CGHR:	Center of Geographic Health Research
DASCO	District AIDS and STDs Control Coordinator
HAART:	Highly Active Antiretroviral drug Therapy
HIV:	Human Immunodeficiency Virus
HDSS:	Health and Demographic Surveillance System
ICRW:	International Center for Research on Women
IPPF	International Planned Parenthood Federation
KEMRI:	Kenya Medical Research Institute
KAIS:	Kenya Aids Indicator Survey
MSF:	Médecins Sans Frontières (MSF) International
MTCT:	Mother-to-Child Transmission
NASCOP:	National Aids and STI Control Program
NACOSTI:	National Commission for Science and Technology and Innovation
NCPD:	National Council for Population and Development
OHRP:	Office of Human Research Protections
PDR:	People's Democratic Republic
PEPFAR:	President's Emergency Plan For AIDS Relief

PMTCT:	Prevention of Mother-to-Child Transmission
PLWHA:	People Living with HIV and AIDS
STD:	Sexually Transmitted Diseases
SPSS:	Statistical Package for Social Research
UNGASS:	United Nations General Assembly Special Session
UNICEF:	United Nations Children Fund
UNAIDS:	United Nations Programme on HIV/AIDS
WHO:	World Health Organization
WOFAK:	Women Fighting AIDS in Kenya

ABSTRACT

HIV-related stigma persist as major obstacle to an effective HIV response in all parts of the world, with national surveys finding that discriminatory treatment of people living with HIV remains common in multiple facets of life, including access to health care. HIV and AIDS related stigma may impede uptake of antiretroviral therapy among women in developing countries thus undermining global efforts towards achieving AIDS free generation. Rachuoonyo North Sub County is mostly devastated with HIV/AIDS pandemic and the effect of HIV stigma on uptake of ART has been poorly understood. The purpose of the study was to investigate effects of stigma on uptake of antiretroviral therapy among women attending PMTCT clinic in Rachuoonyo North Sub County, Kenya. The research objectives were to establish the influence of enacted stigma, anticipated stigma, perceived community stigma and self-stigma on uptake of ART. The study was anchored on theoretical framework postulated by Erving Gofman in 1963 and it employed cross sectional descriptive study design method where Rachuoonyo North Sub County was stratified into two divisions and three facilities in each division was purposively selected from each division having met a pre-defined criteria. Semi-structured questionnaires for women visiting the PMTCT clinic and Key Informant Interview guide for health officer in-charge of PMTCT was used to collect data. A sample size of 299 women was established; however 280 women successfully returned their questionnaires. Validity of the instruments was appraised through pilot testing and reliability was tested through a pilot study. The study established that enacted stigma influenced ART uptake by causing 160 (65%) to stop taking anti retroviral drugs, anticipated stigma influenced ART uptake by causing 177(63%) women to stop taking Antiretrovirals, consequently perceived community stigma did influence ART uptake by causing 168(60%) respondents to stop taking antiretroviral drugs and self stigma led to stoppage of antiretroviral drugs among 184(66%) women. The study concluded that enacted stigma, anticipated stigma, perceived community stigma and self-stigma impede ART uptake and should be addressed by enforcing specific stigma reduction strategies to improve ART uptake and thereby increase quality of maternal health. The study findings may be useful to County health officers and other key stakeholders in health sector to improve ART uptake.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Uptake of antiretroviral therapy was intended to effectively diminish vertical transmission of HIV virus to infants among pregnant women in order to generate an HIV/AIDS free society (Giaquinto *et al*, 2005). However, women seeking Prevention of Mother to Child Transmission (PMTCT) services are still heavily affected by HIV/AIDS. Following provision of Anti-Retroviral Therapy(ART) to pregnant women, there was an annual 52% decline of new HIV infections among children from the year 2001 to 2012 (UNAIDS,2013). Effective PMTCT services available at the hospitals require uptake of anti-retroviral therapy including usage of anti-retroviral drugs by pregnant women visiting the clinics (Padian *et al*, 2011). Despite the apparent gains of ART evidenced by global reduction of HIV/AIDS, stigma and discrimination has affected global enrolment of pregnant women in PMTCT programmes and thus interrupting treatment adherence (Turan *et al*, 2013). This is an indication that stigma may reduce uptake of ART among pregnant women visiting PMTCT clinics. HIV stigma has contributed to rapid spread of HIV virus since women decline to visit PMTCT clinics in order to obtain care and treatment and by implication affecting uptake of ART (ICRW, 2014).

Globally, HIV/AIDS related stigma continues to become a major problem affecting uptake of ART since AIDS epidemic was initially reported (Johnson *et al*, 2015). Combating HIV stigma is critical in ensuring reduction of HIV among pregnant women in the United States. According to Kaiser (2011), HIV stigma and discrimination against women who are HIV positive is still prevalent, despite understanding how HIV is transmitted. This implies that those who are infected with HIV may not optimally utilize ART services. According to Miralles *et al* (2013), women in Europe comprises one-third of new diagnoses of HIV which implies a low ART uptake. He further establishes that HIV related stigma still remains to be a bigger problem in many communities in Europe and that monitoring the spread of HIV in women will help inform strategies in providing patient support care of the affected population which may result in improving ART uptake. Another study in Spain, analyzing evolution of stigma from 2008 to

2012, reported a reduction of HIV related stigma and attitudes of the Spanish population toward people with HIV have improved in the last four years (Fuster-RuizdeApodaca *et al*, 2014). However, it recognizes that some attitudes and beliefs still need to be changed implying that perceived and enacted stigma still exists. According to Liamputtong *et al* (2009), effects of HIV stigma are severe among women attending PMTCT clinics in Thailand and Vietnam consequently leading to non adherence of antiretroviral drugs which frustrate global efforts in provision of quality health care. This study further revealed that women living with HIV in Thailand suffered from high levels of self stigma which made them to miss clinical appointments and some of them lost their jobs due to discrimination at work place implying a reduction of ART uptake. According to Wolfe *et al* (2008), HIV stigma in women has been linked to laxity in accessing HIV testing services at PMTCT sites resulting to a low uptake of ART (Wolfe *et al*, 2008).

Enacted stigma has a global impact on mothers attending Prevention of Mother-to-child clinic leading to low rate of utilization of ART services since these women refuse to be tested for HIV. (Turan *et al*, 2013) According to a study in Chile, high levels of enacted stigma was found among the women aged 18-49 (Cianelli *et al*, 2015). This implies that identifying predictors of enacted stigma is key towards designing effective PMTCT programs which may lead to increased antiretroviral therapy uptake. In Lusaka, Zambia, enacted stigma affected willingness of those living with HIV to continue with Antiretroviral therapy (Parsons *et al*, 2015). The studies therefore suggest that addressing enacted stigma is crucial towards enhancing ART uptake. According to Spangler *et al* (2014), the impact of HIV related AIDS stigma including enacted stigma must be taken into consideration in promoting HIV positive status disclosure in women attending PMTCT and maternal health services in Kenya. Therefore it remains imperative to address enacted stigma in PMTCT set up in order to reduce HIV/AIDS in pregnant women which will improve ART uptake (Gourlay *et al*, 2013).

According to Painter *et al* (2005), pregnant women may fail to seek for PMTCT services due to anticipated stigma and this has caused failure to link up HIV positive mothers to treatment. This was confirmed by another study by Dlamini *et al* (2007) who observed that since HIV/AIDS was first identified, women have suffered emotional, physical and structural abuse arising from this kind of stigma thereby affecting ART uptake. It has also been shown that it has led to drop out of

PMTCT programs once the women are enrolled thus leading to poor uptake of antiretroviral therapy (Bwirire *et al*, 2008). According to Pulerwitz *et al* (2010), women experiencing this stigma will not access HIV testing services. This implies that those who turn to be HIV positive may not get medications to reduce the risk of transmission of HIV. In the views of Deressa *et al* (2014) the need to mitigate anticipated stigma in Ethiopia was underscored as a barrier among women attending PMTCT services, He further proposes that more studies need to be conducted to evaluate uptake of ART uptake among HIV positive pregnant women.

Perceived community stigma is both widespread and highly prevalent among women attending PMTCT especially in Sub-Saharan Africa. (IPPF, 2015). Despite good progress of provision of ART to pregnant women, PMTCT services have been hindered by the impact of community stigma (Murray *et al*, 2009). According to Meiberg (2008) this has led to ill-feeling among community members as well as health care workers towards people with HIV thus contributing to underutilization of ART services. The role of perceived community stigma has been poorly understood in hindering ART uptake which implies that there is need for concerted efforts in addressing the impact of perceived community stigma have (PEPFAR, 2009). According to Strebel *et al* (2006) women living with HIV/AIDS feel less tolerated in the community than their male counterparts which makes them much stigmatized which leads to missed clinical appointments. According to evaluation report by UNICEF (2001), perceived community stigma within mother-to-child transmission (MTCT) clinics prevented women in Zambia, Ukraine, India and Burkina Faso from visiting the clinics for HIV testing in order to know their HIV status. This may cause reduced quality of life among those who are HIV positive and subsequently affect ART uptake. The study concluded that rapid completion of ARV therapy trials and ensuring that HIV treatment is affordable and easily accessible will help to reduce the by women will likely to reduce the impact of perceived community HIV/AIDS. According to Arrey *et al* (2015), the most striking implications of self-stigma on Sub-Saharan migrant women living in Belgium was reluctance to seek anti-retroviral therapy thus leading to its poor uptake. The study further recommended rethinking on interventions that will reduce self-stigma. A study in Southeast Asia, Lao People's Democratic Republic (PDR), reported almost all respondents as having been affected with the feelings of self-stigma among people living with HIV and AIDS and this led to inability to access ART and exposure to health care facility (Chanvilay *et al*,

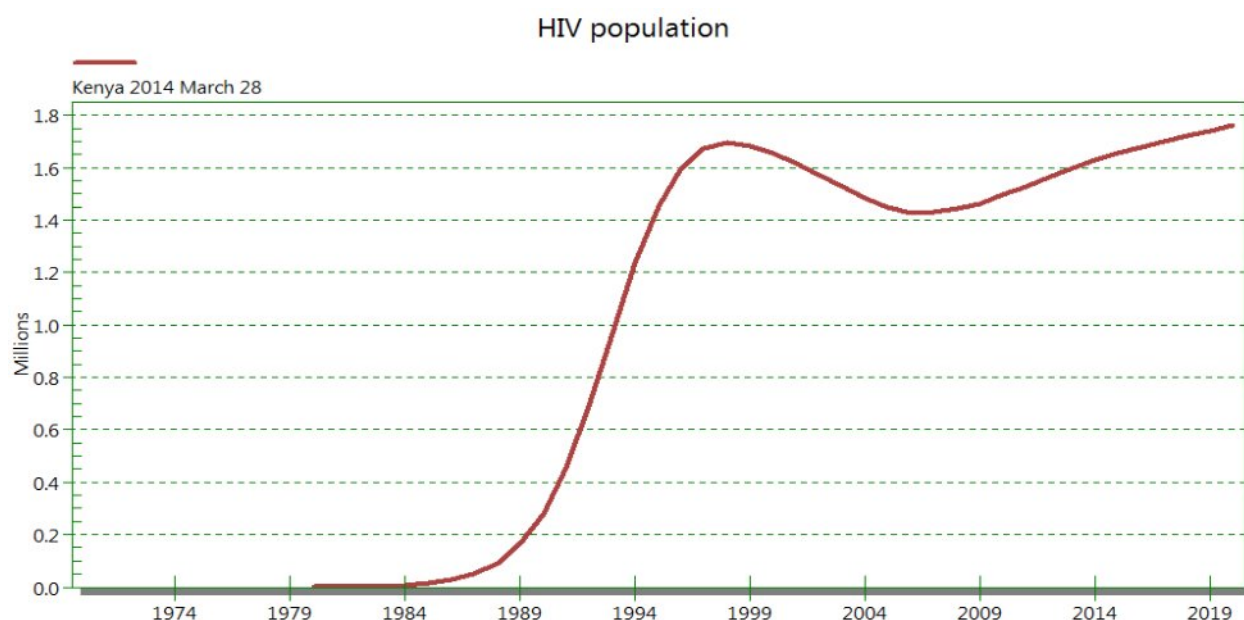
2015). This study implies that an intervention to reduce self-stigma may lead to increased uptake of ART among women seeking for PMTCT services. According to Schechter *et al* (2014), self-stigma was identified as a major barrier in pregnant women living with HIV and attending PMTCT services in Côte d'Ivoire, a West African country. The study highly recommending that in order to maximize adherence to PMTCT services then, there is urgent need to address self-stigma. A study by Barroso *et al* (2014) in the Deep South, Southern United States underscored importance of putting in place interventions to reduce self-stigma in HIV infected women which resulted in improved social relationships and this implies that such measures may lead to increased uptake of ART among women attending PMTCT services in health clinic. These findings agree with another study performed in Africa in three countries Ethiopia, Mozambique, and Uganda by Geary *et al* (2014), which reported that women were more affected with self-stigma (internalized stigma) than men and that enhancing programs that address stigma may lead to better prevention efforts in PMTCT clinics.

According to Mwaura (2008), Kenyan women living with HIV are highly stigmatized and are culturally deemed worthless if unable to bear children. The women therefore engages in child bearing even if HIV positive. This has undermined PMTCT programs in the country and makes none effect intervention of anti-retroviral therapy. Many women living with the virus still face stigma and discrimination, even though there is a high awareness rate of HIV and AIDS in Kenya (WOFAK, 2012). Studies have shown that despite awareness of basic facts of HIV/AIDS, still a majority do not have in depth knowledge of how to address stigma which is critical in improving ART uptake. Few health care facilities are implementing policies to protect women living with HIV from undue discrimination. Women are still afraid to disclose their HIV status due to stigma and will avoid PMTCT clinics in order to obtain HIV treatment and care services due to fear of being noticed by the community members and the neighbors.

Kenya begun implementing PMTCT as standalone Programmes in 2002 and has committed itself to elimination of mother-to-child HIV transmission by 2015 (Ndonga *et al*, 2014). The programs have been effective but hindered by high drop-out rates of mothers due to stigma associated with Comprehensive Care Clinic (CCC) (KAIS, 2007). According to Kenya Aids Response Progress Report (2014), Kenya had a target to reach 1 million People Living with HIV and AIDS (PLWHA) with lifesaving anti-retroviral treatment by 2013. Key strategies employed to increase

ART coverage was addressing stigma and discrimination. Number of people living with HIV has greatly increased according to the figure below published by Kenya Aids Response Progress Report (2014). It is estimated that the number is set to increase. While this is attributed to higher survival rate (decreased mortality rate) due to roll out of ART services, it is important to look at the underlying role of stigma and discrimination.

Figure 1.1 Trend in Estimated Number of People Living with HIV in Kenya



Source: Kenya Aids Progress Report, 2014.

The figure shows that many people will continue to be affected by HIV/AIDS in Kenya towards the year 2020 and that intervention to reduce HIV/AIDS related stigma should be put in place to increase uptake of ART among women attending PMTCT in order to improve maternal health care.

Rachuonyo North Sub-County is one of the sub counties ravaged by HIV menace in Homa-Bay County, Kenya. It is located along the lake shores always associated with widespread HIV/AIDS new cases. It is therefore important to evaluate effect of stigma on ART uptake in order to reduce HIV transmissions within the region. According to WHO (2011) women still remains to be highly stigmatized, however the role that different types of stigma play on uptake of ART has

been poorly understood highlighting the need to study the effect of stigma specific domains in order to employ stigma reduction strategies aimed at promoting ART uptake.

1.2 Statement of the Problem

According to UNAIDS (2001), PMTCT health care units is one of the main settings that are associated with HIV-related stigma and discrimination. How different dimensions of stigma affect uptake of antiretroviral therapy among pregnant women visiting PMTCT clinics in high HIV prevalence settings have not been widely studied. HIV and AIDS related stigma has been cited as posing a great challenge by inhibiting many women from seeking HIV testing services and accessing ART (NCPD, 2013). In addition, according to Stewart *et al* (2002), lack of utilization of HIV testing services is significantly associated with stigmatizing attitudes toward PLWHA which occurred due to social isolation and ridicule. This has a likely effect of affecting uptake of ART especially among women who ought to visit PMTCT regularly. Duffy *et al* (2005) further reports that issues of stigma among PLWHA are still poorly understood and often marginalized within national and international programs and responses. HIV related stigma affects national efforts in its campaigns to provide social and medical care among women who are HIV positive. As a result of this, the number of new HIV infections increase and so the benefits of ART is not fully achieved since PLWHA are not accepted within their families and communities. This leads to a lack of self belonging within the society which should provide for them support and as a result of this stigma reduction campaigns are also hindered. Enacted stigma may frustrate efforts of HIV prevention methods including ART uptake if not addressed. Medicins Sans Frontieres (MSF), a humanitarian NGO based in Homa-Bay county where HIV prevalence was the highest in Kenya at 27.1 % in 2012, highlights the need to address enacted stigma as a deterrent to ART uptake in the county (MSF,2015).One of the priorities of Homa Bay County in its fight against HIV/AIDS epidemic is to increase the Uptake of ARV prophylaxis for PMTCT among mothers and HIV exposed infants. However, anticipated stigma may lead to a drop of enrollment rate in PMTCT programs thus making the dream impossibility. Consequently this may lead to poor uptake of ART among the women attending PMTCT services. Urgency to address self-stigma has been established as a necessary step to improve

uptake of ART in PMTCT programs. There is paucity of literature on how various domains of stigma influences uptake of ART in PMTCT clinics and the understanding of the mechanism on how stigma affects healthcare system remains limited (Piot *et al*, 2006)

1.3 Purpose of the Study

The purpose of the study was to investigate the effects of stigma on uptake of Anti-retroviral Therapy (ART) among women attending PMTCT clinic in selected health facilities in Rachuonyo North Sub County.

1.4 Objectives of the Study

This study was guided by the following objectives:

1. To establish how enacted stigma influence uptake of ART among women attending PMTCT clinic in Rachuonyo North Sub-County.
2. To determine how anticipated stigma influence uptake of ART among women attending PMTCT clinic in Rachuonyo North Sub-County.
3. To assess the extent to which perceived community stigma influence uptake of ART among women attending PMTCT clinic in Rachuonyo North Sub-County.
4. To examine the extent to which self-stigma influence uptake of ART among women attending PMTCT clinic in Rachuonyo North Sub-County.

1.5 Research Questions

This study aimed to answer the following key research questions:

1. How does enacted stigma influence uptake of ART among women attending PMTCT clinic in Rachuonyo North Sub-County?

2. How does anticipated stigma influence uptake of ART among women attending PMTCT clinic in Rachuonyo North Sub-County?
3. To what extent does perceived community stigma influence uptake of ART among women attending PMTCT clinic in Rachuonyo North Sub-County?
4. To what extent does self-stigma influence uptake of ART among women attending PMTCT clinic in Rachuonyo North Sub County?

1.6 Significance of the Study

Evidence shows that stigma plays a key role to ensure success of HIV prevention, care, and treatment efforts; however Kenyan women are still highly stigmatized. The study outcomes may inform policy makers, donors and stakeholders on the impact of different facets of stigma on ART uptake within Rachuonyo Sub County, in Homa Bay County which has the highest HIV prevalence in the country. It is expected that this will lead to increase of ART uptake. These findings may be generalized to the whole country to provide recommendations on addressing specific dimensions of stigma related to cultural settings. The study may highlight benefits of addressing stigma which may lead to better uptake of ART services. It is also hoped that the findings of this study may lead to elimination of new child infections and concomitantly improve maternal health care.

1.7 Limitations of the Study

The study was limited by incomplete records and those who were not willing to participate in the questionnaires administration. There were challenges of tracing drug defaulters up to the community level; however snowball sampling technique was used to reach defaulters who did not present themselves at the clinic. The study was limited to time constraints owing to the nature of the study; however time was adequately planned for this activity and two research assistants were recruited who worked aggressively with the researcher to ensure that necessary data is captured within time. There were challenges in recruiting the total subjects for the study participants, however much effort was put in place including working over the weekends to ensure that sample size was attained. There were challenges in accessing health facilities which

were located far from another; however this was overcome by using motorcycles which traversed all kinds of terrains in order to reach the facilities.

1.8 Delimitations of the Study

This study was delimited to Homa Bay County and specific area: Rachuonyo North Sub County covering six health facilities which are: Kendu Adventist Hospital, Rachuonyo Sub-District Hospital, Miriu Health Center, Wagwe Health Center, Kandiege Sub-District Hospital and Homa Hills Health Center. Rachuonyo North Sub-County is among the high HIV prevalence regions within Homa Bay County. The study was also delimited to women attending PMTCT clinics from the time the woman is pregnant until the time that the baby is 18 months old. Women were especially targeted for this study because they are disproportionately affected by HIV/AIDS than men (UNAIDS, 2012). The scope was delimited to uptake of ART. The study was also delimited to research objectives, the research questions, variables of interest and theoretical perspectives that were adopted.

1.9 Basic Assumptions of the Study

It was assumed that the respondents gave their honest answers while filling in the questionnaires to avoid any misleading information. To ensure this was done appropriately, anonymity and confidentiality while conducting the interviews was observed. It was also assumed that this did not significantly affect the study outcome. It was assumed that study participants were aware of the need to investigate effects of stigma on uptake of anti-retroviral therapy among women attending PMTCT clinic. It was also assumed that the sample chosen was representative of the entire population. It was further assumed that the research questions objectively and sufficiently tackled the major issue in the statement of the problem.

1.10 Definition of Significant Terms used in this Study

Enacted stigma: Stigma that causes women to experience physical or verbal abuse or which may lead them to isolate themselves from other people as a result of disclosing their HIV positive status.

Anticipated stigma: Stigma that causes pregnant women to stay away from seeking PMTCT services due to fear of being tested for HIV and being found that they are HIV positive.

Perceived community stigma: Stigma that causes HIV-positive pregnant women not to seek for PMTCT services and to shun away from ARV clinics due to discriminatory attitudes that they face within the community.

Self-stigma: Stigma that causes HIV-positive women to have low self esteem because of their HIV status and will lead them to blame themselves hindering their willingness to adhere to ARV drug regimen prescribed in the health care facility.

Uptake of Antiretroviral therapy: Refers to utilization of antiretroviral drugs, care and treatment by women who are HIV positive and are enrolled in the health facility

1.11 Organization of the Study

This document consists of three chapters. Chapter one deals with the introduction, background of the study, problem statement, and purpose of the study, objectives, Research questions and significance of the study. It also describes limitations, delimitations, assumptions, definition of significant terms used in the study and organization of the Study. Chapter Two reviewed literature related to global overview of HIV and AIDS stigma in PMTCT settings, Enacted stigma and uptake of anti-retroviral therapy in PMTCT clinic, Anticipated stigma and uptake of anti-retroviral therapy in PMTCT clinic, Perceived community stigma and uptake of anti-retroviral therapy in PMTCT clinic, self-stigma and uptake of anti-retroviral therapy in PMTCT clinic. Also included in this chapter is the theoretical and conceptual frameworks on which this study was made as well as the summary of the literature reviewed. Chapter three describes the methodology used to answer the research problem, and justification for the choice of each technique. It deals with the research design, target population, sample size and sampling techniques, validity and reliability and data collection and data analyses techniques to be used.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section covers Introduction and literature reviewed on Enacted stigma and uptake of Anti-retroviral therapy in PMTCT, Anticipated stigma and uptake of Anti-retroviral therapy in PMTCT clinic, Perceived community stigma and uptake of Anti-retroviral therapy in PMTCT clinic, Self-stigma and uptake of Anti-retroviral therapy in PMTCT clinic. Theoretical review and conceptual framework that guided this study was also looked at.

2.2 HIV and AIDS Stigma in PMTCT Settings: Global Perspectives

There are increased calls globally to achieve AIDS free generation with many international bodies such as UNAIDS having outlined its strategy during the period of 2011-2015 which is expected to result in reducing discrimination among women and bringing to nought the number of deaths caused by HIV/AIDS (UNAIDS, 2010). According to Schwartlander *et al* (2011), national governments have been urged and supported to come up with effective measures which are evidence based and technology oriented in PMTCT settings which will help to reduce widespread stigma and increase uptake of ART. As indicated by UN (2011), this will help to achieve ambitious goals to lower HIV/AIDS deaths which were ratified by UN member states at the 2011 UN international seminar meeting on HIV/AIDS. Other global bodies such as The President's Emergency Plan For AIDS Relief (PEPFAR), has outlined in its Blueprint measures that should be put in place to achieve AIDS free society (PEPFAR, 2012). However, it is agreed that for these political initiatives to be implemented, HIV related stigma and discrimination must be reduced which is very critical to the success rate of retaining women in patient care and

treatment within PMTCT settings and to obtain increased ART uptake. In a recent report by UNAIDS (2014), it was revealed that as women find out their HIV-positive status they will seek for ART. The report further revealed that efforts to increase access to ART have been instrumental in prolonging life span of HIV infected women. In 2013, an additional 2.3 million people gained access to ART. The report concludes that although there is hope of ending the epidemic by 2030, widespread stigma and discrimination may hold back results. This is attested by one of the reports by WHO (2011) that indicated that stigma and discrimination is one of the main reasons why people do not take anti-retroviral drugs

According to literature review conducted by Nyblade *et al* (2009), evidence reveals that there is a renewed global focus on HIV prevention and stigma reduction especially in women supported by increased role out of ART. In addition, the focus has been shifted to the need of equipping health facilities so that they will have capacity to deliver HIV prevention, treatment and care services that will ultimately reduce stigma in a growing population of which majority are women. While the paper demonstrated the effects of addressing HIV stigma in health facilities and PMTCT settings and further outlining how stigma may be reduced by health care providers, it failed to look at specific dimensions of stigma on uptake of anti-retroviral therapy. Important finding revealed is that addressing stigma may lead to improvement of quality health care. By implication; this would lead to increased uptake of ART among women attending PMTCT clinics in these facilities. The review by Stangl *et al* (2013) examined evaluation data from interventions on HIV/AIDS related stigma reduction strategies, documenting the considerable progress made over the past decade. However key gaps include lack of measures to assess stigma domains. Addressing specific stigma domain would be crucial in employing effective reduction strategies as observed by the author. In addition, this would also help to evaluate the effect of specific domains of stigma on the uptake of ART among women. The review suggests that effective stigma reduction strategy focusing on specific dimension of stigma would impact positively on key behavioral and biomedical outcomes. Thus it highlights the need to lay emphasis on evaluating HIV stigma dimensions.

2.3 Enacted Stigma and Uptake of Anti-Retroviral Therapy in PMTCT Clinic

A study conducted by Wingood (2007) in United States found out that enacted stigma was lower at around 17% of the sample and did not affect greatly the uptake of ART. This is in agreement with another study performed by Lekas *et al* (2006) which found out that women living with HIV/AIDS continued to face stigma before and after initiation of Antiretroviral therapy. This study further revealed that even though HIV enacted stigma decreased slightly, women living with HIV/AIDS are still severely affected with self stigma which hinders them from seeking clinical appointments. In another study conducted by Aubrey *et al* (2012) in United States, it was revealed that women experience various types of stigma which occur either externally or at individual level. This study was conducted by reviewing published literatures from the year 2000-2010 when there was widespread usage of antiretroviral therapy in United States. The study further revealed that participants suffered from self stigma and enacted stigma. Women who were highly affected by self stigma reported that non disclosure of HIV positive status was the main determinant due to anticipated discrimination. It was noted that enacted stigma may display in other forms such as prejudice, fear, isolation, ostracism leading to lack of support among those who are HIV positive. In addition, Enacted stigma includes verbal insults that women experience from their spouses which may result to missed medication of antiretroviral drugs. While the study reported that HIV-related stigma affected medication adherence, it also recommended that further studies should be done to understand the relationship of HIV-related stigma to ART uptake especially in women living with HIV and are accessing PMTCTC services.

Globally, HIV infections have been on the rise in the regions of the Central and South America with an estimated 4,600 new infections occurring in Peru during 2012 (UNAIDS 2013). A study in Peru conducted by Carla *et al* (2015) found out that there was strong association between enacted stigma and retention of patients to HIV care and treatment. The study recommended that further prospective studies need to be conducted to address enacted stigma on patient oriented interventions such as ART. According to Díaz and Toro-Alfonso *et al* (2005), enacted stigma has also been documented in Puerto Rico. It was found to have negatively influenced social interactions with family, friends, sexual partners, coworkers, and health professionals. While the study focused on social interactions and recommended interventions to address AIDS-related stigma, it did not investigate the effect of enacted stigma on HIV prevention methods including ART uptake. However on a later study by Diaz *et al* (2008), which was conducted not only in

Puerto Rico but also the Caribbean region reported that when enacted stigma emanates from health professionals it can severely hinder access to health services, which are crucial for those living with the virus. Both studies recommended the need to develop interventions to reduce stigma.

According to Li et al (2009) about more than one half of women respondents in a study in China experienced enacted stigma which contributed to low uptake of ART. This was confirmed by another study conducted later within the urban center of China by Laurie *et al* (2014) which found out that even though China has made great efforts to provide care and treatment for PLHWA, enacted stigma in HIV infected women is still a major barrier affecting ART uptake. The study recommended that interventions should be aimed at addressing fears related to HIV and PLHWA. According to the Ministry of Health in China (2012) the effect of overall HIV stigma among women attending PMTCT clinics remains salient since majority of women (57%) are not aware of their HIV status despite the government scaling HIV testing services. According to Qiu (2011) failure to address enacted stigma in women may undermine China's commitment to reducing new infections and increasing ART uptake leading to non adherence to ARV among women attending PMTCT. Enacted stigma has been widely reported in India to have caused a crippling effect on people living with HIV/AIDS leading to poor uptake of ART in women attending PMTCT services (Kumar *et al*,2015).In a study conducted by Bharat (2011), a systematic literature review on 30 published papers covering HIV/AIDS related stigma and discrimination was carried out in India to identify major key gaps and research findings. It was found out that research exploring linkages between stigma and HIV services uptake need to be prioritized in order to strengthen HIV care and treatment programs which will likely to improve ART uptake.

Few studies in rural Uganda and urban Zambia have shown that due to enacted stigma there was relatively low uptake of ART services among women, young people and married people with a high HIV prevalence (Murray *et al*, 2009). According to WHO (2010a), it is estimated that only half of the HIV-infected pregnant women in resource poor settings receive ART in health facilities despite the recent global scale up of PMTCT services. The poor uptake of ART could be attributed to experiences of enacted stigma among the pregnant women. In another qualitative study conducted in Zambia, enacted stigma among women emerged be the second most

frequently listed reason why women decline to access ART which subsequently affects drug adherence (Murphy *et al*, 2006). This parallels a large household-based study carried out in Kenya which found out that 75% of women who visited PMTCT clinics experienced enacted stigma which resulted to a reduced uptake of ART (Odindo and Mwanthi 2008). The study was conducted in Kibera informal settlements which is one of the largest slums in Sub Saharan Africa with a population of over one million people. Although, it was observed that there Non-Governmental Organizations play a key role in mitigating the effect of HIV related stigma and discrimination in Kibera, evidence reveals through personal testimonies that HIV positive women still suffer from enacted stigma.

2.4 Anticipated Stigma and Uptake of Antiretroviral Therapy in PMTCT Clinic

Literature review examining 150 journals conducted by Turan *et al* (2013) found out that HIV-related stigma can prevent pregnant women in low-income settings from seeking anti-retroviral therapy and may hinder global efforts towards AIDS free society. These findings pose a serious challenge to international goals to virtually eliminate mother-to-child HIV transmission. If HIV stigma is not addressed it will be difficult to reduce HIV-related maternal mortality rates. The authors found compelling evidence that HIV-AIDS related stigma and discrimination lowers uptake of ART services among women who attend health facilities for PMTCT services. Pregnant women may refuse ANC services fearing that they may be forced to be tested for HIV virus. Stigmatizing attitudes have also been shown to be expressed by health care workers and this may hinder women from being tested leading to low uptake of ART. While some women may reach the final stages of PMTCT services there are still chances that they will not enroll in treatment and care programs because they fear that their HIV positive status may be made known to the community. This in effect jeopardizes efforts to scale up ART uptake. Anticipated stigma acts as significant barriers to uptake of PMTCT services and low utilization of ART services. The authors recommended renewed measures to come up with strategies which may help to reduce HIV-related stigma and to increase uptake of ART in women. This will further help to streamline acceptance of HIV services through media, community outreach and advocacy by various stakeholders. A review of published literature conducted by Ehiri *et al* (2005) confirms wide prevalence of anticipated stigma which discourages women who are aware of their HIV-positive status from disclosing their HIV positive status to their spouses for fear of

discrimination which in effect retards efforts to control the spread of HIV infection. The review focused on barriers posed by stigma to HIV/AIDS prevention and care in sub-Saharan Africa implying that the influence of different domains of stigma on an intervention such as increasing ART uptake is rooted in the structure of communities and societies. The review further recommended that interventions to reduce stigma should be context specific and sensitive to each country. This review is in agreement with another review done later by Bos *et al* (2008) which adds that anticipated stigma hinders HIV-related health promotion and HIV Testing and Counseling (HTC) services implying that uptake of anti-retroviral therapy in women is also affected. In another review conducted by Paudel and Baral *et al* (2015), findings revealed that women anticipated HIV stigma while accessing health facilities and that majority of women had been treated unfairly by health care providers. The study concluded that health care workers in PMTCT clinics must be sensitized about their duties and roles so that they do not they stop negative feelings towards women living with HIV. This may attribute to refusal by women not to access HIV testing services leading to a poor uptake of ART.

In a study performed by De Jesus *et al* (2015), anticipated stigma was experienced by immigrant women living in Washington DC in United States of America. This paper looked at various indicators for measuring anticipated stigma which included fears related to being diagnosed with HIV. Findings revealed that women from East Africa articulated unique concerns that originated from experiences in their home countries which deterred them from seeking HIV services in the PMTCT health care facilities which contributed to a poor uptake of ART. This study is similar to another study carried out by Kwapong *et al* (2014) in Ghana ,which found out that fear of being HIV positive influenced women attending ante-natal clinic from accessing HIV testing and counseling services and by implication resulted to low uptake of ART. This shows that in order to improve ART uptake, it is imperative that confidentiality is maintained which will lower discrimination levels among women. This is much critical in a setting where stigmatization still remains highly prevalent. Previous studies in Asia reported breaches of confidentiality by health care workers and by implication resulting into anticipated stigma which led to refusal of HIV testing and subsequently low uptake of ART (Paxton *et al*, 2005).

In Uganda, a study by Mayanja *et al* (2013) cited lack of family support as one of the key barriers to ART uptake. A spouse may not visit health facility for fear of being blamed by the

partner when found to be HIV positive resulting to anticipated stigma. The study recommended personal target barriers to be addressed in order to improve uptake of ART. In another study carried out in India by Taraphdar *et al* (2011) it was found out that out of 72 ever married women indoor patients whose in-laws were aware of their HIV/AIDS status, 41.7% reportedly were blamed for spouse's illness. This implies that women are experiencing family blame when found to be HIV positive and this would hinder them to access HIV testing services leading to low uptake of ART.

In Nigeria, a review of research studies conducted by Monjok and Essien *et al* (2009) on HIV/AIDS related stigma and discrimination found out that great fear still exists on HIV/AIDS due to misunderstanding of the disease itself even among health care providers which has resulted in an increase of discriminatory attitudes against women living with HIV. This implies that rigorous research should be carried out in order to gain a full understanding on the impact of stigma in women. The study further recommended that more epidemiological studies are needed to understand the relationship of dimensions of stigma on prevention initiatives in Nigeria. The study concludes that efficient stigma reduction strategy would improve uptake of anti-retroviral therapy uptake.

Anticipated stigma has been reported to lead to mistreatment at health care settings resulting in discrimination. In a study by Nöstlinger *et al* (2014), HIV related discrimination was experienced in about thirty-two per cent of the study participants in European Health care settings in the previous three years. Almost half of them reported that they suffered from discriminated against them by health care providers. Countries in which study participants reported relative higher levels of discrimination by health care providers were Austria (35%), Poland (30%), and Greece (28%). This implies that women may not visit health care facilities on fear that they may be mistreated by health care providers. This would result to low uptake of antiretroviral therapy uptake.

Many people living with HIV face high levels of stigma and discrimination despite comparatively high levels of awareness of HIV and AIDS in Kenya. Stigma and discrimination has been shown to affect women in Kenya from seeking vital HIV services (UNGASS, 2014). In a study in Rural Kenya by Turan and Cohen *et al* (2010), the effects of HIV/AIDS stigma on

accessing health services by pregnant women was examined and the study demonstrated that anticipated stigma was a barrier to acceptance of HIV testing by pregnant women even in antenatal clinics where national guidelines outline that HIV testing must be done. In another study by Colombini *et al* (2014) conducted in Kenya, it was reported that women attending HIV integrated services experienced anticipated stigma and this was exacerbated by the actions of health care providers. Anticipated stigma may lead to poor uptake of ART and so it needs to be tackled. However, the desire to get healthy overrides the fear of stigma. The study further recommended that confidentiality of HIV services should be improved in order to mitigate the effect of anticipated stigma. In another study by Quinn *et al* (2009) it was concluded that given the crucial role of anticipated HIV/AIDS stigma which results in refusal of HIV testing and lowering ART uptake, it would be important to examine the role of anticipated HIV/AIDS stigma in utilizing PMTCT services when women have been tested for HIV. This will help to monitor their adherence to ARV. Thus the importance of evaluating these dimensions of stigma will be crucial to understand the effect of these dimensions of stigma on ART uptake.

2.5 Perceived Community Stigma and Uptake of ART in PMTCT Clinic

Community stigma together with other cultural factors has been reported to have plagued PMTCT interventions for more than 10 years since inception (Gourlay *et al*, 2013). This has an effect of impeding ART uptake among women visiting health facilities. According to Anderson *et al* (2004), HIV epidemic in United Kingdom majorly affects African women living with HIV but staying in United Kingdom. A descriptive study he performed among these women reveals that perceived community HIV stigma had a profound impact on women's lives, making control of information about their situation a matter of acute concern. This had an effect on how women accessed health services and by implication would affect ART uptake in the specialist where they seek PMTCT services.

According to Díaz and Toro-Alfonso *et al* (2005), perceived community stigma has also been documented in Puerto Rico. It was found to have negatively influenced social interactions with family, friends, sexual partners, coworkers, and health professionals. While the study focused on social interactions and recommended interventions to address AIDS-related stigma, it did not investigate the effect of these domains of stigma on HIV prevention methods including ART

uptake. In a study in Ethiopia, it was found out that perceived community stigma within the neighborhood hindered women attending ANC from HIV testing (Fanta *et al*, 2012).

This implies that ART uptake was greatly affected due to underutilization of testing facilities. However, this study contrasts another study by Duff *et al* (2010) which found out that perceived community stigma did not hinder uptake of ART since many (58%) respondents claimed that the community's view of HIV-infected persons had no bearing on their decision to begin or continue treatment

A study in Mozambique by Andrade *et al* (2015) found out that perceived community stigma affected women living with HIV and AIDS and they have sought ways to cope with stigma. In a country with high HIV prevalence, the author recommends that public health policies should be adopted geared towards reduction of HIV/AIDS related stigma. The impact of perceived community stigma was manifested in the way HIV positive women felt embarrassed as they try to keep their diagnosis confidential and seeking support in group meetings with others living with HIV. This may have a likely effect of hindering uptake of ART among those who are visiting health care facilities for HIV/AIDS care and treatment. According to Dejong *et al* (2013), perceived community stigma was experienced by women living with HIV in Sudan which is a low HIV prevalence region. Challenges experienced by the women in this region due to perceived community stigma included but were not limited to decreased uptake of ART. The authors recommended community mobilization to counter HIV-related stigma. Literature published from studies in Middle East and North Africa reveals that perceived community stigma among other HIV related stigma have impeded women to access HIV testing services leading to under detection of HIV and depriving HIV-positive women of access to treatment that is provided free in the region (Dejong *et al* (2015)). Therefore there has been paucity of data on the effect of stigma on uptake of ART in this region. The study recommended context specific research per country that would address populations that are most at risk in attending testing and prevention which includes women attending PMTCT.

Effect of perceived community stigma has also been reported in Nigeria. In a study by Olalekan *et al* (2014), about three quarters of study participants (PLWHA) was found to be living a low-keyed lifestyle, isolating themselves from the public domain and avoiding seeking HIV care in

PMTCT clinics due to perceived community stigma and discrimination. This resulted to low uptake of ART which may have arisen due to feelings of embarrassment and isolation which was experienced by the study subjects. This study implies that stigma influences willingness of HIV positive women in seeking medical health care. It was further recommended that awareness campaigns should be increased as a measure to reduce societal stigma. Skinner *et al* (2004) observes further that the impact of this stigma goes beyond individuals infected with HIV to reach broadly into society, both disrupting the functioning of communities and complicating prevention and treatment of HIV. He further notes that a person may not likely to visit health care facility to be tested due to perceived community stigma. This has a likely effect in delaying treatment schedule and leading to low uptake of ART especially in women who are much affected. In another study by Dlamini *et al* (2009) whose objective was to explore the relationship between perceived HIV stigma and number of missed clinical doses of antiretroviral medications in five countries (Lesotho, Malawi, South Africa, Swaziland and Tanzania) found out that perceived community stigma was strongly associated with missed medications which implies that women stopped taking their drugs due to perceived community stigma which they experienced. This study concluded that the reason for poor uptake and adherence of ART among women was because of perceived community stigma which deters women from visiting PMTCT facilities.

In a study by Kohler *et al* (2014) to evaluate factors influencing uptake of PMTCT among women in Western Kenya, findings revealed that most HIV positive mothers reported perceived community stigma, which may have contributed to women unwilling to take Anti-retroviral drugs (ARVs) in PMTCT settings thereby leading to poor uptake of ART. This study recommended interventions that seek to address internalization of HIV/AIDS related stigma. A recent study in Western Kenya by Onono *et al* (2015) found out that stigma from community did not increase the odds of MTCT. However, the paper did not examine the effect of stigma on uptake of ART. It was further observed that poor adherence to PMTCT guidelines may hamper efforts of elimination of MTCT. According to Derribe *et al* (2010) stigma from community may lead to isolation or abandonment by the women in the society living with HIV/AIDS and thus leading to non-disclosure of their HIV status. This study was confirmed by another study carried out in Rural Kenya by Spangler *et al* (2014) which found out that in the context of high levels of HIV related stigma and discrimination including perceived community stigma, HIV infected

women do not easily disclose their HIV positive status-this in turn affects their ability to access lifesaving HIV services leading to decreased uptake of ART. The study concluded that an understanding of HIV/AIDS related stigma including HIV status disclosure and how they impact women on accessibility of PMTCT services will be essential to prevent HIV transmission to infants, increase drug adherence levels and improve maternal health in resource poor settings.

2.6 Self Stigma and Uptake of ART in PMTCT Clinic

In a study conducted by Jiménez *et al* (2012) which evaluated levels of felt stigma which is the same as self-stigma among People Living With HIV/AIDS (PLWHA) in Puerto Rico it was found out that 80% of the respondents reporting high level of self stigma with women reporting significantly higher levels of HIV-related self stigma than did men. The study revealed that women have problems with disclosure, negative self-image, and public attitude than men. However, the paper did not examine the effect of self-stigma on uptake of ART. A study in South Africa by Simbayi *et al* (2007) to examine self-internalized stigma among both men and women living with HIV/AIDS in Cape Town South Africa found out women were mostly affected with discrimination experiences which led to high level of self stigma (40%) contributing to poor uptake of ART. It was also shown that due to discrimination one in five persons who were infected with HIV lost their jobs as a result of their HIV positive status and the majority being women. This implies that proper interventions to curb this stigma is urgently needed which will have a positive impact on the uptake of anti-retroviral therapy. In India, there is documentary evidence of severity of self-stigma affecting People Living with HIV/AIDS (PLWHA). A study by Bimal *et al* (2012) found out that self stigma hindered accessibility of ART services which subsequently contributed to poor quality health care. This implies that those who experienced this kind of stigma did not freely seek for health care medication which hindered uptake of ART. The study recommended high level of social support for those living with HIV/AIDS in order to improve quality of life including utilization of ART services.

A study by Chan and Siedner *et al* (2015) sought to examine trends of HIV related stigma and the rate of ART uptake among women seeking for PMTCT services in health care institutions. Findings from the study revealed that increase of HIV related stigma contributed to a lower uptake of ART among women in PMTCT settings. The study further showed that increasing

ART uptake may lead to elimination of HIV/AIDS related stigma in the global population. In another study by Neuman *et al*, 2013, it was found out that the prevalence of self stigma in Malawi was 9.6% while that of Burkina Faso was 45%, however women suffered heavily from self stigma compared to men implying that this may affect the health seeking behavior of women as they visit PMTCT clinics and lead to low ART uptake. The high (45%) prevalence rate of self stigma in Burkina Faso may be attributed to differences in age, gender, educational level or the method of statistical tool which was used while analyzing the data. This suggests that in areas of low HIV self stigma prevalence such as Malawi there is lower self-blame for HIV infection and thus reduced self-stigma. However, this may be speculative and thus the social and cultural context of HIV-positive persons needs to be further explored in understanding how they manage HIV and seek for ART. This analysis implies that in addressing HIV related stigma, health care programs should be designed in order to tackle effectively different types of stigma to promote social support and to increase ART uptake.

A study in rural Uganda by Chan and Tsai *et al* (2015) analyzed its data to assess whether there was a change of self stigma in women at a time when ART was being scaled up. It was established that self stigma increased over time among women living with HIV and this worsened anticipated stigma among the general population of the country since it hindered willingness of the people to visit HIV testing centers to know of their status and subsequently leading to poor uptake of ART among women. Findings further showed that there is need to understand why HIV related stigma keeps on rising since it may impact negatively on future prevention efforts. These findings contrasts an earlier study conducted by Tsai *et al* (2014) in the same country which found out that there was a decline in internalized stigma over time subsequent to the initiation of ART from a cohort HIV-infected persons in rural Uganda following analysis of data from a cohort HIV-infected persons. This study also noted that treatment did not completely stop internalized (self) stigma implying that internalized stigma may still pose threats to HIV prevention methods. While the importance of ART scale up is applauded in this era of HIV/AIDS, key stigma reduction strategies involving addressing the underlying fears must not be overlooked (Castro *et al*, 2005).

In Kenya, a study by Yebei *et al* (2008) found out that HIV stigma varies depending on the social context and gender, however women are adversely affected by self stigma compared to

men. The study further revealed that women dwelling within urban regions experience a change of self stigma over time compared to women in rural regions of the country implying that ART uptake in rural places may be lower unlike in urban places. This study suggests that in rural areas there is likely to be a higher prevalence of self-stigma. The context of intended research also proposes a study within rural regions of Rachuonyo North Sub County implying that women are likely to be affected by self-stigma. The findings by Yebei et al, however did not examine the effect of self-stigma on uptake of ART revealing therefore that further research should be undertaken to evaluate this aspect.

2.7 Theoretical Framework

This study was anchored on theory of social stigma postulated by Erving Goffman in 1963. This theory has been used to understand the effect of various sickness related illness in population. HIV and AIDS has elicited widespread stigma and therefore this theory was used in the study to understand implication of stigma on uptake of ART. According to Goffman (1963), stigma causes women to feel devalued because other people perceive those who are infected with HIV as potentially infectious. This attitude has caused HIV positive women to suffer from a poor self esteem

Social Stigma theory by Goffman was further expanded by Link and Phelan (2001) who described HIV stigma occurring in a stepwise direction which involves separation of those who are HIV infected from those who are not infected with HIV virus. This may cause a reduced uptake of ART since women who are HIV positive will not likely to visit PMTCT clinics. This concept by Link and Phelan (2001) was further built by Gilmore and Sommerville (1994) who demonstrated that those who are HIV negative tend to justify themselves and perceive HIV infected people as non-persons. This has resulted to negative feelings directed towards the infected group which is likely to affect ART uptake due to stigmatization. According to Parker and Aggleton (2003) when stigma is firmly ingrained in a community then the more dominant groups such as men may discriminate and marginalize women resulting in inequalities at work places. According to Alonzo and Reynolds (1995), when women are stigmatized then they will cherish feelings of shame, self hatred and self isolation which is likely to affect uptake of ART. Stigmatized women may accept that they deserve to be mistreated and thus display negative

feelings due to their HIV positive status (Goffman, 1963). This theory was used to understand the interplay of the dimensions of stigma under this study (Enacted, Anticipated, Perceived community, and Self stigma) on uptake of anti-retroviral therapy among women visiting PMTCT clinics in Rachuonyo North Sub County. HIV/AIDS related types of stigma manifest in forms of discrimination which leads to feelings of embarrassment and low self esteem among women. This affects response of women in accessing ART in health facilities and may ultimately affect uptake of ART.

2.8 Conceptual Framework

The conceptual framework below in figure 2.1 shows the relationship between the independent variables and dependent variables.

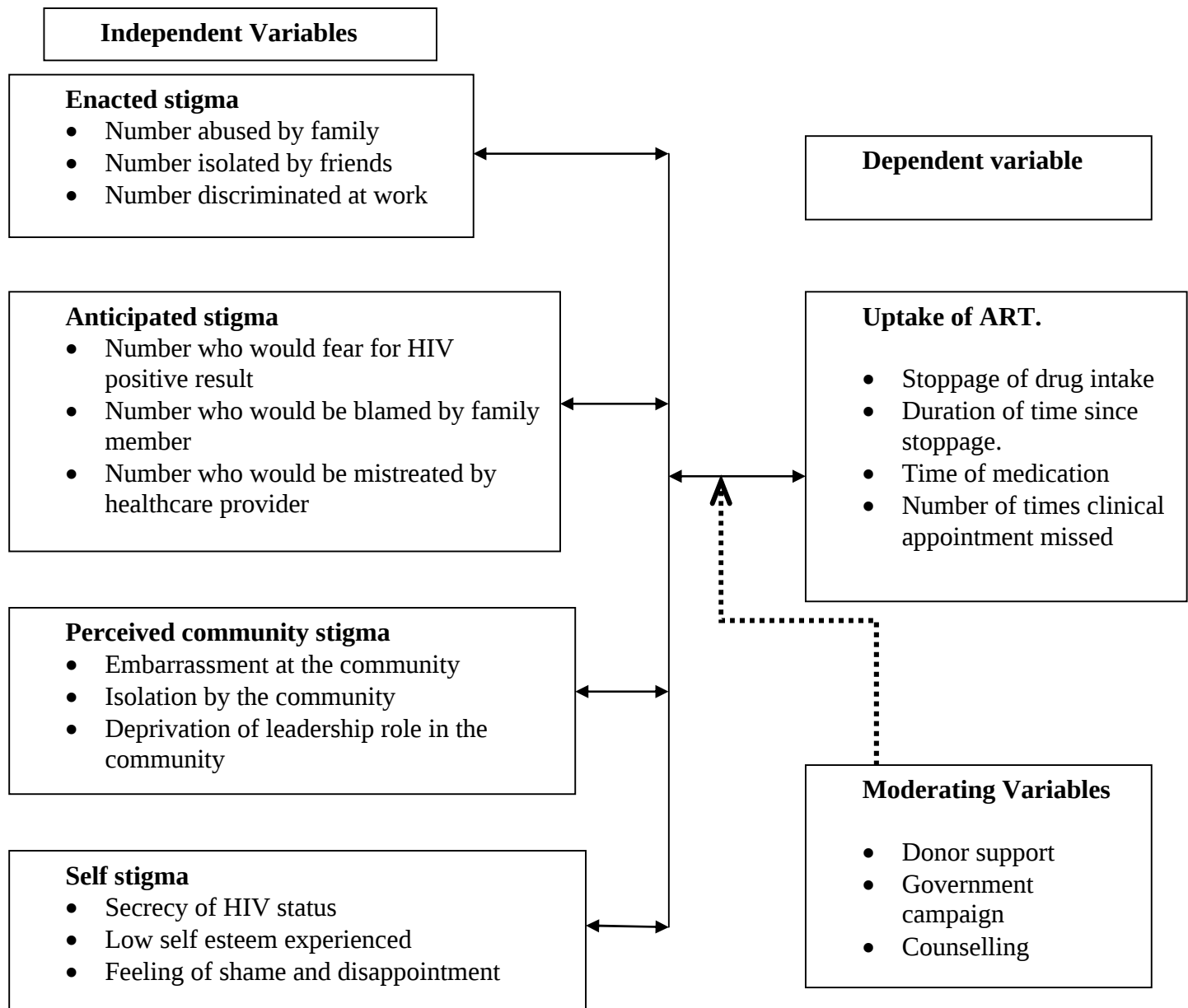


Figure 2.1: Conceptual Framework

Table 2.1 Types of Variables Used

Variable Type	Definition of the Variable
Independent Variable	Enacted, anticipated, perceived community and self-stigma
Dependent Variable	Uptake of ART
Moderate Variable	Donor support, Government campaign and counseling

As shown in Figure 2.1 above, there is strong relationship between independent variables and dependent variable. When participants experience strong forms of stigma listed above, it is expected that these will act on the dependent variable by decreasing the uptake of ART in the PMTCT clinic. Conversely when participants are less stigmatized it is expected that the uptake of ART being a dependent variable will increase. The study also postulates that there will be moderating variables (Donor support, Government campaign and counseling at PMTCT clinic) which may reduce the effect of stigma and lead to increased uptake of ART.

2.9 Summary of the Literature Review

Literature review covered looked at general literature and systematic literature reviews conducted with an aim to identify existing gaps in the effect of stigma on the uptake of ART. It has showed the current situation of HIV/AIDS epidemic, anti-retroviral drug coverage trends and stigma and discrimination among women visiting the health facilities for HIV prevention services. It has revealed that despite the scale up of ART services globally with an aim to achieve ‘AIDS’ free generation, HIV infected women still remains highly stigmatized highlighting the need to evaluate the effect of this stigma on ART uptake (WHO,2011).This agrees with another review conducted by Stangl *et al.* (2013) which recommended that addressing specific domains of stigma would help in not only designing stigma reduction interventions but also improve quality of health and by extension improve ART uptake.

The case in United States of America reveals that while enacted stigma has decreased slightly from pre ART era to post ART era, self-stigma still remains as a challenge to surmount. In a

review conducted by Aubrey *et al* (2012) it was reported that felt and enacted stigma affected medication adherence and has implication on other health outcomes as well. Central America and Latin America has been greatly affected with HIV/AIDS. As reported by Carla *et al* (2015), participants in the study were greatly affected by enacted stigma. This study highlighted the need to evaluate the effect of enacted stigma on ART uptake. A look at Eastern Europe shows that majority of women that are faced with HIV/AIDS epidemic are African Americans living with HIV in Europe and the stigma they faced, enacted and perceived stigma may have an impact on their accessibility to seek better health services including ART. (Anderson *et al*, 2004)

According to a study in China by Qiu (2011), it was found out that failure to address HIV/AIDS related stigma in the general population will likely negate China's commitment to reducing new HIV infections and mortality rate since majority of people are unaware of their HIV serostatus. A case in India revealed that research exploring linkages between stigma and HIV services uptake are largely missing and studies on the same should be undertaken to examine impact of stigma on ART utilization (Bharat, 2011).

A study conducted in Sub-Saharan Africa has revealed that HIV related stigma may discourage women from taking antiretroviral drugs from the PMTCT site. It has also been shown that different domains of HIV stigma exist, whose impacts on HIV care and treatment should be investigated. A study in Uganda by Tsai *et al* (2014) reveals that while HIV treatment is scaled up stigma still plays a barrier against ART uptake. In Kenya, stigma and discrimination is especially high in women attending PMTCT clinics. This study will be based on this premise to find out the effect of stigma on ART uptake in order to improve maternal care and reduce transmissions of HIV to infants. Homa-Bay County was chosen because it has the highest HIV prevalence in the country with Rachuonyo North Sub County as one of the sub counties that are greatly affected due to its location along the beaches and Lake Victoria.

2.10 Knowledge Gap

Reduction of stigma attributed to HIV has been demonstrated to be critical towards achieving HIV/AIDS free generation. However, due to complexity of HIV stigma, it has been shown that implementing HIV intervention strategies such as improving uptake of ART in PMTCT settings requires concerted efforts at addressing specific domains of HIV stigma. Most literature has

examined HIV stigma and discrimination in general but is limited on investigating specific types of HIV stigma and how it affects uptake of ART in resource-poor settings. Therefore the researcher has investigated on how these domains of stigma affects uptake of ART among women who attend PMTCT clinics in rural Kenya. This is considered critical because national governments needs to include stigma reduction strategies in the national AIDS plans especially to increase uptake of ART among women who are most adversely affected and it would be helpful if influence of specific type of stigma on uptake of ART is investigated.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section covers research design, target population, sample size and sampling procedure, Research instrument, pilot testing, validity of the instrument, reliability of instrument, data collection procedures, Data analysis techniques and ethical considerations.

3.2 Research Design

A research design is the arrangement of conditions for collection and analysis of data that aims to combine relevance to the research purpose with economy in procedure (Kothari, 2004). This study was a descriptive survey design involving both qualitative and quantitative approaches. According to The Office of Human Research Protections (OHRP), a descriptive study is any study that is not experimental in nature. In human research, a descriptive study can provide information about the naturally occurring health status, behavior, attitudes or other characteristics of a particular group. Descriptive surveys are designed to obtain pertinent and precise information concerning status of the phenomena and whenever possible to draw valid general conclusions from the facts discovered.

3.3 Target Population

Target population comprised 299 women who attended PMTCT clinics and were issued with preventive antiretroviral drugs in selected health facilities in Rachuonyo North Sub County. Rachuonyo North Sub County has two divisions: Karachuonyo East Division and Karachuonyo West Division. Facilities selected from Karachuonyo West Division were: Homa Hills Health Center, Wagwe Health Center and Kandiege Sub-District Hospital. Facilities selected from Karachuonyo East Division were Kendu Adventist Hospital, Kendu Sub-District Hospital and Miriu Health Center. According to District Health Information System, women who were issued with ARV prophylaxis in the year 2014 is shown in table 3.1 below.

Table 3.1: Target Population

Health Facilities in Karachuonyo West	Women issued with ARV
Homa Hills Health Center	42
Wagwe Health Center	23
Kandiego Sub District Hospital	60
Health Facilities in Karachuonyo East	
Kendu Adventist Hospital	54
Kendu Sub District Hospital	70
Miriu Health Center	50
Total	299

3.4 Sampling Procedure and Sample Size

This section describes the sample size and sampling procedures employed in the study.

3.4.1 Sample Size

According to cooper and Schindler (2003), the ultimate test of a sample design is the characteristic of population it represents. In its measurement term the sample must be valid. The survey sample size is defined as the minimum required number of sampling units that are needed to build sound statistical conclusions and inferences. A sample size of 299 women was selected to participate in the study according to table 3.1. This study was a cross sectional descriptive study and adopted census method of sampling. Census sampling is a method of purposive sampling technique used when the population size is relatively small and the researcher decides to study the whole population since it has particular characteristics that meet the research objective. Therefore this method was selected because it meets the nature of the study.

3.4.2 Sampling Procedure

Since it was not possible to study the entire Rachuonyo North sub county, stratified sampling was employed to come up with 2 strata; each stratum belonging to each division. Thus the two divisions which were studied were Karachuonyo East and Karachuonyo West division. Three facilities in each stratum were purposively selected having met the predefined criteria. The criteria was arrived at looking at the number of new ANC clients received which had to be more than 160 clients per year and the location of the health facility. A sample of six facilities was used to establish parameters that may be used to generalize entire sub county. All clients who are issued with anti retroviral prophylaxis are registered at the PMTCT clinics using PMTCT register which also contains demographic information accessible to District AIDS and STDS Control Coordinator (DASCO).The researcher worked with DASCO to identify 299 women in these facilities who were interviewed. Snowball sampling was used to recruit those who may have defaulted ARV drug prophylaxis in the course of taking the treatment regimen and did not present to the clinic. Snowball sampling is a type of non-probability sampling technique used to classify potential subjects in a location where it is difficult to locate the participants that form the sample size. It helps to meet the required sample size of a study.

Table 3.2 Sample Size Determination

Health Facilities	Women Population	Percentages (%)	Sample Size	Sampling Procedure
Homa Hills Health Center	42	100	42	Purposive sampling
Wagwe Health center	23	100	23	Purposive sampling
Kandiege Sub District Hospital	60	100	60	Purposive sampling
Kendu Adventist Hospital	54	100	54	Purposive sampling
Kendu Sub- District Hospital	70	100	70	Purposive sampling
Miriu Health Center	50	100	50	Purposive sampling
Total	299	100	299	

3.5 Research Instruments

Mugenda and Mugenda (2003) observed that, the pre-requisite to questionnaire design is definition of the problem and the specific study objectives. The primary data was collected using structured questionnaires for respondents and by key informant method for health officer in charge of PMTCT clinic and District AIDS and STDs Control Coordinator. The sets of questionnaires and key informant guides were designed based thematic areas covered under objectives of the study. Key informant guide enabled the researcher to get information from

individuals who are considered knowledgeable on the study topic. The research instruments allowed face to face interaction which gave researcher opportunity to seek new insights and ask questions.

The questionnaire comprised open and closed-ended questions. Closed ended questions were included because they are easy to administer and analyze. Open ended questions were used to extract qualitative data while closed questions were used to analyze quantitative data. The questionnaires were organized into sections which made it easy to extract information. The first section-named PART A comprised Respondent's personal data, second section examined influence of enacted stigma on uptake of ART, the third section established influence of anticipated stigma on uptake of ART, fourth section addressed influence of perceived community stigma on uptake of ART and the fifth section addressed influence of self stigma and uptake of ART.

Key informant interview guide had two sections. Section one entailed background information of the key informant and section two contained pertinent information in a mixture of closed ended questions and open ended questions. Open ended questions were included so that the researcher could extract as much information as possible on the influence of the various aspects of stigma on uptake of ART.

3.5.1 Pilot Testing

Pilot testing was carried out to ensure that instruments used for data collection was reliable. It also helped to carry out practical interviewing before actual interviewing of the respondents takes place in the study. This is importance to help identify areas of improvement. Pilot testing was done outside the study area for a period of one week to avoid interviewing those who had been interviewed during the piloting stage. Well-structured questionnaires were used. Nachmias and Nachmias (1996) noted that pilot-testing is a crucial step in the qualitative and quantitative research process since it helps to identify vague questions and unclear instructions in the instruments which need to be expunged. It also captures important comments and suggestions from the respondents that enable the researcher to improve efficiency of instruments, adjust strategies and approaches to maximize response rate.

3.5.2 Validity of the Instrument

Validity is defined as the accuracy and meaningfulness of the instrument to measure data which are based on the research results (Mugenda & Mugenda, 1999). It is the extent to which the instrument captures what it purports to measure. Completed questionnaires will be reviewed at the primary data entry point in order to ensure as accurate and complete data is captured as possible. The same research team used during the pilot testing was the same team that was engaged during the lifecycle of the study. This ensured uniformity and consistency.

3.5.3 Reliability of the Research Instrument

Reliability refers to consistency of measured data when a particular method of data collection is used. According to Taylor (2008) a research instrument is reliable when it is administered twice under the same condition by two different researchers and obtaining similar results. To measure reliability, the study used the test-retest method which involved selecting 10% of the respondents and administered the same instrument twice to the same group of participants after a period of one week. Statistical Package for Social Sciences software (SPSS version 20) was used to analyze results of the test-retest and coefficient of correlation was computed. Karl person's formula for correlation was used to ascertain a correlation coefficient of 0.9 at 0.05 significant level of confidence implying that research instrument was reliable to collect data.

3.6 Methods of Data Collection

This study began by recruiting 2 research assistants to assist in data collection and processing. A research permit was obtained from County secretary of higher education under the department of national council for science and technology, which gave an approval for the study to take place. Copies of approval letter and permit were presented to ward administrator of Rachuonyo North Sub-County for an introductory letter to Homa-Bay County Education Officer.

3.7 Methods of Data Analysis

According to Yin (2003), data analysis consists of employing both qualitative and quantitative techniques in order to address key objectives of the study. Questionnaires were checked for completeness before data entry was done. Qualitative data obtained from the questionnaire and key informant interviews was extracted and transcribed. Common themes were identified, organized and discussed under the main objective areas of the study. Qualitative data was analyzed by use of content analysis. Quantitative data was entered and analyzed using SPSS version 20. The software was used due to its ability to analyze multi-response questions, user friendliness and cross tabulation. The analysis employed descriptive statistics; including frequencies and percentage distribution aided by Microsoft excel to examine the relation between independent and dependent variables individually

3.8 Ethical Consideration

Prior to commencing of the study, a research authorization letter was provided by University of Nairobi and a research permit was obtained from the National Commission for Science and Technology. The researcher informed the local area chief and sought his approval. Consent from respondents was sought to participate in the study while assuring them that their participation was voluntary. It was further ensured that participants never suffered from physical or psychological torture and neither was participants coerced to give information. All the participants were assured of total confidentiality and where the participant needed clarifications or asked questions regarding the study then this was done in a courteous manner. Respondents had freedom to ignore items/questions in the questionnaires. Women were treated with respect and before collection of data begun; consent was obtained from county director of health,

District Aids Coordinator of Rachuonyo North Sub county and medical officer of health in charge of the health facility. Data obtained from the study was only used for research purpose which in no way infringed on the rights of the participants. Information was further obtained from the participants in a truthful and honest approach.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents data analysis, interpretations and discussions of the findings of the study which have been discussed under thematic areas and sub sections in accordance with the four objectives of the study. Thematic areas include study demographics, enacted stigma on uptake of Anti-Retroviral Therapy, Anticipated stigma and uptake of Anti-Retroviral Therapy, Perceived community stigma and uptake of Anti-Retroviral Therapy and self-stigma and uptake of Antiretroviral Therapy. The analysis and interpretation follows tabular presentations and respondents' descriptive results in line with the information derived from the questionnaires returned.

4.2 Response Rate

The response rate describes number of people who responded to the survey which was evaluated based on the number of questionnaires which were returned. The response rate for the questionnaires was determined as shown in table 4.1

Table 4.1: Questionnaire Response Rate

Sample Size	Respondents	Percentage (%)
299	280	93.65

Out of 299 respondents which represented the sample size, 19 (0.06%) women declined to participate in the survey for personal reasons. 280 questionnaires were administered to the study participants and completed for analysis which represented 93.65% response rate. This was representative of the target population. The response rate was attributed to women being recruited while receiving PMTCT services within the facilities. According to Mugenda (2003), a response rate of 50% is considered adequate for analysis and reporting, 60% is good and that of 70% and above is very good. On the other hand, according to Fowler (1993), a response rate of

75% is considered to be the rule of thumb for a minimum response rate. Study findings obtained an over 90% response rate which implies that response bias was minimized.

4.3 Demographic Information

Demographic profiles considered were age, marital status, religion and educational level.

4.3.1 Age

The mean age of respondents was found to be 27 years. This implies that majority of women who visited PMTCT facilities within Rachuonyo North Sub County are of middle age group. This is a very active child bearing age group and the focus of WHO is to promote a comprehensive approach to PMTCT program which provides treatment, care and support to this particular mothers living with HIV and have their children and families (WHO, 2010b).

4.3.2 Marital Status of Respondents

Respondents were grouped as either single/never married, married/living as married and divorced/widowed/separated in order to ascertain the level of stigmatization and uptake of ART by various categories. Table 4.2 presents distribution of marital status of respondents.

Table 4.2: Marital Status of the Respondents

Marital Status	Frequency	Percentage (%)
Single/Never Married	62	22
Married/Living as married	165	59
Divorced/Widowed/Separated	53	19
Total	280	100

Out of 280 female respondents, 62(22%) were single, 165(59%) were married/living as married and 53(19%) respondents were divorced/widowed/separated. A high (22%) number of married women may be attributed to strong family values.

4.3.3 Religion of the Respondents

Religious faith may play a key role in reducing stigmatization in women and increased ART uptake. Therefore women were asked to indicate their religious persuasion according to the faith they belong. Table 4.3 presents distribution of respondents by religion.

Table 4.3 Religion of the Respondents

Religion	Frequency	Percentage (%)
Christian	214	76
Muslim	48	17
Others	7	3
No Religion	11	4
Total	280	100

Out of 280 women, 214(76%) were Christians, 48(17%) were Muslims and 7(3%) reported that they belonged to other faiths and 11(4%) women professed no religion at all.

4.3.4 Education Level

Respondents were asked to indicate highest education levels attained. Responses varied from secondary, College (Diploma) and University (Degree) level. Table 4.4 presents distribution of respondents by education level.

Table 4.4 Education Level of Respondents

Education Level	Frequency	Percentage (%)
Primary	0	-
Secondary	199	71
College(Diploma)	74	26
University	7	3
Total	280	100

The study revealed that out of 280 respondents, 199 (71%) had attained secondary level of education, 74(26%) respondents indicated that they had obtained college (Diploma) education and 7(3%) respondents reported that they had acquired university education.

4.4 Enacted stigma and uptake of Anti-Retroviral Therapy

The study sought to establish how enacted stigma influence uptake of ART among women attending PMTCT clinics in Rachuonyo North Sub-County. This section further presents data, interpretations and discussions on enacted stigma and uptake of ART.

4.4.1 Experiences of Enacted Stigma Among Women Attending PMTCT

Respondents were asked to indicate experiences in discrimination from family, friends or at work place due to HIV positive status. Table 4.5 presents the distribution of respondents based on types of stigma experienced in all the six health facilities.

Table 4.5 Experiences of Enacted Stigma

Clinics	Family		Friends		Workplace		Stopped drugs	
	Frequency	(%)	Frequency	(%)	Frequency	(%)	Frequency	(%)
Kendu Adventist Hospital	20	12.9	15	11.1	5	9.1	25	13.9
Kendu Sub County Hospital	40	25.8	35	25.9	15	27.3	35	19.4
Miriu Health Center	25	16.1	20	14.8	10	18.2	30	16.7
Wagwe Health Center	20	12.9	20	14.8	5	9.1	30	16.7
Kandiego Sub County Hospital	40	25.8	40	29.6	15	27.3	40	22.2
Homa Hills Health Center	10	6.5	10	7.4	5	9.1	20	11.1
Total	155	100	135	100	55	100	180	100

Study findings revealed that enacted stigma at family level affected 155 women (55%) resulting to a decreased uptake of ART which was manifested by the respondents' unwillingness to visit health facility for care and treatment.

Discriminating attitudes constitute enacted stigma when it emanates from spouses, friends or at work place which may result to loosing employment. In one of the instances, one woman reported:

“When my husband returns home in the evening he feels very reluctant to share with me supper...and sometimes I am left to take my meal alone with my children. Often times he has preferred not to share with me the same bedroom due to my HIV positive status.All I need

from him is support and care which I have failed to get. I have two young children who still do not understand my condition’’

In contrast, a study by Orza *et al* (2015) demonstrated that discrimination from family due to enacted stigma contributed to violence within the family. One woman from Canada reported that:

‘‘I experienced violence before my diagnosis of HIV virus but this grew worse after I was diagnosed that I was HIV positive. I felt discriminated due to my HIV positive status, friends gossiped about me and I was treated very badly by my family members and as a result of this I stopped taking my drgs. ‘’ (Orza et al, 2015)

This argument is further supported by a study in China which showed that enacted stigma manifestations within domestic spheres led to decreased uptake of ART (Yu *et al*, 2016). Study findings revealed that enacted stigma expressed within the family was reported widely among respondents which implies that ART uptake may be reduced as a result of this discrimination since women will fail to visit the health facilities regularly for their drug refill or they may just miss taking medication within the house.

One of the respondents who reported that she was discriminated by friends stated that:

‘‘ I have found it difficult to disclose my HIV positive status to my friend Anny since last time I told my friend Eunice that I am HIV positive immediately her attitude towards me changed. We stopped relating the way we used to. It makes me sad that even the frequent visitation to her place has stopped. Following that experience, I decided not to disclose my HIV positive status to my friends. When I visit clinic for my drugs, I do not wish to be noticed by my friends.’’

This finding reveals that discrimination due to enacted stigma posed by friends may prevent women from accessing health facility for drug refills for fear of being noticed which results to a poor uptake of ART. Table 4.5 shows that 135(48%) respondents were discriminated by friends due to their HIV positive status which in effect hindered uptake of ART. The number of women who lost their jobs due to discrimination was found to be 55 (19.64%) respondents but this did not affect ART uptake. The study revealed that the major forms of enacted stigma were presented within the family sphere and friends. Further findings showed that 180 (65%)

respondents stopped taking drugs as a result of enacted stigma highlighting the need to tackle enacted stigma. However, a study in South Africa by Miller *et al* (2010) revealed that respondents rarely reported stopping medication because of family pressure or stigma. One woman reported that:

“I stopped taking drugs because I did not have fare to reach health facility but not because of fear of disclosure of my positive HIV status neither was it due to the side effects of ARV. I am well known along the streets and I have not stopped taking my drugs due to pressure from the community” (Miller *et al*, 2010)

These findings suggest that experiences of enacted stigma may lead to a decreased uptake of ART by causing women to stop taking antiretroviral and the study by Miller *et al*, (2010) suggests that besides stigma, there may be other factors which may lead to poor ART uptake namely transportation costs. Therefore the researcher highlights the need to explore the same.

4.4.2 Enacted Stigma and Time of Medication

Influence of enacted stigma on uptake of ART was determined by asking respondents to indicate how the experience of enacted stigma affected the time of taking medication for antiretroviral drugs. Respondents gave their responses ranging from very seriously, seriously, a little, very little and not influenced at all. Table 4.6 presents findings based on how much time of medication was influenced by enacted stigma.

Table 4.6 Influence of Enacted Stigma on Time of Medication

Influence on Time of medication	Frequency	Percentage (%)
Very Seriously	31	11
Seriously	79	28
A Little	72	26
Very Little	19	7
Not at all	79	28
Total	280	100

Out of 280 respondents, 31 (11%) respondents reported that their time of medication was very seriously affected due to stigma from families which contributed to poor uptake of ART, time of medication for 79 (28%) respondents were seriously affected due to stigmatization from friends, 72(26%) respondents indicated that their time of medication was a little affected, 19(7%) stated that their time of medication was very little affected and time of medication for 79(28%) were not affected at all which implies that adherence level remained high. These findings are supported by another study carried out in Kenya by Talam *et al* (2008) which found out that the time of medication for 28.9% of the respondents was affected by enacted stigma due to HIV. Findings by Cama *et al* (2015) also revealed that greater enacted stigma among People Living with HIV/AIDS (PLWHA) affected the time of taking antiretroviral drugs which led to a decreased uptake. These findings imply that enacted stigma plays greatly affects prescribed time of taking antiretroviral drugs therefore contributing to decreased uptake of ART. One respondent whose time of medication was affected seriously by enacted stigma had this to say:

“Three times I have missed taking my medication at the scheduled time because I fear the presence of my spouse. I do not want him to notice that I am taking drugs. Last week I was supposed to take my drugs 7.00 AM, but my husband was in the house.. He had not yet left for work, so I had to wait until he left at 9.00 AM. After he had left, I even forgot

to take my medication. I have not disclosed my HIV positive status to my husband and am not planning to do so because he may pound me.”

This argument is supported by a study in Tanzania which revealed that women were compelled to conceal the identity of ARVs by putting the drugs in an unlabeled envelope, or one bearing a drug name that is unfamiliar to most lay people affecting the time of taking ART (Mhodes-Wade et al, 2016). One respondent had this to say “*I remove ARVs from their original container and put them in a plain envelope from where I take them, even in the presence of other people.*” (Female respondent, 28 years old). These findings suggest that enacted stigma plays a key role in influencing the time of medication by women visiting PMTCT settings. In contrast one respondent whose time of medication was not affected at all by enacted stigma had this to say:

“I do not care what people will say or feel or think...when my time of medication has reached, I ensure I take my drugs as prescribed and advised by my doctor. When my sister in law visited me about two weeks ago, I was not ashamed to take my drugs in her presence. My husband has not shown any negative feelings or attitude towards me due to my HIV positive status. He has been very supportive to me and so this has enable me to take my drugs without any problem.”

This study established that even though 28% of women reported that their time of medication was not affected by enacted stigma, worse still a higher number of respondents (72%) reported that their time of medication was affected and thus highlighting the need to address enacted stigma.

4.4.3 Influence of Enacted Stigma on Dosage Requirements

Respondents were asked to indicate how much enacted stigma had influenced their dosage requirements. Table 4.7 presents the results of how the dosage of Antiretroviral drugs was influenced by enacted stigma. Respondents gave their responses based on what extent their dosage was influenced that is very much, much, a little, very little and not at all.

Table 4.7 Influence of Enacted Stigma on Dosage

Influenced by Enacted Stigma	Frequency	Percentage (%)
Very Much	32	11
Much	12	4
A Little	71	25
Little	78	28
Not at All	87	32
Total	280	100

Study revealed that dosage of antiretroviral drugs for 32(11%) respondents was influenced very much by stigma from family which decreased ART uptake, 12(4%) respondents reported that their dosage was influenced much by stigma from friends which affected ART uptake, 71(25%) respondents stated that their dosage was influenced a little which had a little effect on ART uptake, 78(28%) respondents indicated that their dosage was influenced very little and 87 (31%) respondents responded that enacted stigma did not influence at all their dosage requirements which implies that adherence to ARV remained high which did not affect ART uptake. The little effect on the dosage requirements for women who are on Anti-Retroviral Therapy may be attributed to the presentation of antiretroviral drugs which comes as a fixed dose package.

One respondent who was not influenced at all had this to say:

“I have once or twice forgotten to take my required dose on time or perhaps when I am engaged in farming activities or household chores. However this did not happen as a result of stigma experienced by my family members or spouse. My husband knows my HIV positive status and has been helpful to remind me not to miss taking the required dose. My doctor has always emphasized the same and I am keen towards adhering to it.”

This argument is supported by WHO (2013b) which revealed that forgetfulness and changes in daily routine are often cited as the main reasons for poor adherence to treatment guidelines or dosage requirements. One respondent whose dosage of antiretroviral was affected very much by enacted stigma reported that the packaging of HIV drugs was in itself stigmatizing. She had this to say:

“ when I attended the health facility at Wagwe Health Center, I was given drugs for two months. The number of tablets was so intimidating to me that I stopped taking my drugs following a prescribed guideline. I am comfortable taking my drugs when given the drugs after every two weeks so that I do not have to carry a bulk of them home. When they are too many I hide them so that nobody notices that I am taking the drugs”

In support of this finding, a study in Western Kenya by Wachira *et al* (2014) reported stigmatization that emanated from the package of the drugs which caused non adherence to the right dosage of drugs and by implication hindered ART uptake. One respondent reported that: *“The way antiretroviral drugs are packaged give people stress especially the packaging of second line drug packaging of antiretroviral drugs. I get so much stressed when I am travelling home because when I am given drugs for two months it is just like I bought several materials from a shop”* HIV patient –Chulaimbo, Western Kenya. These findings suggest that some women may be intimidated by the amount of drugs they receive from the health facility and this may cause them to stop taking their drugs. Study findings revealed that while the dosage of most respondents (32%) were not influenced by enacted stigma, there is still need to increase adherence level by providing a user friendly package of antiretroviral drugs since this may improve ART uptake.

4.4.4 Influence of Enacted Stigma on Clinical Appointments Missed

Respondents were asked to indicate how many times they missed their clinical appointments from attending health facility as a result of enacted stigma. Table 4.8 presents distribution of respondents based on the number of times that clinical appointments were missed.

Table 4.8 Influence of Enacted Stigma on Clinical Appointments Missed

Times Clinical Appointments Missed	Frequency	Percentage (%)
Once	57	29.84
Twice	35	18.32
Thrice	52	27.23
Fourth Times	30	15.71
Fifth Times	17	8.9
More than Fifth Times	0	0
Total	191	100

Out of 191 women who missed their clinical appointments, 57 (29.84%) women missed their clinical appointments once due to enacted stigma which affected ART, 35 (18.32%) respondents missed their clinical appointments twice due to enacted stigma which affected ART uptake, 52 (27.23%) missed their clinical appointments thrice due to enacted stigma which in effect hindered ART, 30 (15.71%) respondents also missed their clinical appointments 4 times and 17 (8.9%) respondents missed their clinical appointments more than thrice due to enacted stigma which decreased ART uptake. No respondent reported to have missed her clinical appointment more than five times.

One respondent who missed her clinical appointment thrice had this to say:

“ I always fear what my relatives think of me when they see me visiting PMTCT health facility to obtain anti-retroviral drugs. I come from a large family of 10 siblings with many in laws. They always backbite and talk ill of me while visiting ART clinic. For this

reason, I have missed accessing health facility three times in order to replenish the stock of drugs I was given since the last visit.’’

This argument is supported by a study in Asia by Wasti *et al* (2012) which reported that ART uptake is affected among women who refuse to visit health facilities due to fear of being noticed by family members. One of the respondents reported that: *I fear meeting my next door neighbor in the hospital when I go for drugs (ARV). I have wondered many times how I can hide from an encounter of those I know (Female).’’* Study findings reveal that fear of exposure to the ART facility in PMTCT setting is likely to lead to low uptake of ART. In support of this finding, another study by Vanable *et al* (2006) in Central New York State reported that clinic attendance was significantly associated with self-stigma indicating that women who missed one or more clinic appointments were more likely to report stigmatizing experiences. This study revealed that enacted stigma contributed to missed clinical appointments by participants suggesting that if appropriate measures to address enacted stigma is not put in place then ART uptake may be hindered.

Missed clinical appointments due to HIV stigma leads to HIV drug non adherence which may lead to resistant strains of HIV virus in infected patients. Therefore it is important to address HIV stigma in order to avoid this occurrence.

4.5 Anticipated stigma and uptake of Anti-Retroviral Therapy

The study sought to determine how anticipated stigma influence uptake of ART among women attending PMTCT clinics in Rachuonyo North Sub County. This section presents data, interpretations and discussions on anticipated stigma and uptake of ART.

4.5.1 Experiences of Anticipated Stigma among Women Attending PMTCT

Respondents were asked to indicate experiences of anticipated stigma based on fear of taking HIV test, family member blames and poor attendance by medical health provider. Table 4.9 presents the distribution of respondents based on type of anticipated stigma experienced per health facility.

Table 4.9 Experiences of Anticipated Stigma

Clinics	Fear of HIV test		Family member blames		Received poor health care		Stopped drugs	
	Frequency	(%)	Frequency	(%)	Frequency	(%)	Frequency	(%)
Kendu Adventist Hospital	10	8.8	16	12.7	20	14.7	25	14.1
Kendu Sub County Hospital	30	26.5	40	31.7	40	29.4	35	19.8
Miriu Health Center	15	13.3	15	11.9	20	14.7	30	16.9
Wagwe Health Center	15	13.3	15	11.9	20	14.7	30	16.9
Kandiego Sub County Hospital	33	29.3	30	23.8	26	19.1	37	20.9
Homa Hills Health Center	10	8.8	10	7.9	10	7.4	20	11.3
Total	113	100	126	100	136	100	177	100

Out of 280 women, 113 (40%) respondents feared taking HIV test as a result of anticipated stigma which may hinder uptake of ART. One of the respondents at Kendu Adventist Hospital reported that:

“ When I visit PMTCT health facility unit. I refuse to take HIV test fearing that the test results may indicate that I am HIV positive. I am disturbed on how I will be perceived as a result of my status. Many of my friends have felt so isolated because of their HIV positive status and this has caused them to shy away from visiting PMTCT clinic. The feelings of my friends have had a negative impact on me and that is why I do not want to undergo the same experience should my test results show that I am HIV positive”

This argument is supported by another study in Uganda by Nannozi *et al* (2016) which revealed that fear of a positive HIV test result emerged as a key barrier at HIV testing centers. The findings therefore imply that failure of women to attend PMTCT clinic may contribute to low uptake of ART this is because women who may be HIV positive fail to get treatment because of fear of HIV positive results. Study findings further revealed that 126 (45%) respondents were blamed by family members as a result of their HIV status. Anticipated stigma as a result of family blames has been reported by Makoe *et al* (2009) who found out that woman taking antiretroviral suffer heavily from stigma associated with family members. One respondent had this to say: “ *I prefer to keep my HIV status secret because if I tell my husband then he would abandon me.*” In support of this finding, a study in South Africa revealed that women were severely blamed and mistreated by their partners when they are found to be HIV positive (Denis, 2014). Study revealed that 136 (49%) received poor health as a result of anticipated stigma. One respondent reported that:

“ I do not want to visit Miriu Health Center again because the Health Facility provider looks at me accusingly and is reluctant to serve me quickly. I have since resorted to be visiting Kendu Adventist Hospital. I have found health care providers at Kendu Adventist Hospital very supportive. They gave me some spiritual literature to read after my last visit to the facility and so I will not visit Miriu Health Center. I will talk to my doctor about it.”

This argument is further supported by Hosain *et al* (2010) which revealed that discriminating attitudes are particularly high among health care workers in different hospitals in Bangladesh. Findings revealed that as a result of anticipated stigma that was experienced by women attending PMTCT, 177(63%) respondents stopped taking antiretroviral drugs and thus leading to poor uptake of ART. This finding was further supported by a key informant, an officer in charge of a PMTCT clinic at Kandiye Sub-District Hospital, who reported that: “ *Anticipated stigma has particularly caused 61% of the women to stop taking antiretroviral drugs. This is quite alarming to us, but we are doing our best to talk to donors and other stakeholders in a move to increase uptake of ART.*” Study shown that anticipated stigma was experienced by women reduced uptake of ART in the health facilities within the study area.

4.5.2 Influence of Anticipated Stigma on Time of Medication

Respondents were asked to indicate how much their time of medication was influenced by anticipated stigma. Table 4.10 presents distribution of respondents based on how much time of medication was influenced by anticipated stigma.

Table 4.10 Influence of Anticipated Stigma on Time of Medication

Influence on Time of Medication	Frequency	Percentage (%)
Very Seriously	177	63
Seriously	101	36
A Little	1	0.5
Very Little	0	0
Not at All	1	0.5
Total	280	100

Findings revealed that anticipated stigma greatly affected the time that women took their antiretroviral drugs for treatment. Out of 280 women, 177 (63%) reported that their time of medication was very seriously affected by anticipated stigma which decreased ART uptake, time of medication for 101 (36%) was seriously affected by anticipated stigma hindering ART uptake, 1 (0.5%) respondent stated that her time of medication was a little affected and 1 (0.5%) of the respondents reported that her time of medication was not affected at all by anticipated stigma which implied that a high level of drug adherence was maintained which did not affect ART uptake.

One woman who was interviewed and who was very seriously affected by anticipated stigma reported that:

“Whenever time has reached to take medication, I close myself within the bedroom and not wishing that my husband or my children to intrude. Last week, I missed taking my drugs at 7.00 A.m. but I took it later at 1000 Am because I feared my husband could blame me as a result of my HIV positive condition. My friend Achieng, shared with me that she has been heavily mistreated by her husband when she learnt that she was HIV positive and I do not want to undergo that experience.”

This finding reveals that anticipated stigma strongly affects time of medication. One respondent who was seriously affected reported that she missed her medication after the time of medication had elapsed. *“ The time I was supposed to take my pill in the evening passed when my husband was around and I did not want him to notice that I am taking my pills. I just realized the following morning that I missed my dosage.”* Lack of adherence to time of treatment has been cited by a study in South Africa by Treves-Kagan *et al* (2016) in which it was found out that anticipated stigma due to family blames affected participants to adhere to treatment. This implies that lack of family support when a member of the family is HIV positive is likely to decrease uptake of ART. One female in the study reported that *“Lots of people are dying because they can’t go out and talk.”* [#12, community member, female, site #3]. Study findings reveals that women who defer their time of treatment due to anticipated stigma may eventually default taking their drugs. This suggests that measures of promoting HIV disclosure are critical towards enhancing stigma reduction strategies which will consequently improve ART uptake.

4.5.3 Influence of Anticipated Stigma on Dosage Requirements

Respondents were asked whether the dosage they were supposed to take was influenced by anticipated stigma. Responses were varying from very much, much, a little, very little and not at all. Table 4.11 presents the effect of anticipated stigma based on how much dosage requirements was influenced.

Table 4.11 Influence of Anticipated Stigma on Dosage

Influenced by Anticipated Stigma	Frequency	Percentage (%)
Very much	31	11
Much	19	6
A little	58	21
Very little	78	28
Not at all	94	34
Total	280	100

Out of 280 women, 31(11%) indicated that their required dosage was very much influenced by anticipated stigma resulting in a decreased uptake of ART, dosage for 19(6%) respondents was much influenced by anticipated stigma causing poor uptake of ART , dosage for 58(21%) respondents was a little influenced by anticipated stigma which did not affect greatly ART uptake, dosage for 78 (28%) respondents was influenced very little by anticipated stigma and dosage for 94 (34%) respondents was not at all influenced by anticipated stigma implying that respondents maintained good adherence level which did not affect ART uptake. One of the respondents whose dosage was not affected at all by anticipated stigma at Kandiege Sub District Hospital reported that:

“ My husband has recently been very supportive regardless of my HIV positive status and this has made me to stick to the medication dosage as prescribed by my doctor. ART has been very useful; I can testify that my health has really improved. I would like to encourage others who are infected with HIV virus to adhere to their dosage. It will really help them. I know of a woman who strongly adhered to her dosage and has lived for more than 10 years since the time she got infected with the virus when her community thought she would die within one year”

This argument was further supported by a key informant at Kandiege Sub District Hospital who reported that: “ *Anticipated stigma has not significantly affected the dosage taken by the women who are living with HIV/AIDS at this facility.*”

In support of these findings, another study in Nigeria by Okoror *et al* (2013) reported that many study participants maintained their medication dosage and were not affected by anticipated stigma. This study therefore imply that dosage requirements is not heavily affected by anticipated stigma and is not likely to hinder uptake of ART. On the other hand, monitoring the effect of anticipated stigma on the dosage requirements may help in improving drug adherence and subsequently improving ART uptake.

4.5.4 Influence of Anticipated Stigma on Clinical Appointments Missed

Respondents were asked how many times they missed their clinical appointments. Table 4.12 presents the number of times that clinical appointments were missed as a result of anticipated stigma experienced. It also includes frequencies and percentage distribution of respondents based on how women missed clinical appointments.

Table 4.12 Influence of Anticipated Stigma on Clinical Appointments Missed

Times Clinical Appointments Missed	Frequency	Percentage (%)
Once	56	30
Twice	38	20
Thrice	51	27
Fourth Times	30	15
Fifth Times	15	8
More than Fifth Times	0	0
Total	189	100

Findings revealed that 56(30%) women missed their clinical appointments once due to anticipated stigma affecting HIV drug adherence and ART uptake, 38(20%) women missed their clinical appointments twice due to anticipated stigma causing a hindrance in ART uptake, 51(27%) women missed their clinical appointments thrice as a result of anticipated stigma resulting in a poor ART uptake, 29(15%) women missed their clinical appointments four times due to anticipated stigma and 15(8%) women missed their clinical appointments five times due to anticipated stigma which implies that drug adherence was affected leading to a decreased uptake. This finding is supported by a key informant at Wagwe Health Center who reported that *“On average women who attend PMTCT Clinic at Wagwe Health Center have missed their clinical appointments three times due to anticipated stigma.”* The findings imply that anticipated stigma reduces uptake of ART by leading to more women missing their clinical appointments. One respondent who missed clinical appointment once due to anticipated stigma reported that:

“ I was ashamed to visit PMTCT clinic because of the way I was mistreated at Kendu Sub-District Hospital. I heard a peer educator at the clinic who made a nasty comment about my HIV status and this made me to miss my clinical appointment once at the health facility. I wish peer educators would be more kind and sensitive. Next time I am mistreated like that, I may opt to change my station to Kendu Adventist Hospital.”

This argument is supported by another study in Nigeria by Anígilájé *et al* (2016) which reported that poor health care received by women who visit PMTCT clinics as a result of their HIV positive status hinders uptake of ART. A focus group discussant reported that *“ I stopped attending PMTCT clinic because I was mistreated by the health nurse at the facility. She looked at me with contempt until I regretted why I visited the clinic. She further uttered some unfriendly remarks regarding my HIV positive status and I just contemplated how she could handle me should I visit the facility for delivery.”* This report suggests that anticipated stigma due to poor health care services at PMTCT clinics may contribute to women defaulting in taking of antiretroviral drugs and this may lead to poor uptake of ART. In support of these findings are studies which shows that anticipated stigma among women cause poor retention of HIV care in PMTCT settings leading to decreased quality of life (Katz *et al*, 2005; Quinn *et al*, 2009 and Valenzuela *et al*, 2015).Therefore addressing anticipated HIV stigma will likely to increase uptake of ART at the health facilities that are offering PMTCT services.

4.6 Perceived Community Stigma and uptake of Anti-Retroviral Therapy

The study sought to assess the extent to which perceived community stigma influence uptake of ART among women attending PMTCT clinics in Rachuonyo North Sub-County. This section presents data, interpretations and discussions on perceived community stigma and uptake of Anti-Retroviral Therapy.

4.6.1 Experiences of Perceived Community Stigma Among Women Attending PMTCT

Respondents were asked to indicate experiences in stigmatization from the community which caused them embarrassment or to be avoided or which resulted to deprivation of their leadership roles. Table 4.13 presents distribution of respondents based on the expression of perceived community stigma in six health facilities.

Table 4.13 Experiences of Perceived Community Stigma

Clinics	Shame or embarrassment		Avoided due to HIV status		Deprived leadership role		Stopped drugs	
	Frequency	(%)	Frequency	(%)	Frequency	(%)	Frequency	(%)
Kendu Adventist Hospital	5	4.8	16	12.3	15	12.4	20	11.9
Kendu Sub County Hospital	30	28.6	40	30.8	35	28.9	35	20.8
Miriu Health Center	15	14.3	19	14.6	20	16.5	30	17.8
Wagwe Health Center	15	14.3	15	11.5	20	16.5	30	17.8
Kandiego Sub County Hospital	33	31.4	30	23.0	25	20.7	37	22
Homa Hills Health Center	7	6.7	10	7.7	11	9.0	16	9.5
Total	105	100	130	100	121	100	168	100

Out of 280 women, 105 (38%) reported that they experienced shame and embarrassment from the community due to their HIV positive status which affected ART uptake, 130 (46%) women indicated that they were avoided by the community members due to their HIV positive status resulting in a decline of ART uptake and 121(43%) women stated that they were deprived of their leadership roles in the community due to their HIV positive status consequently causing a poor uptake of ART. One of the respondents reported that:

“ A number of times I have felt socially rejected when I have been isolated from taking leadership responsibilities within the community. Often I have felt very embarrassed but I have struggled to cope with it. I can remember that before I got infected I had many friends who used to visit me, but when I got infected and lost my job my friends have become reluctant to associate with me. I feel lonely but I know that God is with.”

This argument is supported by Sandelowski *et al* (2004) who found out that women living with HIV/AIDS experience panic and social rejection within the community and this may affect their health seeking behavior for HIV care and treatment and thus leading to low uptake of ART. In another related study by Abela *et al* (2013) in Tanzania, it was reported that about 63% of the respondents stated that PLHIV are a threat to society, 55% felt that PLHIV should be isolated and 11% did not want to be friends with a person infected with HIV which is likely to lead to feelings of isolation in the society and low uptake of ART by not utilizing PMTCT facilities. Study findings further revealed that 168 (60%) women stopped taking antiretroviral drugs as a result of perceived community stigma. One respondent who stopped taking drugs as a result of perceived community stigma reported. *“ I got so embarrassed that I declined to visit Wagwe Health center to take my medication.”* In support of this finding, a key informant at Wagwe Health Center reported that:

“ Perceived community HIV stigma is common around this region.HIV infected women feel so ashamed of their HIV positive status that they prefer to be isolated. This has caused them to fear coming to the clinic to obtain their medication. When I was analyzing the rate of ART uptake ,I found out that as a result of perceived community stigma ART uptake decreased by 5 % last month, but I am optimistic it will improve due to recent national campaigns towards HIV stigma reduction”

This suggests that perceived community stigma result to a decreased uptake of ART by causing women to stop taking antiretroviral drugs and that Government campaigns may increase ART uptake. Use of print and electronic media has been used in the past for campaign on Polio vaccine and if such methods are used then there would be a decline in perceived community stigma and subsequently an increase of ART uptake.

4.6.2 Influence of Perceived Community Stigma on Time of Medication

Respondents were asked to indicate how perceived community stigma influenced their time of taking medication. Table 4.14 presents distribution of respondents based on how time of medication was affected.

Table 4.14 Influence of perceived community stigma on time of medication

Influence on Time of Medication	Frequency	Percentage (%)
Very seriously	30	10
Seriously	105	38
A little	61	22
Very little	70	25
Not at all	14	5
Total	280	100

Out of 280 women, time of medication for 30 (10%) respondents was very seriously influenced by perceived community stigma which led to a decline of ART uptake, 105 (38%) respondents reported that time of medication was seriously affected by perceived community stigma hindering ART uptake, 61 (22%) respondents reported that time of medication was a little influenced by perceived community stigma which slightly affected ART uptake, 70 (25) respondents reported that time of medication was very little influenced and time of medication for 14(5%) respondents was not influenced by perceived community stigma at all implying that

ARV drug adherence remained at an acceptable level which did not affect ART uptake. One respondent reported that:

“ I do not want to take my drugs when I am in presence of my friends because I fear that they will learn of my HIV status and that the whole community will know that I am HIV positive. I later realized that I completely missed out my medication for that day. I do not want to meet my doctor because of this, because I know that he will reprimand me strongly. However when I am alone I take my drugs at the right time ”

This argument is further supported by another study in Ethiopia which found out that women missed their medication when in presence of other people and this led to drug non adherence causing a low uptake of ART (Bezabhe *et al*, 2014). One respondent stated that: *“ I have missed taking my pills many times because I am in company of friends. When Nimrod sat next to me, he did not know of my HIV positive status. I am worried about what others will think of me should they see me take my pills in their presence (25 years, female). ”* These findings imply that when women fail to take their pills at the right time then it has a likely effect of affecting uptake of ART. In support of study findings, a key informant at Miriu Health center reported that:

Question: *“ In your opinion how has the varied form of stigma influenced ART uptake among women visiting your PMTCT site? ”*

Response *“ Women at Miriu Health Center mainly suffer from perceived community stigma although other forms of stigma has also been reported at this site. Reports of missing to take medication at the scheduled time have reached us due to perceived community stigma widely prevalent. We endeavor to work with the county government and other health stake holders to avert this so that uptake of ART is not affected. ”*

Study revealed the importance of addressing perceived community stigma to improve ART uptake. Appropriate sensitization workshops carried out may help to reduce perceived community stigma.

4.6.3 Influence of Perceived Community Stigma on Dosage Requirements

Respondents were asked to indicate how much their dosage of antiretrovirals was influenced by perceived community stigma. Table 4.15 presents the effect of perceived community stigma on dosage requirements.

Table 4.15 Influence of Perceived Community Stigma on Dosage

Influenced by Perceived Community Stigma	Frequency	Percentage (%)
Very Much	20	7
Much	72	26
A little	63	23
Very Little	15	5
Not all	110	39
Total	280	100

Out of 280 women, 20 (7%) reported that their dosage requirements was influenced very much by perceived community stigma leading to poor uptake of ART, 72(26%) stated that their ARV dosage was influenced much by perceived community stigma causing a decline of ART uptake, 63(23%) informed that their dosage was influenced a little resulting to a slight change in ART uptake, 15(5%) described that their dosage was influenced very little and dosage for 110 (39%) respondents were not affected at all by perceived community stigma which implied that ARV drug adherence was not affected and a high ART uptake was attained.

One of the respondents reported that:

“I ensured I took the right dosage at the right time no matter what others thought of me. I can remember when I returned from taking care of my farm last week, I found some members from the community who paid a courtesy call on me. It was around 1 .00 Pm and that was the time of taking my dose. I can assure you that I never missed taking my dose of drugs due to their presence.”

Compliance to dosage, regardless of prevailing stigma, may be attributed to the packaging of some antiretroviral drugs which come in fixed dose combination (Castelli *et al*, 2010).Therefore;

it implies that perceived community stigma did not strongly influence ART uptake since majority of women representing 39% of respondents reported that they took their required dosage as per the national guidelines.

4.6.4 Influence of Perceived Community Stigma on Clinical Appointments Missed

Respondents were asked to indicate how many times they missed clinical appointments due to perceived community stigma Table 4.16 presents the number of times that clinical appointments were missed as a result of perceived community stigma.

Table 4.16 Influence of Perceived Community Stigma on Clinical Appointments Missed

Times Clinical Appointments Missed	Frequency	Percentage (%)
Once	106	38
Twice	47	17
Thrice	35	13
Four Times	45	16
Five Times	29	10
More than Five Times	18	6
Total	280	100

Out of 280 women, 106 (38%) respondents missed their clinical appointments once due to perceived community stigma which slightly affected ART uptake, 47(17%) missed their clinical appointments twice due to perceived community stigma affecting drug adherence and ART uptake, 35(13%) respondents missed their clinical appointments thrice because they felt isolated by friends due to their HIV positive status resulting in a decline of ART uptake, 45(16%) respondents missed their clinical appointments four times due to feelings of shame causing a poor uptake of ART, 29(10%) respondents missed their clinical appointments five times and 18(6%) respondents missed their clinical appointments more than five times due to perceived community stigma which severely affected ARV drug adherence and consequently leading to

low uptake of ART. This study finding is supported by Turan *et al* (2016) who argued that perceived community stigma is linked to lower medical adherence which is likely to cause women to miss their regular clinical appointments thereby affecting uptake of ART. One of the respondents reported that:

“ I have felt so isolated by my community due to my HIV status that I missed taking a refill of my drugs at Kendu Adventist Hospital once and instead I have resorted to take my drugs at Miriu Health Center where I am not known by majority. I am comfortable travelling to Miriu Health Center despite the fairly long distance. Inasmuch as I get my drugs then I think there is no problem”.

This view is further supported by a key informant at Miriu Health Center who reported that: *“ some clients have since transferred from their nearby health centers and have requested to be enrolled at Miriu Health Center. My greatest concern is that if they take long to come to our facility then it might affect uptake of ART.”* In support of study findings, a study in Malawi by Elwell (2016) found out that community based HIV stigma hindered participants (PMTCT patients) from accessing care and treatment in PMTCT program thereby leading to a poor uptake of ART. This study suggests that there is need to address perceived community stigma as a potential barrier towards successful PMTCT program since it may cause women to miss clinical appointments.

4.7 Self Stigma and Uptake of Anti-Retroviral Therapy

The study sought to examine the extent to which self-stigma influence uptake of ART among women attending PMTCT clinics in Rachuonyo North Sub-County. This section presents data, interpretations and discussions on self-stigma and uptake of antiretroviral therapy.

4.7.1 Experiences of self stigma among women attending PMTCT

Respondents were asked to indicate their experiences of self-stigma based on non-disclosure of HIV status, self-esteem and feelings of embarrassment or shame. Responses were on a 4-point Likert scale (strongly disagree, disagree, agree, strongly agree). Table 4.17 presents distribution of respondents by the type of self-stigma experienced.

Table 4.17 Experiences of Self Stigma

Expressions	Frequency	Percentage (%)
Prefer not to disclose HIV status	105	38
Self Esteem Reduced:		
Strongly Agree	67	24
Agree	151	54
Disagree	25	9
Strongly Disagree	37	13
Embarrassed or ashamed of condition:		
Strongly Agree	68	24
Agree	90	32
Disagree	27	10
Strongly Disagree	95	34
Stopped taking ARVs	184	66

Out of 280 women, 105(38%) preferred not to disclose their HIV status for fear of being stigmatized. One respondent who preferred not to disclose her status reported in this manner: “ *I fear informing my husband of my HIV status because, he will beat me and accuse me of infecting him with HIV.*” Another respondent reported:

“ I prefer to live a personal life and so I do not see the need to go public about my HIV positive status. What is my HIV positive status to do with the public? I must confess that at some times I have felt so lonely with no one to confide to yet I have maintained a brave face in this situation. What people say about you when they realize you are HIV positive is just too sickening that I cannot bear.”

This implies that women may not seek for PMTCT services because of physical violence which is likely to affect ART uptake. This is further argument is further supported by a study carried in rural Kenya by Walcott *et al* (2013) which reported that fears of abuse—including being blamed for the infection, break-up of the relationship, and bodily harm—served as contributing factors to non-disclosure of one's HIV status which has a likely effect of reducing uptake of ART. Findings further revealed that 67 (24%) respondents strongly agreed that their self-esteem was reduced due to their HIV positive status which led to a decline of ART uptake, 151 (54%) agreed that their self-esteem was reduced due to a positive HIV status thus hindering ART uptake and drug adherence, while 25(9%) disagreed and 37 (13%) respondents strongly disagreed that their self-esteem was reduced as a result of self-stigma which did not affect ART uptake. These results imply that a low self-esteem is likely to affect uptake of ART in PMTCT facilities and consequently lead to failure among women to take their medications. This finding is supported by other studies by Edwards *et al* (2006) and Okoror *et al* (2013). In comparison; a study in Puerto Rico by Jimenez *et al* (2012) reported a higher level of self-stigma experienced among participants with 70.3 % of participants reporting that their self-esteem was reduced. One of the respondents at Kandiege Sub District Hospital who strongly agreed that her self-esteem was reduced in this study had this to say:

“When I realized that I was HIV positive-I could not believe it. My self-esteem was so much reduced that I avoided meeting my friends. I could not even attend PMTCT regularly for a refill of my medication. I have never felt this low in my life. I found it difficult to meet my friends and share my problems with them because I thought that people hated me and my neighbors never wanted to meet me. I decided to stay in my house most of the time not wishing for any visitor to visit me”

This argument is further supported by another study in United States by Konkle-Parker *et al* (2008) who demonstrated that lower self-esteem causes reduced ART uptake in women causing them to stop taking drugs. A study participant reported that: *“I was mad and upset because I was in self denial. It took me over five years to tell my closest friend that I was HIV positive. I kept my HIV status secretive for long. Many times I was angry with myself and presently I don't take my medicines like I should be taking.* - (Konkle-Parker *et al*, 2008). Study findings suggest

that self-stigma is widely experienced by women within the study region and contributes to reduced self-esteem which hinders women from accessing PMTCT facilities.

Findings further revealed that out of 280 women, 68 (24%) reported that they strongly agree that they were embarrassed or ashamed of their condition due to their HIV positive status implying that they were highly stigmatized which caused a reduced ART uptake, 90(32%) women stated that they agreed that they felt embarrassed of their positive HIV status which hindered them from accessing ART clinic for drugs, 27 (10%) disagreed and 95(34%) respondents strongly disagreed that they felt embarrassed of their HIV condition and this did not affect ART uptake. These findings suggest that although women reported feelings of embarrassment among women who are HIV positive and who attend PMTCT clinics, on the other hand situations of embarrassment may be declining as can be noted by a high number of 34% of respondents who strongly disagreed that they felt embarrassed. This may also be attributed to a number of social support groups that have been formed for PLWHA. This finding is supported by another study in Tanzania by Layer *et al*, (2014) which proved that participants were no longer “embarrassed” of being HIV-positive and did not feel ashamed to attend HIV testing and counseling services because they know they are not alone. Findings further revealed that as a result of experiences of self-stigma, 184(66%) respondents stopped taking antiretroviral drugs thereby leading to a low uptake of ART. This study recommends the need to promote formation of more support groups to lower the levels of self-stigma.

4.7.2 Influence of Self Stigma on Time of Medication

Influence of self stigma on uptake of ART was determined by asking respondents to state how the experience of self stigma affected the time of taking medication for antiretroviral drugs. Table 4.18 presents distribution of respondents based on how much time of medication was affected.

Table 4.18 Influence of Self Stigma on Time of Medication

Influence on Time of Medication	Frequency	Percentage (%)
Very Seriously	86	30
Seriously	80	29
A Little	66	24
Very Little	31	11
Not at all	17	6
Total	280	100

Out of 280 women, 86 (30%) reported that their time of medication was very seriously affected by self-stigma which adversely hindered ART uptake, 80 (29%) women described that their time of medication was seriously affected due to self-stigma leading to a decline of ART uptake, 66 (24%) informed that they experienced little influence on time of medication due to self-stigma which affected uptake of ART slightly, 31(11%) stated that there was very little influence on the time of medication and 17(6%) respondents reported their time of medication was not influenced at all by self-stigma implying that ART uptake was not affected because drug adherence level remained high.

Among the respondents who reported that her time of medication was seriously influenced identified fear of disclosure as the main reason behind it. She reported that:

“ I knew that if I disclosed my HIV status to my husband then she would mistreat me in the house therefore I missed taking my medication at the right time because I did not want him to notice. Last week my husband came at around 9.00 Pm from work and he seemed drunk. Just at the same time I was about to take my drugs. When I heard his voice at the door calling me to open the door I quickly slipped and hid my tablets under the table so that he could not notice that I am taking my drugs.”

One respondent at Wagwe Health Center felt too embarrassed to take the drugs in presence of her friends that she postponed taking the drugs till her friends left her house:

“ My friends travelled as far from Kisumu to come and visit me. I was so happy that they came especially when they informed me that they were going to spend overnight in my house. We enjoyed our stay and had a nice dinner with them. It reached 8.00Pm when I was to take my drugs, and then suddenly I became so uncomfortable with their presence. I was too embarrassed to take my pills in presence of my friends until I took my pills two hours later.”

These findings suggest that self-stigma is likely to affect the time of medication which eventually affects drug adherence and ART uptake. In a study carried out by Martinez *et al* (2012) it was demonstrated that self-stigma impacts on medication adherence causing women to delay taking their drugs as prescribed. Study findings revealed that HIV self-stigma does influence time of medication and may ultimately lead to poor uptake of ART. In support of this finding, a study in an urban setting in Kenya found out that HIV self-stigma creates many missed opportunities for HIV positive mothers to take their drugs in time (Cuca *et al*, 2012).

4.7.3 Influence of Self Stigma on Dosage Requirements

Respondents were asked to indicate the effect on dosage requirements as a result of self-stigma experienced. Response varied from very much, much, a little, very little and not at all. Table 4.19 presents distribution of respondents by the effect of self-stigma on dosage requirements.

Table 4.19 Influence of Self Stigma on Dosage

Influenced by Self Stigma	Frequency	Percentage (%)
Very Much	34	12
Much	11	4
A little	50	18
Very Little	86	31
Not at all	99	35
Total	280	100

Out of 280 women, 34(12%) reported that their dosage requirements was influenced ‘very much’ by self-stigma which affected drug adherence and ART uptake, 11(4%) stated that their dosage was influenced ‘much’ by self-stigma causing a decline of ART uptake. 50(18%) informed that there was a little influence on the dosage requirement, 86(31%) respondents described that their dosage requirements was influenced very little by self-stigma and 99 (35%) respondents explained that their dosage requirements was not influenced at all implying that ART uptake remained high because of drug adherence.

Dosage of antiretroviral is important in evaluating whether uptake of ART is improving or not. Failure to take the prescribed drugs would result into a decrease of ART uptake. Uptake of ART is usually calculated based on the number of doses missed when visiting the health facility after 30 days. This study found out that the dosages of 12% of respondents were influenced by self-stigma. One respondent reported that:

“ It happened to me last month when I missed taking my dosage. I travelled home to visit my extended family. They did not know that I am HIV positive. Being a young lady of 25years old and a first borne in my family, my parents have put all their hope in me and they have high expectations of me regarding my future achievements as the pillar of the family. I had been given my drugs over a period of 30 days to take, but then I felt so

embarrassed at home during my stay that I had to find somewhere I could hide while taking my drugs. I felt so ashamed of my positive HIV status that I had disappointed my family.’’

This study revealed the need to address self-stigma by coming up with coping strategies for those who are newly infected with HIV in order to curb self-stigma associated with positive HIV status. This will ensure that the patients who visit pharmacy ART clinic or women who visit PMTCT clinic will not miss their medication dosages which will lead to an increase of ART uptake.

One of the respondents whose dosage was not influenced by self-stigma reported that:

‘‘ I know I have a life to live and it is not my mistake that I am HIV positive so I cannot afford to miss taking my medication as prescribed by my doctor. I have never felt embarrassed while taking my dose since the doctor had explained to me the importance of taking full dosage as it helps in viral suppression. I have once missed my dosage because of drugs unavailability at Kendu Sub-District Hospital but not of feelings of poor self-esteem.’’

This argument is further supported by a study in rural Kenya which found out that 69.1 % of HIV positive mothers strictly adhered to prescribed medication dosage and schedules implying that the women were not influenced and by implication this did not have a negative impact on uptake of ART (Murithi *et al*, (2015).

4.7.4 Influence of Self-Stigma on Clinical Appointments Missed

Uptake of ART was analyzed by examining the influence of self-stigma on the number of clinical appointments missed by the women who attended PMTCT clinics. Respondents were asked to indicate the number of times they missed clinical appointments. Table 4.20 presents distribution of respondents based on clinical appointments missed.

Table 4.20 Influence of self-stigma on clinical appointments missed

Times Clinical Appointments Missed	Frequency	Percentage (%)
Once	53	28
Twice	32	17
Thrice	57	30
Four Times	26	14
Five Times	19	10
More than Five Times	1	1
Total	280	100

Out of 280 women, 53(28%) reported that they missed their clinical appointments once due to self-stigma which affected slightly uptake of ART, 32(17%) informed that they missed their clinical appointments twice due to self-stigma which led to a decline of ART uptake, 57(20%) women stated that they missed their clinical appointments thrice due to self-stigma severely affecting ART uptake and drug adherence, 26 (14%) reported that they missed their clinical appointments four times and 19(10%) respondents reported to have missed their clinical appointments five times due to self-stigma resulting in a drop of ART uptake because of failure to maintain good adherence level. Study findings revealed that self-stigma was widely associated with missing clinical appointment which may have contributed to poor uptake of ART. One respondent at Kendu Adventist Hospital who missed her clinical appointment once reported:

“ I have once missed my clinical appointment because I did not want my husband to know my HIV status. I have managed to keep it a secret. It is now 5 years since we have lived in marriage and he has not known my HIV positive status and I have managed to visit PMTCT clinic without his knowledge. I know my husband well. He gets too much angry and he is an alcoholic. He would not tolerate me in the house should he learn of this situation even if it is him to blame for this condition”

This argument was supported by a key informant at the same facility who stated that: “ *most women who visit our facility suffer from self-stigma. Last month alone about 25% of women who visited PMTCT clinic reported to have suffered from self-stigma.*” This finding is further supported by a previous study in United States by Rao *et al* (2007) who reported that fifty percent of female respondents missed their ARV doses and failed to visit PMTCT clinics for their routine appointments for fear of discrimination they encountered within the family or friends when their HIV positive status was known and by implication leading to a low uptake of ART. In support of this finding is a study in Asia which found out that self-stigma experienced by HIV infected pregnant women hindered uptake of ART by causing women to avoid seeking drug prophylaxis at parent to child transmission of HIV services offered in health facilities (Rahangdale *et al*, 2010). This suggests that interventions to reduce self-stigma is critical towards improving uptake of ART. Non-Governmental Organizations and Media industry may play a role in addressing self-stigma. This was particularly noted by a key informant at Kendu Adventist Hospital who reported that: “ *Donor support through Catholic Relief Services (CRS) has led to improvement of ART uptake at Kendu Adventist Hospital.*” The importance of donor support in HIV Stigma campaign has been underscored by UNAIDS (2007) which reported that donors and civil society can make the reduction of HIV-related stigma and discrimination central in national responses to HIV/AIDS.

CHAPTER FIVE

SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter contains summary of findings, conclusions, recommendations, contributions to knowledge and suggestions for future research, based on the objectives of the study.

5.2 Summary of Findings

The first objective of the study was to establish how enacted stigma influence uptake of ART among women attending PMTCT clinic in Rachuonyo North Sub-County. 155 (55%) respondents reported that they were discriminated by family due to enacted stigma, 135 (48%) respondents reported that they were discriminated by friends and 55 (19.64%) respondents reported that they lost their jobs due to enacted stigma. It was further found out that 160 (65%) women stopped taking anti-retroviral drugs due to experiences of enacted stigma, 31(11%) respondents reported that their time of taking medication was very seriously influenced due to enacted stigma and 79 (28%) respondents reported that their time of medication was seriously influenced. Whereas enacted stigma did not affect significantly the dosage requirements for anti retroviral drugs with 87 (31%) respondents reporting that they were not affected at all, it was observed that enacted stigma did significantly influence uptake of ART since 57 (32%) women missed their clinical appointments once, 35(18.32%) respondents missed their clinical appointments twice, 52 (19%) respondents missed their clinical appointments thrice, 30 (15.71%) respondents missed their clinical appointments four times and 17(8.9%) respondents missed their clinical appointments five times.

The second objective of the study was to determine how anticipated stigma influence uptake of ART among women attending PMTCT clinic in Rachuonyo North Sub-County. It was found out that 126 (45%) women were stigmatized by family members which comes second to the number who were discriminated at the health facility which was 136 (49%). These findings reveal that anticipated stigma was experienced by majority of women attending PMTCT services in health

facilities. According to Schuster *et al* (2005), 36% of women respondents living with HIV/AIDS reported experiences of discrimination from health care provider and as a result of this about 8% declined to be initiated into care and treatment program which in effect affected ART uptake (Schuster *et al*, 2005). This implies that anticipated stigma should be tackled especially at the health care facility where discrimination was found to be the highest. It was further shown that anticipated stigma led 177(63%) respondents to stop taking anti-retroviral drugs which led to decreased uptake of ART. Further findings shows that anticipated stigma affected the timing of medication among women who were on drugs with 177 (63%) reporting that they were affected but the dosage requirements were not affected. It was also found out that 51 (18%) respondents missed their clinical appointments thrice. This indicates that uptake of ART was reduced as a result of frequent interruptions of antiretroviral drugs.

The third objective of the study was to assess the extent to which perceived community stigma influence uptake of ART among women attending PMTCT clinic in Rachuonyo North Sub-County. It was found out that perceived community stigma was expressed heavily by women who were avoided due to their HIV status which represented 130 (46%) respondents. Findings also showed that 168 (60%) women stopped taking antiretroviral drugs as a result of perceived community stigma which implied that ART uptake was reduced. Further findings indicated that perceived community stigma affected the timing of medication among women who were on drugs with 105(38%) respondents reporting that perceived community stigma hindered the time of medication. However, the dosage requirements were not heavily influenced by perceived community stigma with only 15(5%) respondents reporting that their dosage requirements were affected. It was also found out that 106 (38%) respondents missed their clinical appointments once suggesting that perceived community stigma hindered uptake of ART.

The fourth objective was to examine the extent to which self-stigma influence uptake of ART among women attending PMTCT clinic in Rachuonyo North Sub-County. It was established that self-stigma was widely reported among the respondents with 105 (38%) women who preferred not to disclose their HIV status for fear of being stigmatized. Effect of self stigma experienced by women attending PMTCT clinic caused 184(66%) respondents to stop taking antiretroviral drugs leading to low uptake of ART. It was found out that self-stigma affected the timing of medication among women who were on drugs with for 86 (30%) women reporting that they were

very seriously affected by self-stigma. However, the dosage requirement was not heavily influenced by self stigma with 99(35%) respondents reporting that their dosage requirement was not affected. It was further revealed that 57(20%) respondents reported to having missed their clinical appointments thrice which implied that self stigma is a barrier to improved uptake of ART.

5.3 Conclusions

The main purpose of the study was to investigate the effects of stigma on uptake of Anti-retroviral Therapy among women attending PMTCT clinic in Rachuonyo North Sub-county. On the first objective, the study concluded that enacted stigma does influence uptake of antiretroviral therapy. There was need to enhance ways of reducing enacted stigma among women to improve ART uptake.

On the second objective it was concluded that anticipated stigma caused majority of women to be mainly stigmatized at the health care facilities thus leading to a poor uptake of ART. There was need to review capacity of health care providers to ensure professionalism is maintained at health care facilities.

On the third objective it was concluded that perceived community stigma led to majority of women being avoided or isolated within the community and this led them not to access clinical appointments for fear of being noticed which resulted to poor uptake of ART. There was need for the government to tackle this kind of stigma at community level by ensuring that resources are available.

On the fourth objective concluded that self stigma did influence uptake of antiretroviral therapy by causing women to feel embarrassed and ashamed of their HIV status and consequently this led to stoppage of antiretroviral drugs highlighting the need to enforce self-stigma reduction measures.

5.4 Recommendations

Based on research findings and in line with the first objective the researcher recommended that the county health director should enhance awareness methods of enacted stigma and its impact on AIDS epidemic.

The study recommended on the second objective that anticipated stigma-discrimination reduction workshops to be held especially at health care settings. This will ensure that suitable ways are identified to reduce anticipated stigma.

The study recommended on the third objective that perceived community stigma can be tackled by disseminating and promoting the use of tools for effective advocacy and action, such as the evidence-based talking points and the case studies of successful interventions.

The study recommended on the fourth objective that government should adopt national policies that seek to address self stigma experienced by women. By allocating resources and involving health stakeholders and Non Governmental Organizations women may be properly educated towards overcoming self stigma.

5.5 Contribution to the body of Knowledge

The table below shows a summary of how the study will contribute to the body of knowledge.

Table 5.1 Contribution to Knowledge

No.	Objectives	Contribution to knowledge
1.	To establish how enacted stigma influence upake of ART among women attending PMTCT Clinic.	Addressing enacted stigma at family level will increase uptake of ART.
2.	To determine how anticipated stigma influence uptake of ART among women attending PMTCT clinic	Majority of women were discriminated at work place highlighting the need to enforce strong measures to reduce stigma at health care settings.
3	To assess the extent to which community stigma influence uptake of ART among women attending PMTCT Clinic in Rachuonyo North Sub County.	Many women were avoided due to their HIV status. Addressing perceived community stigma will increase uptake of ART.
4	To examine the extent to which self-stigma Influence uptake of ART among women attending PMTCT clinic in Rachuonyo North Sub County.	Non disclosure of HIV status emerged to be the main barrier leading to self stigma and consequently affecting uptake of ART.

5.6 Suggestions for Further Research

The study findings suggest that further research can be carried out in the following areas:

1. Carrying out intervention research to evaluate effectiveness of anti-stigma reduction strategies at individual, community and structural levels.
2. Carrying out research on tracking defaulters who are totally lost to follow up and do not present themselves in the clinic.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE FOR RESPONDENTS

	EFFECTS OF STIGMA ON UPTAKE OF ANTIRETROVIRAL THERAPY AMONG WOMEN ATTENDING PMTCT CLINIC IN RACHUONYO NORTH SUB-COUNTY. QUESTIONNAIRE FOR RESPONDENTS		
	QUESTIONS	RESPONSES	INSTRUCTIONS
1.0	INTRODUCTION AND PERSONAL DATA		
.1 1	NAME OF HEALTH FACILITY	_____	INDICATE IN FULL
.2 1	DEPARTMENT	_____	INDICATE IN FULL
.3 1	GENDER	MALE..... 1 FEMALE..... 2	
.4 1	How old are you?	_____ YEARS	INDICATE IN COMPLETE YEARS
.5 1	What is your marital status?	SINGLE/NEVER MARRIED.....1 MARRIED/LIVING AS MARRIED.....2 DIVORCED/WIDOWED/SEPARATED.....3	CIRCLE THE MOST APPROPRIATE
.6 1	Which religion do you belong to?	CHRISTIAN.....1 MUSLIM.....2 OTHERS.....3 NO RELIGION.....4	CIRCLE THE MOST APPROPRIATE
.7 1	What is the highest education level that you completed?	SECONDARY 1 COLLEGE 2 UNIVERSITY 3	CIRCLE THE MOST APPROPRIATE
2.0	ENACTED STIGMA AND UPTAKE OF ART		
.1 2	Have been you been discriminated (treated badly) by your family due to your HIV status?	YES 1 NO 2	CIRCLE THE MOST APPROPRIATE ANSWER
.2 2	Have you felt discriminated by your		CIRCLE THE

	friends as a result of your HIV status?	YES 1 NO 2	MOST APPROPRIATE ANSWER
.3 2	Have you lost your job as a result of your condition or felt discriminated by your colleagues?	YES 1 NO 2	CIRCLE THE MOST APPROPRIATE ANSWER (IF YOU HAVE ANSWERED NO TO ALL QUESTIONS GO TO PART 3.0)
.4 2	Did you stop taking anti-retroviral drugs as a result of what you experienced?	YES 1 NO 2	IF NO, SKIP TO QUESTION 6
.5 2	If yes, for how long did you stop taking the drugs?	_____ DAYS/WEEKS/MONTHS/YEARS	SPECIFY THE UNITS
.6 2	Did your experience affect the time that you take the medicine?	VERY SERIOUSLY 1 SERIOUSLY 2 A LITTLE 3 VERY LITTLE 4 NOT AT ALL 5	CIRCLE THE MOST APPROPRIATE ANSWER
.7 2	Has the dosage that you are supposed to take been influenced in any way by this stigma?	YES 1 NO 2	CIRCLE THE MOST APPROPRIATE ANSWER
.8 2	If yes, how much has your dosage been influenced?	VERY MUCH 1 MUCH 2 A LITTLE 3 VERY LITTLE 4 NOT AT ALL 5	CIRCLE THE MOST APPROPRIATE ANSWER
.9 2	Have you ever missed any of your clinical appointments because of discrimination?	YES 1 NO 2	CIRCLE THE MOST APPROPRIATE ANSWER
.10 2	How many times did you miss your appointment to the facility due to discrimination?	ONCE 1 TWICE 2 THRICE 3 FOUR TIMES 4 FIVE TIMES 5 MORE THAN FIVE TIMES 6.	CIRCLE THE MOST APPROPRIATE ANSWER
3.0	ANTICIPATED STIGMA AND ART UPTAKE		
.1 3	Would you fear to take a HIV test for fear of the test becoming positive?	YES 1 NO 2	CIRCLE THE MOST APPROPRIATE ANSWER

.2 3	Would a family member blame you because of your condition?	YES 1 NO 2	CIRCLE THE MOST APPROPRIATE ANSWER
.3 3	Would a health care provider give you poor health care due to your HIV status?	YES 1 NO 2	CIRCLE THE MOST APPROPRIATE ANSWER (IF YOU HAVE ANSWERED NO TO ALL QUESTIONS SKIP TO PART 4.0)
.4 3	Did you stop taking anti-retroviral drugs as a result of what you experienced?	YES 1 NO 2	IF NO, SKIP TO QUESTION 6
.5 3	If yes, for how long did you stop taking the drugs?	_____ DAYS/WEEKS/MONTHS/YEARS	SPECIFY THE UNITS
.6 3	Did your experience affect the time that you take the medicine?	VERY SERIOUSLY 1 SERIOUSLY 2 A LITTLE 3 VERY LITTLE 4 NOT AT ALL 5	CIRCLE THE MOST APPROPRIATE ANSWER
.7 3	Has the dosage that you are supposed to take been influenced in any way by this stigma?	YES 1 NO 2	CIRCLE THE MOST APPROPRIATE ANSWER
.8 3	If yes, how much has your dosage been influenced?	VERY MUCH 1 MUCH 2 A LITTLE 3 VERY LITTLE 4 NOT AT ALL 5	CIRCLE THE MOST APPROPRIATE ANSWER
.9 3	Have you ever missed any of your clinical appointments because of discrimination?	YES 1 NO 2	CIRCLE THE MOST APPROPRIATE ANSWER
.10 3	How many times did you miss your appointment to the facility due to discrimination?	ONCE 1 TWICE 2 THRICE 3 FOUR TIMES 4 FIVE TIMES 5 MORE THAN FIVE TIMES 6.	CIRCLE THE MOST APPROPRIATE ANSWER
4.0	PERCEIVED COMMUNITY STIGMA AND UPTAKE OF ART		
4.1	In your community does HIV cause	YES 1 NO 2	CIRCLE THE MOST

	shame or embarrassment?		APPROPRIATE ANSWER
.2 4	Would other people in your community avoid a person infected with HIV?	YES 1 NO 2	CIRCLE THE MOST APPROPRIATE ANSWER
.3 4	Do you think that your condition deprives you from playing a leadership role in the community?	YES 1 NO 2	CIRCLE THE MOST APPROPRIATE ANSWER(IF YOU HAVE ANSWERED NO TO ALL QUESTIONS SKIP TO PART 5.0)
.4 4	Did you stop taking anti-retroviral drugs as a result of what you experienced?	YES 1 NO 2	IF NO,SKIP TO QUESTION 6
.5 4	If yes, for how long did you stop taking the drugs?	_____DAYS/WEEKS/MONTHS/YEARS	SPECIFY THE UNITS
.6 4	Did your experience affect the time that you take the medicine?	VERY SERIOUSLY1 SERIOUSLY.....2 A LITTLE.....3 VERY LITTLE.....4 NOT AT ALL.....5	CIRCLE THE MOST APPROPRIATE ANSWER
.7 4	Has the dosage that you are supposed to take been influenced in any way by this stigma?	YES 1 NO 2	CIRCLE THE MOST APPROPRIATE ANSWER
.8 4	If yes, how much has your dosage been influenced?	VERY MUCH.....1 MUCH.....2 A LITTLE.....3 VERY LITTLE.....4 NOT AT ALL.....5	CIRCLE THE MOST APPROPRIATE ANSWER
.9 4	Have you ever missed any of your clinical appointments because of discrimination?	YES 1 NO 2	CIRCLE THE MOST APPROPRIATE ANSWER
.10 4	How many times did you miss your appointment to the facility due to discrimination?	ONCE.....1 TWICE.....2 THRICE.....3 FOUR TIMES.....4 FIVE TIMES.....5 MORE THAN FIVE TIMES.....6.	CIRCLE THE MOST APPROPRIATE ANSWER
5.0	SELF STIGMA AND UPTAKE OF ART		
.1 5	If possible would you prefer to keep people from knowing about your HIV status?	YES 1 NO 2	CIRCLE THE MOST APPROPRIATE ANSWER

.2 5	I think less of myself and my self esteem has reduced.	STRONGLY AGREE.....1 AGREE.....2 DISAGREE3 STRONGLY DISAGREE.....4	CIRCLE THE MOST APPROPRIATE ANSWER
.3 5	I am embarrassed or ashamed that I have this condition	STRONGLY AGREE.....1 AGREE.....2 DISAGREE3 STRONGLY DISAGREE.....4	CIRCLE THE MOST APPROPRIATE ANSWER
.4 5	Did you stop taking anti-retroviral drugs as a result of what you experienced?	YES 1 NO..... 2	IF NO, SKIP TO QUESTION 6
.5 5	If yes, for how long did you stop taking the drugs?	_____ DAYS/WEEKS/MONTHS/YEARS	SPECIFY THE UNITS
.6 5	Did your experience affect the time that you take the medicine?	VERY SERIOUSLY1 SERIOUSLY.....2 A LITTLE.....3 VERY LITTLE.....4 NOT AT ALL.....5	CIRCLE THE MOST APPROPRIATE ANSWER
.7 5	Has the dosage that you are supposed to take been influenced in any way by this stigma?	YES 1 NO..... 2	CIRCLE THE MOST APPROPRIATE ANSWER
.8 5	If yes, how much has your dosage been influenced?	VERY MUCH.....1 MUCH.....2 A LITTLE.....3 VERY LITTLE.....4 NOT AT ALL.....5	CIRCLE THE MOST APPROPRIATE ANSWER
.9 5	Have you ever missed any of your clinical appointments because of discrimination?	YES 1 NO..... 2	CIRCLE THE MOST APPROPRIATE ANSWER
.10 5	How many times did you miss your appointment to the facility due to discrimination?	ONCE.....1 TWICE.....2 THRICE.....3 FOUR TIMES.....4 FIVE TIMES.....5 MORE THAN FIVE TIMES.....6.	CIRCLE THE MOST APPROPRIATE ANSWER
THANK YOU			

APPENDIX II: INTERVIEW GUIDE FOR KEY INFORMANTS

SECTION 1: BACKGROUND INFORMATION

1. Health Facility_____
2. Name(Optional)_____
3. Profession and Position_____
4. Gender (1) Male (2) Female
5. Age bracket (1) 18-30 (2) 31-40 (3) 41-50 (4) 51-55 (5) 56 and above

SECTION 11: PERTINENT INFORMATION

1. Which department do you work for?_____
2. In your opinion do you think HIV positive mothers are being discriminated against?
 () Yes () No
3. In your opinion which forms of stigma do most women experience?

(Select more than one where applicable)

- a. Enacted stigmatization
 - b. Anticipated stigmatization
 - c. Perceived stigmatization
 - d. Self-stigmatization
4. How would you describe the uptake of ART in this facility for women visiting PMTCT site? _____

5. In your view, are their mothers who stop taking drugs after their first enrollment in the PMTCT site due to stigma?

☐ Yes

☐ No

6. In your opinion approximately what percentage would that be? _____

7. For how long (on average) do you think they stop taking the drugs?

e. Less than a week

f. A week

g. More than a week. Please specify the number of weeks:_____

h. A month

i. More than a month. Please specify the number of months:_____

j. A year

k. More than a year. Please specify the number of years:_____

8. Have some mothers ever missed any of your clinical appointments with them because of discrimination?

☐ Yes

☐ No

9. How many times, on average, have they missed their appointments to the facility due to discrimination?

a. Once

b. Twice

c. Thrice

d. Four Times

e. Five times

f. More than five times.

10. Counseling has improved uptake of ART in your facility.

☐ Strongly Agree ☐ Agree ☐ Disagree ☐ Strongly Disagree

11. Donor support has improved ART uptake in this facility.

☐ Strongly Agree ☐ Agree ☐ Disagree ☐ Strongly Disagree

12. Government campaign to reduce stigma has improved uptake of ART in this facility

☐ Strongly Agree ☐ Agree ☐ Disagree ☐ Strongly Disagree

13. In your opinion how has the varied forms of stigma influenced ART uptake among women visiting your PMTCT site?

14. Any other comments?

APPENDIX III: LETTER OF INTRODUCTION

Jim Seth Katieno

Cell Phone:

Date.....

Dear Respondent,

**RE: EFFECTS OF STIGMA ON UPTAKE OF ANTI-RETROVIRAL THERAPY
AMONG WOMEN ATTENDING PMTCT CLINICS IN RACHUONYO NORTH SUB
COUNTY.**

I am a post-graduate student at the University of Nairobi pursuing a Master of Aers Degree in Project Planning and Management. I am carrying out a study on the above subject. You have been selected to take part in the study as a respondent.

Attached is a questionnaire aimed at gathering information, which will be vital for the above research. I am kindly requesting you to respond to the questionnaire items as honestly as you can and to the best of your knowledge. The questionnaire is for the purpose of research only and therefore the responses shall be absolutely confidential and anonymously given.

In case the study will be of interest to your organization it can be availed once the study is complete. Your participation in this survey is highly appreciated.

Yours faithfully,

Jim Seth Katieno

**APPENDIX IV: RESEARCH AUTHORIZATION LETTER FROM UNIVERSITY OF
NAIROBI.**



UNIVERSITY OF NAIROBI
COLLEGE OF EDUCATION AND EXTERNAL STUDIES
SCHOOL OF CONTINUING AND DISTANCE EDUCATION
KISUMU CAMPUS

The Secretary
National Council for Science and Technology
P.O Box 30623-00100
NAIROBI, KENYA

15th September, 2015

Dear Sir/Madam,

RE: JIM SETH KATIENO -REG NO. L50/84300/2012

This is to inform you that **Jim Seth Katieno** named above is a student in the University of Nairobi, College of Education and External Studies, School of Continuing and Distance Education, pursuing Masters in Project Planning and Management.

The purpose of this letter is to inform you that **Jim** has successfully completed his course work and Examinations in the programme, has developed Project Proposal and submitted before the School Board of Examiners which he successfully defended and made corrections as required by the School Board of Examiners.

The research title approved by the School Board of Examiners is: ***"Effects of Stigma on Uptake of Entiretroviral Therapy among Women Attending Prevention of Mother- to- Child Transmission Clinic in Rachuonyo North Sub -County, Kenya"***. The project is part of the pre-requisite of the course and therefore, we would appreciate if the student is issued with a research permit to enable him collect data and write a report. Thesis reflects integration of practice and demonstrates writing skills and publishing ability. It also demonstrates the learners' readiness to advance knowledge and practice in the world of business.

We hope to receive positive response so that the student can move to the field to collect data as soon as she gets the permit.

Yours Faithfully

DR. RAPHAEL NYENJE
RESIDENT LECTURER
KISUMU CAMPUS



**APPENDIX V: LETTER OF AUTHORIZATION BY NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY AND INNOVATION**



**NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION**

Telephone: +254-20-2213471,
2241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No.

Date:

26th October, 2015

NACOSTI/P/15/96696/8145

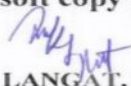
Jim Seth Katieno
University of Nairobi
P.O. Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Effects of stigma on uptake of Antiretroviral therapy among Women attending prevention of mother-to-child transmission clinic in Rachuonyo North Sub-County, Kenya,”* I am pleased to inform you that you have been authorized to undertake research in **Homa Bay County** for a period ending **23rd October, 2016.**

You are advised to report to **the County Commissioner, the County Director of Education and the County Coordinator of Health, Homa Bay County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.


DR. S. K. LANGAT, OGW
FOR: DIRECTOR GENERAL/CEO

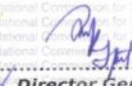
Copy to:

The County Commissioner
Homa Bay County.

The County Director of Education
Homa Bay County.

National Commission for Science, Technology and Innovation is ISO 9001: 2008 Certified

APPENDIX VI: RESEARCH CLEARANCE PERMIT

THIS IS TO CERTIFY THAT: MR. JIM SETH KATIENO of UNIVERSITY OF NAIROBI, 3977-40100 kisumu, has been permitted to conduct research in Homabay County on the topic: EFFECTS OF STIGMA ON UPTAKE OF ANTIRETROVIRAL THERAPY AMONG WOMEN ATTENDING PREVENTION OF MOTHER-TO-CHILD TRANSMISSION CLINIC IN RACHUONYO NORTH SUB-COUNTY, KENYA for the period ending: 23rd October, 2016 Applicant's Signature	Permit No : NACOSTI/P/15/96696/8145 Date Of Issue : 26th October, 2015 Fee Received : Ksh 1,000   for Director General National Commission for Science, Technology & Innovation
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