

**THE STATUS OF HIV/AIDS MANAGEMENT STRATEGIES IN CORRECTIONAL
SETTINGS IN KENYA: A CASE STUDY OF LANG'ATA WOMEN AND KAMITI
MAXIMUM PRISONS.**

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*A thesis submitted in partial fulfillment of the requirement for the award of a Master's of
Arts degree in Sociology in the Department of Sociology and Social Work, University of
Nairobi.*

**November,
2014.**

DECLARATION

I hereby declare that this is my own original work and has not been submitted in this or any other University or Institution of higher learning for award of a degree or any other qualification.

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TABLE OF CONTENTS

Declaration	i
Table of Contents	ii
Abstract	v
Dedication	vi
Acknowledgement	vii
List of Tables.....	viii
List of Figures	ix
Appendices	x
Abbreviations	xi
CHAPTER ONE: INTRODUCTION	1-8
1.1 Background	1
1.2 Problem Statement	3
1.3 Research questions	5
1.4 Objectives of the Study	5
1.5 Rationale of the Study	5
1.6 The Scope of the Study	7
1.7 Operational definition of key terms.....	8
CHAPTER TWO: LITERATURE REVIEW	9-33
2.1 Introduction	9
2.2 The status of HIV/AIDS in penal systems	9
2.3 Factors contributing to the status of HIV/AIDS in penal systems	11
2.4 Occurrence of HIV/AIDS in penal systems	13
2.5 Legal frameworks n HIV/AIDS in penal systems.....	15
2.6 Ethical dilemmas in prison health care system	16
2.7 General awareness of HIV/AIDS by prison inmates.....	18
2.8 Perception of HIV/AIDS by prison inmates.....	20
2.9 Obstacles in containing HIV/AIDS in penal systems	23

2.9.1	Overcrowding	23
2.9.2	Risky behaviours and sexual practices	25
2.9.3	Stigma and discrimination	27
2.9.4	Potential impact of released prisoners on community health care system	28
2.9.5	Discharge planning	29
2.10	Theoretical framework	30
2.11	Conceptual Framework	31
2.12	Study hypothesis.....	32
2.13	Summary of Literature Review	33

CHAPTER THREE: RESEARCH METHODOLOGY41-46

3.1	Introduction	35
3.2	Research site.....	35
3.3	Research Design	36
3.3.1	Survey Research	37
3.4	Target Population	37
3.5	Unit of Analysis.....	37
3.6	Unit of observation.....	38
3.7	Sampling design of the study	38
3.7.1	Selection of Kenyan prisons.....	38
3.7.2	Selection of primary respondents	39
3.7.3	Selection of key informants.....	40
3.8	Type and Sources of data	41
3.8.1	Primary data	41
3.8.2	Secondary data	41
3.9	Techniques and Tools of Data Collection	41
3.10	Data Analysis	42
3.11	Field work experiences.....	44
3.12	Ethical Considerations.....	46

CHAPTER FOUR: PRESENTATION AND ANALYSIS OF DATA	47-71
4.1 Introduction	47
4.2 Univariate Analysis	47
4.2.1 Social and Demographic characteristics of respondents	47
4.2.2 Knowledge of HIV/AIDS by inmates	54
4.2.3 Orientation of HIV/AIDS to inmates	56
4.2.4 Exposure to HIV/AIDS information by inmates	57
4.2.5 Awareness of HIV/AIDS activities	58
4.2.6 Availability of VCT centres	60
4.2.7 Frequency of visit to VCT centres	61
4.2.8 Level of equipment of the VCT Centres	61
4.2.9 Common practices of managing HIV/AIDS by Kenyan prison authorities	62
4.2.10 Practices of coping with HIV/AIDS by the infected inmates	64
4.2.11 Protective devices for coping with HIV/AIDS by the infected inmates	65
4.3 Bivariate analysis	66
4.3.1 Age and frequency of visiting VCT Centres	67
4.3.2 Marital status and frequency of visiting VCT Centres	68
4.3.3 Status of HIV/AIDS and frequency of visiting VCT Centres	69
4.3.4 Duration of imprisonment and frequency of visiting VCT Centres	70
4.3.5 Length of stay in prison and frequency of visiting VCT Centres	71
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS.....	73-79
5.1 Introduction	73
5.2 Summary of the study's key findings	73
5.3 Conclusion.....	75
5.4 Recommendations	76
5.5 Further Research.....	79
BIBIOGRAPHY	80-92

ABSTRACT

This study focuses on status of HIV/AIDS management strategies in correctional settings in Kenya. Specifically, it examines in detail how the transmission and spread of HIV is mitigated by the Kenya Prison Service. To find out whether this goal is achieved, the study had three objectives viz. (a) assess how prisoners perceive the scourge of HIV in prisons; (b) establish the preparedness of the Kenya prison service to mitigate the transmission and spread of HIV in prisons and (c) to identify the current practices of managing HIV in Kenyan prisons and assess the success of such practices in containing its spread. To achieve the three objectives, the study adopted a survey research of 142 inmates. Of these, 98 (69%) were males from Kamiti and 44 (31%) were females from Lang'ata prisons. Using purposive sampling, 16 key informants were reached and gave their view on HIV management in prisons.

Data was analyzed at univariate and bivariate levels using descriptive and inferential statistics respectively. At descriptive level, the study found that Kenyan jails are dominated by male inmates. The mean age of inmates was 28.1yrs. This implies that prisons covered were dominated by young adults. On marital status, majority of inmates were married. This suggests that majority of inmates in the prisons covered were in the age bracket that is likely to be married. On education, majority of inmates had secondary education.

Drawing from the study findings, about half of the inmates covered reported to be HIV positive. This could be attributed to high prevalence of HIV among inmates in the prisons studied. Data on inmates' knowledge about HIV indicated that majority of inmates were exposed to HIV information. VCT centres were available in both prisons and this is where majority of inmates got exposed to HIV/AIDS information in both prisons. Thus, VCT centres played a key role in informing inmates about HIV/AIDS.

Bivariate analysis was used to measure relationships between and among variables by finding out how the background factors influenced the frequency of visiting the VCT centre by inmates. Age and frequency of visiting the VCT centre was statistically significant relationship at 0.05 probability level. The relationship was weak as indicated by the value of Contingency Coefficient (0.09). Duration of imprisonment and frequency of visiting the VCT centre was also statistically significant at 0.05 probability level. The relationship was weak as indicated by the value of Contingency Coefficient (0.19).

Based on the study findings, the main obstacles to effective implementation of HIV/AIDS management programs in Kenyan prisons appear to be viz. a) high prevalence of HIV by inmates; b) lack of clear and proper mechanism of identifying the HIV positive inmates; c) congestion in prisons; d) poor access to health care services; e) inadequate knowledge about HIV; f) inadequately exposure to HIV information by inmates; f) poor facilitation of continuity of HIV programs in the transition from prison to community as well as g) lack of elaborate post-release or discharge planning program to sick and terminally ill patients.

Therefore, the study recommends that, mandatory HIV testing on entry in prisons should be introduced to enable inmates to discover their HIV status. A standard of prison medical services that meets the principle of equivalence should be provided to inmates. Elaborate discharge planning program should be made available for inmates in Kenyan prisons to enable prisoners who enter the later stages of terminal illnesses like HIV/AIDS access palliative care.

DEDICATION

This thesis is dedicated to the memory of my late mother: Maryann Wangari Mungai (1952-1993).

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The findings from this research were made possible by participation of key respondents and key informants. However, the interpretations and conclusions of this report are entirely those of the author who solely is responsible for any errors or omissions.

LIST OF TABLES

Table 3.1: Selection of primary respondents Lang’ata women’s and Kamiti maximum prisons	40
Table 3.2: Summary of key informants selected for the study.....	40
Table 4.1: Distribution of key respondents by age and sex.....	47
Table 4.2: Distribution of respondents by education achievement and sex	49
Table 4.3: Distribution of respondents by HIV status and sex.....	51
Table 4.4: Distribution of respondents by type of crime and sex.....	52
Table 4.5: Distribution of respondents by understanding what is HIV/AIDS and sex	55
Table 4.6: Distribution of respondents by Knowledge about HIV/AIDS and sex	55
Table 4.7: Distribution of respondents by satisfaction with HIV orientation and sex	57
Table 4.8: Distribution of respondents by exposure to HIV information and sex	58
Table 4.9: Distribution of respondents by awareness activities and sex.....	59
Table 4.10: Distribution of respondents by adequacy of VCT services and sex	60
Table 4.11: Distribution of respondents by level of equipment of VCT and sex.....	62
Table 4.12: Distribution by common practices of managing HIV/AIDS and sex	63
Table 4.13: Distribution of respondents by practices of coping with HIV and sex	64
Table 4.14: Distribution of respondents by HIV/AIDS protective devices and sex	65
Table 4.15: Distribution of respondents by effectiveness of HIV protective devices.....	66
Table 4.16: Relationship between age and frequency of visiting VCT centre.....	67
Table 4.17: Relationship between marital status and frequency of visiting VCT centre	68
Table 4.18: Relationship between HIV/AIDS status and frequency of visiting VCT centre.....	69
Table 4.19: Relationship between duration of imprisonment and frequency of visiting VCT	71
Table 4.20: Relationship between length of stay and frequency of visiting VCT centre.....	72

LIST OF FIGURES

Figure 2.1: Management of HIV/AIDS in Prisons.....	32
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APPENDICES

Appendix I: Letter of transmittal.....	1
Appendix II: Questionnaire for inmates.....	2
Appendix III: Interview Guide for Key informants	7
Appendix IV: End notes.....	8

ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
AMREF	Africa Medical Research Foundation
ART	Antiretroviral Therapy
ARV	Antiretroviral
BMBPS	Bench Mark Book for Prison Staff
CBD	Central Business District
CBS	Central Bureau of Statistics
CEBC	Centre for Evidence Based Correction
CHLN	Canada HIV Legal Network
CSC	Correctional Service Canada
CSVR	Centre for the Study of Violence and Reconciliation
DCS	Department of Correctional Services
DCSPH	Department of Correctional Service Policy on HIV
GNP+	Global Network of People Living with HIV
GOK	Government of Kenya
HIV	Human Immune Deficiency Virus
HRW	Human Rights Watch
ICNA	Infection Control Nurses Association
ICPS	International Centre for Prison Studies
IDU	Injecting Drug Users
IPRT	Irish Penal Reform Trust
ISS	Institute of Security Studies
KAIS	Kenya AIDS Indicator Survey
KDHS	Kenya Demographic and Health Survey
KES	Kenya Economic Survey
KHRC	Kenya Human Rights Commission
KIHBS	Kenya Integrated and Household Budget Survey
KNAMTS	Kenya National AIDS Mode of Transmission Survey
KNASP	Kenya National AIDS Strategic Plan
KNBS	Kenya National Bureau of Statistics
KPS	Kenya Prisons Service

KPHS	Kenya Prison Health Service
LOK	Laws of Kenya
LVCT	Liverpool Voluntary Counseling and Testing
MARPS	Most at Risk Population
MDC	Minnesota Department of Corrections
MoH	Ministry of Health
MPND	Ministry of Planning and National Development
MSM	Men having Sex with Men
NACC	National AIDS Control Council
NASCOP	National AIDS/STI Control programme
NEPHAK	National Empowerment Network of People Living with HIV in Kenya
NCA	National Commission on AIDS
NCLR	National Council for Law Reporting
NIMHNS	National Institute of Mental Health and Neural Science
PASAN	Prisoners AIDS Support Action Network
PEPFAR	President's Emergency Plan for AIDS Relief
PLWHIV	People Living With HIV
PRI	Penal Reform International
QCEA	Quaker Council for European Affairs
SADCS	South African Department of Correctional Services
SPSS	Statistical Package for Social Sciences
UK	United Kingdom
UN	United Nations
UNAIDS	United Nations programme on HIV/AIDS
UNODC	United Nations Office on Drug and Crime
UNSMRTP	United Nations Standards and Minimum Rules for Treatment of Prisoners
US	United States
WHO	World Health Organization
STIs	Sexually transmitted infections
TB	Tuberculosis
VCT	Voluntary Counseling and Testing
YCTC	Youth Corrective Training Centre

CHAPTER ONE: INTRODUCTION

1.1 Background

The HIV epidemic is one of the most destructive health crises of modern times, ravaging families and communities throughout the world. It is caused by a human immunodeficiency virus that weakens the immune system, making the body susceptible to other opportunistic diseases that lead to death (MoH, 2001:1). The predominant mode of HIV transmission is through heterosexual contact that occurs in a variety of sexual encounters: between married couples, concurrent sexual partnerships, casual sexual partners, and a range of transaction-based sexual practices. Other modes of transmission are through infected blood and unsafe injections (ibid). Globally, 33.2 million people were living with HIV and 2.1 million deaths occurred in 2007 (UNAIDS, 2007:39). However, despite twenty years of prevention programmes, an estimated 2.5 million new infections occurred in that year (NACC, 2009 b: 16). Sub-Saharan Africa remains the most affected region with 68% of all HIV -positive people (UNAIDS, 2007:15). In Kenya, as of December 2011, 1.6 million people were living with HIV while adult prevalence in 2010 was 6.2%. This is about 40% lower than at the epidemic's peak in 1993 (NASCOP, 2012: X). In addition, an estimated 49,126 people died of AIDS-related causes in 2011, slightly more than one-third the annual numbers who died in 2002–2004 (Ibid).

The first HIV/AIDS case in Kenya was reported in 1984 and since then, the rate of infection has continued to rise (MoH, 2001:1). The prevalence of HIV in the late 1990s was over 14% in adults compared to 7.4% in 2007 (NASCOP, 2008:1). The epidemic is geographically diverse, with a particularly high prevalence in Nyanza Region that account for more than half of infected adults in Kenya (Wambayi, 2009:2). Nairobi has the next largest number of HIV infected adults followed by Coast, Eastern and Western Regions. Prevalence rates among the urban population are higher than in the rural population (Ibid). For more than a decade, Kenya has experienced a mixed and geographically heterogeneous HIV epidemic with characteristics of both a 'generalized' epidemic among the mainstream population, and a 'concentrated' epidemic among specific most-at-risk populations (NASCOP, 2008:1). Prisoners are among most at risk population who contribute 15% of new HIV infections, it's likely that the HIV epidemic in the general population spread from this initial source (NACC, 2009a: iv).

The first report of HIV/AIDS in correctional facilities was published in the early 1980s (Dostoyevsky, 2008:2). The rates of HIV infection among prisoners in many countries are

significantly higher than those in the general population (Wamsley, 2008:2). This is because, sexual activity including rape and other forms of sexual violence occur in prisons and result in transmission of HIV and other sexually transmitted infections (Jurgens, 2007:2). This poses a serious threat to the health of prisoners, including the risk of HIV and other sexually transmitted infections (ibid). However, while some prison systems continue to deny the existence of the problem, others have shown that it is possible to fundamentally change the way in which sexual violence is addressed in prison, within a relatively short timeframe. Thus, high prevalence of HIV infection and the over-representation of injecting drug users in prisons combined with HIV risk behaviour create a crucial public-health issue for correctional institutions and, at a broader level, the communities in which they are situated (Dolan et al., 2007:2). In Kenyan prisons, prevalence of HIV is significantly higher than in the general population (NAS COP, 2008). This is a clear indication that HIV is a reality in Kenyan prisons.

There are approximately nine million men, women and children held in penal institutions around the world mostly, as pre-trial detainees or as sentenced prisoners with an annual turnover of 30 million (Muntingh, 2007:1). Over two million prisoners are in the USA, which has the highest prison population rate at 756 prisoners for every 100,000 persons (Wamsley, 2008:1). Almost two thirds (59%) of countries had rates below 150 per 100,000 (ibid). Africa has an estimated prison population of close to 900,000 with an estimated 2.7 million people moving through African prison systems annually (Muntingh, 2007:1). South Africa has the highest prison population in Sub-Saharan Africa, with 164,297 people behind bars; it has the ninth largest prison population in the world (Wamsley, 2008:2). Ethiopia has the second largest number of prisoners in the region, with 80,000 incarcerated. Overall, West African countries indicate the lowest prison population, with between 755-10,000 people in prisons (ibid).

The Kenya Prisons system was established in 1911 and by 1912, there were about 30 penal institutions while the prison population stood at 1,466 against 300 staff population (KPS, 2009:1). By the year 2012, Kenya had an estimated prison population of 50,000 inmates held in 107 prisons (Pris/25/1/stats/Vol 13). Prisonsⁱ in Kenya are categorized into 5 groups while prisonersⁱⁱ are categorized into two groups (KPS, 2009:27). Individual prisonersⁱⁱⁱ are classified into four groups, which is done in regard to prisoners' special needs and characteristic to ensure the security and welfare of prisoners is guaranteed (Ibid). Prisoners infected with HIV have

special needs, due to high prevalence of HIV infection and the over-representation of injecting drug users in prisons (Dolan et al., 2007:2).

Kenya Prisons Service (KPS) HIV/AIDS policy supports the government's commitment in continued policy and legislative reforms responsive to the needs of HIV infected and affected persons (KPS, 2007:1). Kenya Prisons Health Service (KPHS) is mandated with the control and management of HIV in the prison community to reduce the spread and address its effects. In a prison setting, HIV management include: Reducing the spread of HIV transmission, mitigating the effects of HIV and building the capacity of the prisons department to respond to the epidemic. Despite the high risk of HIV transmission within prisons, HIV prevention programmes like condom distribution, syringe exchange among other programs are often not provided for inmates (LVCT et al., 2008:6). Some fear that these programmes would encourage undesirable behaviors (Ibid).

Risky behavior creates a crucial public-health issue for correctional institutions and at a broader level, the communities in which they are situated (Dolan et al., 2007:2). Although much information is known about the HIV, risk factors, prevalence rates and policy in Europe, America and South Africa, similar literature does not exist for inmates in Kenya and other African countries (LVCT et al., 2008:1). Thus is due to the fact that very few people like associating with prisoners and that security issues discourage many people to do studies in prisons. In addition, there is high morbidity of inmates from prisons to the community since once prisoners finish serving their prison terms, they are released back to the community. This could results to the transmission of HIV by the released inmates to the general population if adequate measures are employed to manage HIV in prisons. Thus, there is a considerable knowledge gap in understanding the magnitude of the epidemic in prison communities and its multiplier effect on the non-prison population in Kenya. Therefore, this study is an attempt to establish the status of HIV/AIDS management strategies in correctional settings in Kenya.

1.2 Problem statement

Prisons concentrate great numbers of HIV -infected and most at-risk populations, while prisoners comprise one of the least represented populations in national HIV strategies (Reyes, 2001:8). In addition, prisoners are identified as a vulnerable group, and that a significant number of HIV/AIDS infections are occurring inside prisons (NACC, 2009 b: 14). Studies from around the

world show that sexual activity, including rape and other forms of sexual violence, occur in prisons and result in the transmission of HIV and other sexually transmitted infections (Jurgens, 2007:5). In a study by Liverpool VCT and Kenyan prison service on sexual health and HIV knowledge, practice and prevalence among male inmates in Kenya revealed that among the 59 prisoners who reported ever having sex in prison, 5 of them were diagnosed with HIV (LVCT, et al., 2008:4). This is an indication that risky sexual behaviours are common in Kenyan prisons.

Prison conditions in many countries do not meet internationally expected standards; in reality the quality and quantity of food provided are inadequate (Jurgens, 2007:56). In addition, overcrowding is common as many prison systems house large numbers of pre-trial detainees leading to difficulties in prison management and increased transmission of infectious diseases such as tuberculosis and HIV. However, as in many countries in Africa, conditions inside Kenya's prisons are dangerously unhealthy. Indeed, a report on high level committee on prison crisis by Madoka revealed that 370 inmates had died between 2003-2008 in Kodiaga Prison in Kisumu due to poor sanitation (Madoka, 2008:20). This is a clear indication that poor prison conditions are realities in Kenyan prisons.

Prisons and jails fail to provide the level of health services required by patients with HIV due to high cost in terms of staff, laboratory testing, and medication (Kantor, 2006:8). Resources to provide adequate care and accommodation to prisoners are not available due to poverty and limited state funding (Muntingh, 2007:1). Access to medical care is severely limited, in fact prisoners living with HIV have few care and treatment options (Jurgens, 2007: 9). Kenya has shown an impressive commitment in combating HIV and tuberculosis especially in voluntary HIV counseling and testing (The East African, June 2010). However, prisoners have been neglected in its fight against infectious diseases (Ibid).

Drugs are commonplace in many penal institutions (Dolan et al., 2007:2). Certainly drug users form a large proportion of prison populations in most developed countries (Ibid). Despite the sustained efforts by prison authorities to prevent drug use by attempting to prevent the entry of drugs into penal institutions, drugs can and do enter prisons (Jurgens, 2007: 21). In Kenya, inmates have access to different types of drugs; undeniably 79.1% of surveyed inmates reported being aware of inmates injecting themselves for non-medical reasons (LVCT et al., 2008:5).

Prisoners come from the community and they return to the community; in fact they are fathers and mothers, brothers and sisters, sons and daughters, grandfathers and grandmothers, husbands and wives, lovers, partners and friends. Indeed, prisoners, and prison staff, come and go from Kenyan prisons every day, bringing with them potentially infectious diseases in both directions (The East African, June 2010). High degree of mobility between prison and the community also means that other sexually transmitted infections, communicable diseases and related illnesses transmitted in prison are transferred to the community (Jurgens, 2007:5). Thus, resumption of risk behaviours such as unprotected sex and drug injecting shortly after release from prison is common and if appropriate interventions are not provided, they carry these problems back into the community upon release (Kantor, 2006:3). Thus, ignoring prisoner health undermines Kenya's broader health goals. This study therefore attempts to establish the status of HIV/AIDS management strategies in correctional settings in Kenya, by addressing the following questions:

1.3 Research Questions

1. How do Kenyan prisoners perceive the scourge of HIV/AIDS in prisons?
2. To what extent does the Kenya Prison Service has the capacity to prevent, control and manage HIV/AIDS in correctional settings in Kenya?
3. What are the current practices of managing HIV/AIDS in Kenyan prisons and how successful are such practices in containing its spread?

1.4 Objectives of the study

The overall objective of this study is to determine how HIV/AIDS is managed by the Kenyan prison system. Specifically the study is set out to:

- a) Assess how prisoners perceive the scourge of HIV/AIDS in correctional settings in Kenya;
- b) Establish the preparedness of the Kenya prison service in controlling and managing HIV/AIDS in correctional settings in Kenya;
- c) Identify the current practices of managing HIV/AIDS in correctional settings in Kenya and assess the success of such practices in containing its spread.

1.5 Rationale of the study

Prisons in Kenya are rudimentary in nature, are overcrowded, have shortages of food, bedding, medical supplies and treatment, and there is absence of recreational facilities (Madoka, 2008:20). Thus, poor conditions of confinement exacerbate negative health impacts and complicate the

provision of health care by prison staff. In this regard, the prison populations are exposed to dreadful diseases of an incurable nature such as HIV/AIDS and other related illnesses like tuberculosis. In the context of HIV, the sub-standard living conditions increases the risk of transmission among prisoners by promoting and encouraging drug use, prison violence and rape. Improved prison conditions, with reasonable space, decent sanitation and balanced diet can help reduce tensions and violence within prisons, and increase the ability of prison staff to manage the institutions effectively. Although attempts have been made by Kenya prison service to improve prison conditions, most prisons are still inadequate. Therefore, this study assesses the effect of prison conditions in the transmission and spread of HIV/AIDS in Kenyan prisons. This would help the Kenya prison service employ the necessary measures to contain HIV/AIDS in prisons.

Prison is an environment where adequate and consistent access to specialized health care is difficult and where maintaining confidentiality about one's HIV status is a daily struggle. In addition, ignorance, fear, stigma and discrimination of HIV are widespread. Under these conditions, the risk of unnecessary or accelerated health decline or death is ever-present. However, there are no responsive programs to address the unique needs of vulnerable populations within the prison system. Therefore, this study attempts to establish how stigma and discrimination is perceived by the Kenya prison community. This would create awareness of the impact of HIV related stigma and discrimination in Kenyan prisons, thereby containing HIV.

Prisoners are among the most at risk population in regard to HIV/AIDS (NACC, 2009a: iv). They are defined by behaviours that put them at risk of HIV infections due to high concentration of men who have sex with men and intravenous drug users (Ibid). Despite this, prisoners are marginalized and have received little or no attention from the Governments and the society. Thus, targeting them for HIV prevention poses special challenges. This study is set to identify the challenges faced by the Kenya prison service in managing HIV/AIDS in prisons. This would help improve HIV/AIDS management programs, thereby adequate health care services to inmates particularly HIV/AIDS preventive and curative care.

Compassionate release is a program that allows sick prisoners to die in dignity, either in their own home or with their families, rather than forced to die isolated in prison (Moller et al., 2007:3). Prison medical services are expected to provide full information on prisoner's health status, treatment needs and prognosis, to the authorities competent to decide upon early release.

This is critical in ensuring continuity of HIV prevention, treatment, and care through linkages and access to necessary medical and psychosocial support services. However, the prison environment with its security-focused architecture is generally non-conducive to compassionate and responsive end of life care. In addition, prison staffs often lack the necessary training and resources. This study therefore assesses whether HIV/AIDS education is offered to inmates and prison staff in Kenya on as a measure to containing HIV/AIDS in prisons. This would create awareness on HIV/AIDS to both inmates and staff.

Like all persons, prisoners are entitled to enjoy the highest attainable standard of physical and mental health. The international community has generally accepted that prisoners retain all rights and ensure that they are not taken away as a fact of incarceration. Therefore, states have an obligation to implement legislation, policies and programmes consistent with international human rights norms to ensure that prisoners infected with HIV are provided a standard of health care. Therefore, this study sets out to find the level of the preparedness by the Kenya prison service in mitigating HIV in prisons by ensuring that prisoners living with HIV are provided a standard of health. By implementing legislation, policies and programmes for HIV infected inmates like special diet, condom provision, providing shaving blades among others would help improve prisoners' health conditions thereby containing the spread of HIV in Kenyan prisons.

1.6 The scope and limitation of the study

This study attempts to establish the status of HIV/AIDS management strategies in correctional settings in Kenya. It is limited to a sample of 142 respondents: 98 male and 44 female inmates from Lang'ata women's maximum prison and Kamiti maximum prison in Nairobi Region. This limited coverage is dictated by limited resources.

The study explores sensitive matters of sexuality and same sex practices which are punishable by law and the stigma associated with HIV/AIDS. However, those involved in sexual abuse do not consider themselves to be homosexual, thus hindering the dissemination of HIV prevention messages. The study therefore is not only limited to the status but also involves the personal information of the inmates in relation to their behaviour in prisons which are perceived to propel the transmission and spread of HIV/AIDS.

The study attempts to find out whether fear of disclosure and its consequences discouraged voluntary counseling and testing. This is because, prison officials use HIV antibody test results

to make decisions about housing and segregation, work assignments, and visiting privileges, among other matters. By these, the study is set to establish the status of existing policies aimed at preventing the spread of HIV/AIDS in Kenyan prisons.

1.7 Operational definition of key terms

HIV/AIDS management: Measures taken by the Kenyan prison authority in ensuring that the prison community access timely and well coordinated HIV/AIDS medical support services and continuity of care, to mitigate the transmission and spread of HIV/AIDS.

HIV/AIDS negative inmate: A person who is serving a sentence of imprisonment in the selected prisons and is not infected with HIV/AIDS.

HIV/AIDS perception: The conscious awareness, translation and interpretation by the Kenyan prison community about what they see, hear and feel about HIV, give it meaning and context.

HIV/AIDS positive inmate: A person who is serving a sentence of imprisonment in the selected prisons and is infected with HIV/AIDS.

HIV/AIDS programs: The plan consisting of all concrete activities aimed at addressing HIV/AIDS in Kenyan prisons, like measures to increase the HIV education and awareness activities, VCT with pre- and post-counseling, as well as treatment given to infected inmates.

Long-term inmates: A person who is serving a sentence of imprisonment in the selected prisons for more than six months.

Short-term inmates: A person who is serving a sentence of imprisonment in the selected prisons below six months.

Status: The situation of HIV/AIDS management strategies employed by the Kenya Prison Service in the fight against HIV/AIDS and the extent to which HIV/AIDS problems are solved.

Strategies: This refers to the interventions or approaches initiated by the Kenya Prison Service in the fight against HIV/AIDS in Kenyan prisons.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction.

This chapter reviews available literature that the study endeavors to fill on the status of HIV/AIDS management strategies in correctional settings in Kenya. It presents relevant literature on the status of HIV/AIDS in prisons, factors contributing to the status of HIV/AIDS in penal systems, occurrence of HIV/AIDS in penal systems, legal frame work on HIV/AIDS prevention in penal systems, ethical dilemma in prison healthcare system, general awareness of HIV by prison inmates, perception of HIV/AIDS by prison inmates and obstacles in containing HIV in penal systems. Where possible, the discussion of various themes is pitched on global, regional and national levels. The chapter ends with the presentation of conceptual frame work and summary of literature review.

2.2 The status of HIV/AIDS in penal systems

Across the world, HIV/AIDS is the leading cause of death in prisons (Goyer, 2001: 44), but the exact number of HIV-positive prisoners is difficult to estimate, due to the fact that testing procedures vary from screening on occasion of outbursts of infectious diseases (Reyes, 2001:2). This situation is worsened by high rates of other infectious diseases such as hepatitis and tuberculosis which is many times higher than in the general population (Moller, 2007:90). This places prisoners at elevated risk of infection (Maruschak, 2005:18). The Kenya Mode of Transmission Study indicated that MSM and IDU combined account for perhaps 15% of new infections, the model for Nairobi placed this group's contribution at 26%, and in Mombasa at 31%, almost a third of new infections (NACC, 2009 a). Therefore, this study is set out to establish the capacity by the Kenya prison service in controlling the transmission HIV in prisons.

The available data on HIV infection rates in prisons cover inmates who were infected outside the institutions before imprisonment. It also covers persons who were infected inside the institutions through the sharing of contaminated injection equipment or through unprotected sex (WHO, 2001). In his study based in South African prisons, Goyer, (2003) highlighted the fact that people who are most likely to contract HIV are the same people who are most likely to go to prison such as the young, unemployed, under-educated and black men. This is because many of the same socio-economic factors, which result in high-risk behaviours for contracting HIV, are the same factors which lead to criminal activity and incarceration (Ibid). Inside prison, high-risk behaviours for transmitting HIV include homosexual activity, intravenous drug use, and the use

of contaminated cutting instruments. Certain populations that are highly vulnerable to HIV/AIDS infection have a heightened probability of incarceration because of their involvement in behaviours such as drug use and sex work (WHO, 2001). In Kenya, the most common risk behaviors predisposing inmates to HIV infection include; MSM activity (both consensual and coerced) and sharing of sharps like razors (NASCOP, 2012:15). This study will therefore investigate whether or not there are HIV/AIDS management programs especially in controlling risky behaviour and also find out their implementation status in the prisons studied.

Various studies have been conducted from time to time on various aspects of the prison life in India, especially relating to the appalling conditions of the prisons. These studies have repeatedly documented about overcrowding, work and vocational training, lack of infrastructure, role of prison personnel in correctional activities, plight of the children of women prisoners in Indian jails (Chattoraj, 2006:28). In South Africa, conditions of overcrowding, stress and malnutrition compromise health and safety and have the effect of worsening the overall health of all inmates, and particularly those living with HIV (Goyer, 2003). In Kenya, prison congestion remains the key challenge that hinders the fight against TB and HIV/AIDS (Otieno, 2011:2). Thus, this study attempts to measure the preparedness of the Kenya prison service in preventing, controlling and managing HIV/AIDS in correctional settings in Kenya.

Prison systems have a moral responsibility to prevent the spread of infectious diseases among prisoners, prison staff, and the public and to care for prisoners living with HIV (Lines, 2002: 67). They present a prime opportunity to respond to behaviours that pose high risk of HIV transmission, such as needle sharing and sexual behaviours, by providing the tools, such as condoms and water-based lubricant, sterile needles and syringes that could decrease the risk of infection from such activities (Lines, 2004:1). Fear that the provision of condoms in prisons may encourage male-on-male sex which is a cultural taboo in many parts of Africa presents obstacles to effective harm reduction measures (UNODC, 2006:19). A survey to measure the acceptability of the condom distribution programme at the Washington, DC Central Detention Facility found condom access to be unobtrusive to the jail routine, no threat to security or operations, no increase in sexual activity, and accepted by most prisoners and correctional officers. (UNODC, 2007:66). The survey concluded that the model would be easily replicable in other institutions. Distribution of condoms in Namibian prisons had mixed responses from the various spheres of Namibian society (Africa Review, 2012:2). Indeed, for many, the initiative is a positive move to

alleviate the scourge of HIV/AIDS behind bars and grant equal access to health services to inmates. But for others, just the mere thought that such an initiative is being considered is unbelievable (Ibid). In Kenya, condoms, lubricants and sterile injecting equipment are not distributed in prisons as it is perceived to be in conflict with existing laws and policies for prisons (NAS COP, 2012:15). Despite the effectiveness of condoms and water-based lubricant used in reducing the risk of HIV/AIDS transmission in prisons, many jurisdictions have institutional regulations prohibiting consensual sex. This persuades the sexually active prisoners not to risk asking for condoms for fearing being subject to increased surveillance. Such institutional prohibitions lead to punitive sanctions against safe sex. Thus, this study attempts to find out the jurisdictions prevailing in Kenyan prisons in relation to sexuality among prisoners in Kenya and whether they help in controlling the spread of the disease.

2.3 Factors contributing to the status of HIV/AIDS in penal systems

Globally, the existing body of literature points to a number of contributing factors to HIV transmission in prisons. These range from the weakness of the criminal justice and judicial systems, social stigma, institutional and societal neglect, lack of resources for maintenance of existing penal institutions, poor food and nutrition, inadequate health care, overcrowding as well as mixing of un-sentenced and convicted persons (Wamsley, 2008:11. In Kenya, Cameroon and Zambia, occupancy rates in prisons range around 300-345 per cent above planned levels, thus reflecting high levels of overcrowding (Simoooya et al., 2001:34). This is followed by Burundi, Malawi, Uganda, Tanzania, Rwanda, and Sierra Leone that are reporting up the rate of 200 per cent ding (Ibid). Other countries stand at 120 per cent up to 170 per cent rates, including Botswana, Burkina Faso, Ghana, Madagascar, Mauritania, Mozambique, Namibia, Senegal and South Africa. Overcrowding contributes to further deterioration of the physical conditions of the prison premises. It also results in poor supervision and safety, which significantly increases the risk of gang activity and violence. Tension, frustration, and idleness among prisoners are often released through sex and sexual abuse. Overcrowding also translates into the mixing of prisoners across categories of those incarcerated (pre-trial detainees, convicts, juveniles, men and women). In Kenya, prison congestion remains the key challenge that hinders the fight against TB and HIV/AIDS in prisons (Otieno, 2011:2). This study therefore attempts investigate whether the conditions prevailing in Kenyan prisons impacts on HIV/AIDS management in prisons in any way and make appropriate recommendations on the way forward.

Prisons offer new norms of dominance and power, particularly between male prisoners. These norms often alter traditional gender identities and roles that become highly sexualized (Gear 2002:16). In the United States, it was estimated that over 1 million inmates had been sexually assaulted in the past 20 years (Gears et al., 2003:14). In South Africa, gangs are known for their particularly rigid gender hierarchy, which dictates the rules for sex and rape in prison (Ibid). Prison rape is also reported among prisoners in Kenya (NAS COP, 2012:15). Indeed, 9% of inmates reported having been forced into sex, particularly those aged below 24 years (Ibid). Fear on the part of prisoners is an often cited reason for the severe under-reporting of sexual violence cases as victims fear violent reprisal or additional victimization. This study will therefore assess how prisoners perceive the scourge of HIV/AIDS in Kenyan prisons by investigating whether or not poor prison conditions impact in any way on the transmission and spread of HIV/AIDS.

Congested prisons are conducive to forced or consenting homosexual activities among prisoners (Mahon, 1996). Other risk factors such as rape and injection drug use within prisons place inmates at an exceptionally high risk of HIV infection. In addition, imprisoned females with a history of prostitution and drug injection are at additional risk of HIV infection (Swetz et al., 2001:98). In a study of prisoners and HIV in England and Wales in 1997-1998, 75 percent of adult male Injecting drug users and 69 percent of adult female IDUs had shared needles/syringes inside prison (Weild et al., 2000:3). In Ghana in 2007, more than a third of prison inmates had ever injected drugs, even though only 10% had been arrested for drug trade or possession (Adjei et al., 2008:33). In Kenya, inmates have access to different types of drugs, whereby 79.1% of surveyed inmates reported being aware of inmates injecting themselves for non-medical reasons (LVCT et al., 2008:5). This study therefore attempt to establish whether the current practices of managing HIV have succeeded in containing drug use in Kenyan prisons.

Injection drug use and high-risk sexual behaviors have been identified in international research as two of the most common modes of HIV/AIDS transmission in prisons (Eshrati et al., 2008:1). In the Republic of Ireland, 70% of the IDUs surveyed reported sharing needles while imprisoned compared to 46% in the month before incarceration (Allwright et al., 2000:23). In Africa, homosexual activity is common but the reported number of instances is likely to be much lower than the actual numbers (Gear et al., 2002:16). This is due to the denial or criminalization of homosexuality, stigmatization of prisoners by society at large, and underreporting of rape and sexual abuse among male prisoners (Ibid). Rape and other forms of sexual violence among male

and female prisoners are rife in African prisons, between prisoners of the same or different sex, and between staff and (Gear et al., 2002: 16). In a MARPS surveillance report by NASCOP in Kenya, 13% of interviewed inmates reporting to have had consensual sex with their colleagues and an additional 9% of inmates have been forced into sex, particularly those aged below 24 years (NASCOP, 2012:15). In addition, HIV prevalence is high for maximum security prisons (16%), then Women's (13%), Medium (8%), Main (7%), Remand (5%), Short Sentence (3%), Borstals (2%) and Youth (0%) (Ibid). This study is set to examine the situation in Kenyan prisons to establish the conditions and factors promoting the transmission and spread of HIV.

2.4 Occurrence of HIV/AIDS in penal systems

The epidemic of HIV/AIDS is a serious health threat for prison populations in many countries, and presents significant challenges for prison and public health authorities and national governments (UNODC, 2006:2). Studies during the early 1990's have shown that HIV prevalence vary widely, from 33.6% in an adult prison in Catalonia (Spain), and over 50% in a female correctional facility in New York (Cameron and Leigh, 1997). In many African countries, HIV prevalence ranges from 2.7% in Senegal and 9% in Nigeria to 27% in Zambia based on Voluntary Counseling and Testing (Stubblefield and Wolf., 2000:38). In South Africa, the Judicial Inspectorate of Prisons estimated HIV prevalence as high as 60%, based on research by the University of Natal at the Westville correctional centre (Goyer et al., 2003:8). For other countries, the corresponding figures show 12% prevalence among prisoners in Cameroon and 28% in Côte d'Ivoire, double or triple the HIV prevalence among the adult population in these countries (Stubblefield and Wolf, 2000:38). In Kenya, high prevalence of HIV/AIDS and Tuberculosis infection in penal institutions is due to high risk behaviours (Nairobi, 31st August 2007 PlusNews). Indeed, 77% of inmates reported ever testing for HIV with tuberculosis second at 23%. Testing for both types of hepatitis was almost non-existent recording less than 2% (NASCOP, 2012:15). This study is therefore set to investigate whether HIV management strategies employed by Kenya prison service impact on high risk behaviours prevailing in Kenyan prisons in any way in both male and female prisons studied.

The problem of HIV/AIDS in prisons is truly international as demonstrated by studies from Australia (Butler et al., 2001), Canada (Beaupre, 1994), Pakistan (Akhtar et al., 2001), Spain (Estebanez et al., 2002), UK (Bellis et al., 1997), USA (Okwumabua et al., 2000) and Africa (Simooya et al., 2001). Other sexually transmitted diseases such as syphilis also pose a problem

for prisoners (Wolfe, 2001) and hepatitis is also present (Allwright et al., 2000). In Kenya, the prevalence of HIV/AIDS among the prison inmates was found to be 8.2%: highest in Nyanza (28%), then Central (13%), Nairobi (11%), Eastern (8%), Coast (6%), Rift Valley (4%), Western (4%), and lastly North Eastern (0%) (NASCOP, 2012:15). This study will therefore attempt to establish the current practices of managing HIV in Kenyan prisons and the extent to which these practices have succeeded.

Tuberculosis is another communicable disease in prisons with an international dimension (WHO, 2001). Indeed, prisons are conducive to the spread of TB, while its mortality is high and drug resistance is prevalent (Coninx and Reyes, 1999). The out breaks of TB are contained through health education which is considered as a general strategy for prison health care (Mohle et al., 2002). In addition, HIV infection is contained by providing condoms and clean needles whereby safe sex and safe drug use are practiced (Simoooya et al., 2001). However, the attitude of correctional officers is key to the success of such strategies as many may have understandable misgivings about providing such things as condoms and clean needles (Godin et al., 2001). In Kenya, Limited awareness among prisoners coupled with lack of basic supplies and protective means increase the risk of HIV infection among inmates, prison staff and the community (NASCOP, 2012:15). Indeed, 23% of inmates reported ever testing for TB (Ibid). Therefore, this study is set out to establish the attitudes of Kenyan correctional officers in the possibility of providing condoms and clean needles in selected prisons in Kenya.

Generally, female inmates have a higher rate of HIV infection than do male inmates (Hammett et al., 1999:12). This is due to the fact that female inmates are more likely than male inmates to engage in behaviors that pose a notable risk for HIV infection like prostitution and injecting drug use (Gudo, 1992:26). In fact, for those that inject drugs, they are more likely than men to share their works including drug injecting instruments (Ibid). The prevalence of sexually transmitted diseases, including HIV, among prisoners is 20 times greater than the general population in Canada (Potts, 2000:2). In a study by Adeyemi and Omideyi, (2006:34) in Ilesa prison, Osun State, Nigeria, HIV prevalence rate for females (8.3%) was higher than that for men (3.3%) among 253 inmates (241 males:12 females) inmates screened. In Kenya, the prevalence of HIV among the prison inmates is 8.2% (NASCOP, 2012:14). Prevalence among female inmates is 19% compared to 6% of male inmates (Ibid). With this in mind, health promotion strategies for prisoners living with HIV are necessary to slow down the progression of their disease. Therefore,

this study attempt to establish the preparedness of the Kenyan prison service in preventing, controlling and managing HIV/AIDS in correctional settings in Kenya.

2.5 Legal frameworks on HIV/AIDS prevention in penal systems

Health care in prisons is a right guaranteed in international laws, guidelines and covenants that include the right to medical treatment and preventive measures (WHO, 1993:4). All prisoners have a right to receive health care, including preventive measures, equivalent to that available in the community without discrimination, in particular with respect to their legal status or nationality (Ibid). However, implementing health care policies in prisons is a major challenge to many countries (Lines, 2004:3). For example, in Europe and Central Asia there is lack of policies that prioritize zero-tolerance to drug use over zero-tolerance to HIV (Ibid). In many African countries there exist outdated laws governing prison system and there is need to update and bring them in line with international standards (Muntigh, 2001:7). For example, in South Africa amended 1959 prisons act that adequate primary health care should be made available in prisons, to allow every prisoner leads a healthy life (Ibid). However, increased impact of HIV related diseases and chronic conditions remain one of the biggest challenges on health service delivery in South Africa (DCS, 2002:4). In Kenya, there is no specific policy on practice and frameworks around HIV prevention that directly address the fate of inmates in Kenya (LVCT et al., 2008:7). This results to non comprehensive programmes known to reduce the risk of HIV/ AIDS transmission in prisons. However, effective prevention of HIV transmission in prisons requires active involvement of non-governmental organizations, prisoners, non-discriminatory and humane care of HIV-infected prisoners. This study will therefore investigate whether or not there are HIV management programs and find out their implementation status in the prisons studied.

Many countries worldwide have dedicated limited resources to prisons and security often takes precedence over treatment and health needs (Dolan, 2007:3). In African countries, few resources are dedicated by governments to cater for healthcare; drugs and lacking equipment, Prison reform International (PRI, 1999:3). In Kenya, there are no doctors working full time in prisons but relies on the Ministry of Health for professional services and that dispensaries lack drugs and pain killers are given for any ailment (KNCHR, 2002:26). Poor prison conditions, such as poor facilities for personal hygiene also worsen the situation for those who are suffering from illnesses and diseases. They inform severe health risks that lead to a number of deaths from malnutrition, dehydration, dysentery, tuberculosis and HIV (Singh, 2008:79). For example, Dissel, (2001:2)

describes Kenya's prisons as 'death chambers due to overcrowding and unhygienic conditions whereby buckets serve as toilets in some prisons. These are indications of the possible challenges facing HIV management in Kenyan prisons which is the focus of this study.

Kenya Prisons Health Service (KPHS) is mandated with the control and management of diseases like HIV in prison community to reduce its spread and address its effects. Management of HIV/AIDS includes reduction on its transmission, mitigation of its effects and building the capacity of the prisons department to respond to the HIV epidemic (UNODC, 2007:57). The Kenyan penal code and constitution contain fairly liberal laws concerning prisoners (LoK, 2010). The country has ratified a number of international instruments protecting the rights of prisoners and detainees. However, prisoners have no access to satisfactory medical care in Kenyan Prisons (Madoka, 2008:20). This is due to the fact that the prevention of HIV transmission in prison has more to do with improving prison conditions in general than with specifically addressing HIV. In Kenya, policies to address HIV transmission in prison cannot be effective without immediate and urgent prison reforms. This could be done through training and educating the staff about HIV, formulating specific prison policies for HIV prevention and implementation those already in force. Thus, this study will establish the current practices of managing HIV and assessing its impact on HIV infections in Kenyan prisons.

2.6 Ethical dilemmas in prison health care system

Health is one of the key indicators of wellbeing of a society and prisons serve as mirrors of society (Math, 2011:1). It is therefore apparent that understanding health conditions in prisons would help in improving public health systems (Ibid). Health care in prison is a right guaranteed in international law, as well as in international rules, guidelines and covenants (UNAIDS, 1997:5). The right to health includes the right to medical treatment, preventive measures and to standards of health care equivalent to those available in the community without discrimination (Ibid). All prisoners have the right to receive health care including preventive measures equivalent to that available in the community without discrimination in particular with respect to their legal status or nationality (WHO, 1999:4). However, there is poor and inaccessible healthcare services in prisons due to inadequate, insufficient and dilapidated infrastructures (UNODC, 2011:6). In Kenya, 86% of prison institutions have at least one health care provider and that 77% of facilities offer HIV care (NAS COP, 2012:15). This is insufficient compared to

the large number of inmates contained in these institutions. This is an indication of study gap in the literature which this study attempts to fill.

A prison is a closed institution with a custodial role that does not always allow for the same provision of care as is available outside (WHO, 2001:14). Prisoners are more likely to be in a bad state of health when they enter prison; indeed, the unfavourable conditions therein make their health situation even worse (Ibid). Prisoners who are healthy on entry have a considerable risk of leaving prison with HIV, tuberculosis, skin diseases, drug problems or poor mental health (Math, 2011:11). Many of the prisoners have a history of high risk behaviour such as unprotected sex, violence and aggression (Ibid). These characteristics expose them to contracting diseases such as HIV/AIDS. In Kenya, the most common risk behaviors predisposing inmates to HIV infection include; MSM activity (both consensual and coerced) and sharing of sharps like razors (NAS COP, 2012:15). This study will therefore investigate whether or not there are HIV/AIDS management programs especially in controlling risky behaviour and also find out their implementation status in the prisons studied.

Prisoners cannot fend for themselves in their situation of detention and it is the responsibility of the state to provide for health services and a healthy environment (WHO, 2001:14). Therefore, preventive measures for HIV/AIDS in prison should be complementary and compatible with those in the community (WHO, 1999:4). They should be based on risk behaviours actually occurring in prisons, notably needle sharing among injecting drug users and unprotected sexual intercourse (Ibid). Thus, prisoners should be identified as a key vulnerable population when allocating national and international resources to combat HIV/AIDS (UNODC, 2006:21). However, in many countries, limited resources are dedicated to prisons, and security often takes precedence over treatment and health needs (Dolan et al., 2007:3). In Kenya, 86% of prison institutions have at least one health care provider (NAS COP, 2012:15). Thus, this study will investigate the situations in Kenyan prisons to find out whether the conditions prevailing in Kenyan prisons exposes prison inmates to contraction of such diseases.

The problem of HIV is a serious health threat for prison populations in many countries, and presents significant challenges for prison and public health systems and national governments (UNODC, 2006:2). Thus, creating functioning systems of referral and cooperation between drug treatment services inside and outside prisons can improve continuity of drug services upon

imprisonment and after release. In Kenyan prisons, the main cause of referrals to other hospitals outside prison is minor illnesses, injuries, and dental problems (Steger, 2011). Thus, this study will therefore investigate the how prisons in Kenya have planned to manage the HIV. This will help in analyzing the situation of HIV management and making the necessary recommendations.

2.7 General awareness of HIV/AIDS by prison inmates

Knowledge on HIV in prisons is very crucial in the prevention of its spread in such settings. A study in the USA by Swartz et al., (2004:34) showed that knowledge was not a significant predictor of level of risk behaviour. Their results showed that a substantial number of participants expressed their willingness to participate in high risk behaviours, such as unprotected sex and needle sharing indicating the level of risks expected from such practices in relation to the spread of HIV. Level of risk was significantly related to demographic characteristics where male inmates and young inmates were more likely to belong to higher risk groups than were female inmates and older inmates (Ibid). Although participants were quite knowledgeable about HIV, they were at a high risk for infection because of multiple sex partners and unprotected sexual intercourse which were found to be prevalent in such prisons. Singh, (2008:20) conducted a study on the knowledge and understanding of prison inmates regarding HIV in a male maximum security prison in Durban. The study revealed that there was shallow understanding of HIV among prison inmates coupled with inappropriate living conditions, overcrowding, high risk sexual behaviour, gang activity and corruption within the prison. In Kenya, behavioral and biological survey on HIV and STIs among most at-risk populations (MARPs) including inmates from all the provinces in Kenya assessing 25 prisons revealed that the general awareness of HIV transmission is high among inmates and prison staff (NASCO, 2012:15). Indeed, 97% cited vaginal sex while 88% cited anal sex without a condom as the main root of HIV/AIDS transmission. However, misconceptions of HIV transmission via oral sex, sitting on toilet seat, sharing glass, etc. persist (Ibid). These attitudes and beliefs of the prison inmates could jeopardize their potential to translate knowledge gained through interventions into behaviour changes. This is an indication that prisoners' knowledge on HIV/AIDS is an important factor in the determination of the status of HIV/AIDS management in Kenyan prisons. This study is therefore aimed at evaluating the knowledge of the prisoners in Kenya to determine how it impacts on the management of HIV/AIDS among prisoners, with a view to make the necessary recommendations on the ways of improving HIV knowledge among prisoners in Kenya.

Despite the call for more effective education in prison, most studies show that high levels of knowledge do not significantly affect one's behavior (Mahon, 1996). Nonetheless, education is still needed if any behavior changes are likely to follow (Ibid). Behavior surrounding sex and drugs is typically the result of deeply entrenched and powerful human drives" (Martin et al., 1995:26) and programs may not spend enough time trying to change clients' attitudes about their practices (Ibid). In a study done in the USA by Des Jarlais and Friedman, (1988) on injecting drug users, revealed that the biggest predictor of behavior change was attributed to whether individuals believed that their friends were changing their behavior in response to the HIV epidemic. In Durban, there was shallow understanding of HIV coupled with high prevalence of HIV/AIDS in prison and inadequate access to anti-retroviral treatment among prison inmates Singh, (2008:20 In Kenya, limited awareness among prisoners coupled with lack of basic supplies and protective means increase the risk of HIV infection among inmates, prison staff and the community (NASCOP, 2012:15). However, very few studies have been done especially on the management of HIV/AIDS in prison setting in Kenya. This is an indication of study gap in the literature which this study attempts to fill.

Inmates return back to their communities with inadequate knowledge about behaviors that foster the transmission of HIV/AIDS (NCA, 1991). Consistent condom use is not prevalent among arrestees in the US (Decker and Richard, 1995:23). However, other studies have shown that inmates have many preconceived misconceptions about the modes of transmission for sexually transmissible infections (Ibid). They underestimate their risk for contracting HIV/AIDS (Keeton and Swanson, 1998), particularly cocaine users (Silbersiepe and Hardy, 1997). Thus, traditional HIV prison-based programs may not be effective (Davis-Berman and Brown, 1990). In addition, there is a paucity of research on prison-based programs (Ibid). This is due to the fact that many prison-based HIV programs are a replication of other prison programs that have been formulated around accessibility and applicability, not on efficacious programming (Hogan, 1994). A study on knowledge, attitude, and preventive practices among prison inmates in Ogbomoso prison at Oyo State, South West Nigerian revealed high knowledge about HIV/AIDS among inmates (Abdulsalam and Babatunde, 2014:5). However, misconception about HIV/AIDS was still rife among the prisoners in that most inmates displayed negative attitudes that were likely to encourage stigmatization and discrimination against the PLWHA. This would create fear of isolation thus preventing inmates from being tested. In Kenya, knowledge of HIV among inmates is a reflection of knowledge levels in the general population (LVCT et al., 2008:6). This

is possibly due to the high turnover rates of inmates, which means that HIV knowledge in the general population is replicated among the inmates (Ibid). The recent reforms in prisons whereby inmates now have access to media have put them in an advantage in terms of boosting their HIV knowledge, and general access to information. Awareness of HIV/AIDS among the Kenyan populace has been very high since 1993 (CBS, 2004). Knowledge of HIV prevention methods was said to be wide spread (Ibid). Thus, this study will find out the status of knowledge among prisoners in the selected Kenyan prisons and how it impacts on the spread on HIV/AIDS infection in Kenyan prisons.

2.8 Perception of HIV/AIDS by prison inmates.

Stigma of HIV is a problem throughout the world that adds to the stress experienced by HIV infected persons, and leads to challenges for HIV prevention efforts (Herek and Capitanio, 1999: 42). Testing of HIV, fear of negative social consequences of a positive HIV test result can deter some persons from getting tested (Ibid). A study by Center for HIV prevention studies at the University of California San Francisco in 2008 on men and women in seven cities in the US revealed that stigma was associated with a decreased likelihood of being tested for HIV. A study done in Uganda among inmates living with HIV revealed that 57% of the respondents were opposed to the suggestion that HIV positive prisoners be separately accommodated while 93% supported the provision of special diet to HIV-positive prisoners (UNODC, 2009:23). In Kenya, several recent studies among Kenyan most at risk populations have shown that community stigma and discrimination is widespread (NACC, 2009b:32). However, stigma surrounding HIV, homosexuality and drug use make it difficult for HIV prevention services to be offered in Kenyan prisons. This study therefore attempts to find out whether knowledge about HIV prevention, transmission and care offsets the stigma that is caused by misinformation and ignorance in Kenyan prisons.

Globally, negative attitudes towards HIV undermine the effectiveness of HIV prevention initiatives among inmates by creating atmosphere of discrimination, and potential violence, against inmates living with HIV (Moller et al., 2007:63). Fear of HIV is magnified by misinformation about routes of transmission, shared living facilities, stigma and discrimination against vulnerable groups (Moller et al., 2007:61). In Uganda, fear of potential discrimination deter prisoners from accessing voluntary HIV testing and discourage prisoners living with HIV from seeking health care services (UNODC, 2009:23). A study done by NEPHAK, (2011), on

PLHIV stigma index Kenyan country assessment revealed that stigma is a reality in Kenya. Indeed, of the total (1073) respondents interviewed, 30% reported experiencing some form of stigma and/or discrimination. This was mainly due to people not understanding how HIV is transmitted and being afraid of getting infected by casual contact. This study will therefore investigate whether the conditions prevailing in Kenyan prisons and the perception of the Kenyan prisoners impacts on HIV/AIDS management in prisons in any way.

Researchers at the University of Alaska Anchorage assembled data measuring the perceptions of individuals in Anchorage who are at some actual risk for contracting HIV. Their study was intended to determine factors related to the perceived risk of HIV among a sample of drug users from the Municipality of Anchorage. Information obtained from 1002 drug users participating in the study between October 1991 and April 1994 was examined. Results of the analysis suggested that, overall, while perceived risk of HIV infection was low; the level of perception was related to actual risk from both drug use and sexual behavior among this sample of drug users. Rapid situation assessment on prisoners' perceived risk of acquiring HIV while in Ugandan prison by UNODC, (2009:23) revealed that 33% of interviewed prisoners perceived themselves as being at risk of acquiring HIV in prison while 77% perceived themselves not being at risk. These study findings implies that despite inmates being in the same prison setting, not all inmates perceive themselves as being at risk of acquiring HIV in prison. In Kenya, there is a low level but consistent pattern of denial of rights to people living with HIV/AIDS in health care settings (NEPHAK, 2011:12). The most common violation of rights is forced to submit to a medical or health procedure, including HIV testing (Ibid). Stigma and discrimination cause stress and fear for prisoners living with HIV, and also discourage others from seeking testing and/or accessing treatment. For this reason, the confidentiality of HIV status is of primary importance to many prisoners living with HIV. Therefore, this study attempts to find out how HIV testing is carried out in the Kenyan prisons and the impacts it may have on those found positive.

The WHO guidelines on HIV infection in prisons state that voluntary testing for HIV infection should be available in prisons when available in the community and that voluntary testing should only be carried out with the informed consent of the prisoners (WHO, 1993). However, in many countries providing HIV testing services in prisons does not meet the standard of the wider community. Some prison systems provide no access—or limited access—to HIV testing. In prison systems where HIV testing is available, testing sometimes takes places without proper pretest

and post-test counseling or without adequate support for prisoners who receive a positive test result (WHO, 1993). Generally, prisoners living with HIV routinely face social isolation, discrimination and even violence as a result of their HIV status (Moller et al., 2007:63). Fear of HIV often places them at increased risk of social isolation, violence and human rights abuses from both prisoners and prison staff (Ibid). In addition, professionalism, independence and confidentiality become difficult to maintain as the doctor acting as a medical expert provide services to detainee as patient and provide medical evidence concerning the patient to court. This is done in the interests of justice and in the service of the community including: preparing forensic reports in cases of allegations of ill treatment and evaluating the threat to society a prisoner poses (Moller et al., 2007:34). In Kenya, 86% of prison institutions have at least one health care provider and that 77% of facilities offer HIV/AIDS care (NASCOP, 2012:15).

Repeat voluntary counseling and testing in correctional settings is an important entry point to HIV/AIDS prevention and care services for at-risk and infected inmates (Dostoevsky, 2008:5). In the US in the state of South California, segregation of prisoners living with HIV is used to prevent further HIV transmission in prisons (Moller et al., 2007:66). However, forced segregation increases HIV-related stigma and discrimination among prisoners and prison staff by creating the impression that prisoners living with HIV are a “danger” (Ibid). In South Africa, the first policy to address HIV in prisons was formulated in 1992 (Achmat and Mark, 1996:4). The procedure consisted of interviewing new prisoners to determine if they were involved in high risk behaviour, testing those who were considered at high risk for being HIV-positive, and then segregating HIV positive prisoners in a separate facility from the general prison population (Ibid). In south Africa, prisoners considered “high risk” were those who were illegal aliens, those convicted of sexual crimes, intravenous drug users, or those who have had sexual contact whilst abroad, specifically in those countries where HIV-infection is present in 10% or more of the population” (DCS, 2001). However, the continued segregation of HIV-positive inmates is not only unnecessary, but it causes humiliation and isolation of prisoners living with HIV. This is due to the fact that it fails to address the need for universal access to condoms, safe injecting equipment and HIV and other blood-borne virus prevention information in prisons. In Kenya, a report by NASCOP, (2012:15) revealed that 77% of inmates reported ever testing for HIV with tuberculosis second at 23%. Thus, this study attempts to assess success of the current practices of managing HIV/AIDS by investigating the frequency and methods of HIV testing and its impact on control and prevention of HIV in Kenyan prisons.

In many countries, lack of education and training among prison staff results in the mistaken belief that a prisoner's HIV status is a workplace safety issue (Moller et al., 2007:63). Institutional practices for providing health care appointments, delivering HIV test results and dispensing medication also differ for prisoners living with HIV than for HIV-negative prisoners, a fact that other prisoners and prison staff will notice (Ibid). Thus, ensuring the privacy of medical information is crucial to the credibility of prison health care staff (Moller et al., 2007:63). However, wearing latex gloves with prisoners living with HIV and not with all prisoners, can disclose a person's HIV status. Thus, prisoners trusting their medical services give them confidence in accessing counseling and education on HIV prevention. In Kenya, lack of financial resources is a barrier to legal redress for people living with HIV and had suffered discrimination, including denial of access to accommodation, work, health services and education (NEPHAK, 2011:12). Strengthening referral and access to free legal services for people and prisoners living with HIV as well as training and capacity building for legal officers and counselors is paramount. Thus, this study will find out the capacity by the Kenya prison service in managing HIV/AIDS in Kenyan prisons.

2.9 Obstacles in containing HIV/AIDS in penal systems

Poor prison conditions worldwide remain the key contributing factor to high mortality rates in relation to high rates of HIV transmission and spread of other infectious diseases like hepatitis and tuberculosis in prisons Singh, (2008:79). These conditions bring many challenges in the management of HIV as elaborated through the following factors: Overcrowding, high risk behaviours and sexual practices, stigma and discrimination of HIV, potential impact of released prisoners to the community healthcare system and lack of elaborate discharge planning.

2.9.1 Overcrowding

Globally, prison conditions do not meet the minimum requirements set out in the UN Standard and Minimum Rules for the Treatment of Prisoners (UNSMRTP, 1955:5). The latter states that "all accommodation provided for the use of prisoners and in particular all sleeping accommodation shall meet all requirements of health, due regard being paid to climatic conditions and particularly to cubic content of air, minimum floor space, lighting, heating and ventilation" (Ibid). The substandard prison conditions have a negative impact on the health of prisoners living with HIV (Moller et al., 2007:81). For example, by confining prisoners in spaces, prisoners share beds/mattresses promoting same sex practices in prisons leading to HIV

transmissions (Ibid). Overcrowding creates many management problems that make the administration of prison a nightmare for anyone close enough to the prison service. In New York, there are approximately 70 prisons that house approximately 70,774 inmates, of which 3,381 are females (Goord, 2000). In Kenya, prisons are overcrowded, unhygienic, poorly ventilated with no adequate washing facilities and prisoners sleep on dirty damp cement (Dissel, 2001:2). For instance, in Nakuru prison, 450 convicted inmates and 780 remand prisoners were held in 14 cells (Ibid). Overcrowding therefore seems to be one of the challenges to the control of HIV/AIDS in Kenya. However, this line of thought has been canvassed by persons who are high enough in the prison administration that a lot lesser mortals have taken their opinion with some measure of ex-cathedra finality. This study will therefore look into the capacities of the prisons in relation to the inmates to affirm the crowding status of the prisons and its effect on HIV/AIDS prevention.

Overcrowding contributes to the deterioration of the physical conditions of prison premises, poor supervision and exacerbates the health problems of those prisoners living with HIV through exposure to increased high risk behaviours and other infectious diseases (Wamsley, 2008:3). Overcrowded prisons become the breeding ground for various types of infections like airborne or transmissible diseases due to unhealthy life styles (Singh, 2008:1). In the US, the overall occupancy rate of Alabama Prisons is 189.3%—a rate that is very close to double of the designed capacity of all State owned facilities (ADOC 2011:29). Long period of pre-trial detention, contributes to overcrowding and other problems in African prisons (Simoooya et al., 2001:62), due to high incarceration leading to insufficient space for prisoners (Wamsley, 2008:3). In Kenya, delayed sentencing and inadequate prison holding capacity promote the spread of HIV (NAS COP, 2012:15). This study will therefore assess the extent of overcrowding in the prisons in Kenya to confirm whether or not it contributes to the transmission and spread of HIV.

Prisoners are forced to live in conditions that increase their vulnerability to medical neglect, opportunistic infections, needless suffering, and untimely death (Lines, 2002:73). The penal systems in Africa have shortages of food, bedding, medical supplies, treatment and lack adequate recreation facilities (Dissel, 2001:2). In Kenya, food and clothing is inadequate for most prisoners (Ibid). Eating a well-balanced diet complete with fresh fruits and vegetables is an important component of health promotion for people living with HIV, yet access to nutritious food is a consistent problem for most prisoners in Kenya. In addition, prisoners living with HIV

have no control over their diet, as policies about prisoners' diets are determined at the institutional level, thus, varying from prison to prison. This study attempts to investigate the availability and access to various resources and facilities which are crucial in the prevention of HIV and those which are required for the already infected prisoners.

2.9.2 Risky behaviours and sexual practices

Globally, prison is a high risk environment characterized by high-risk activities, such as use of drugs and sexual activities between men (Reyes, 2001:10). The greatest number of HIV cases related to injectable drug use has been documented in the New York City metropolitan area (Des Jarlais and Friedman, 1988). In South Africa, sexual interaction in prisons is forbidden but homosexual intercourse is present (Singh, 2008:77). In Kenyan prisons, the most common risk behaviors predisposing inmates to HIV infection include; MSM activity (both consensual and coerced) and sharing of sharp objects like razors (NASCOP, 2012:15). However, condoms, lubricants and sterile injecting equipment are not distributed in Kenyan prisons as it is perceived to be in conflict with existing laws and policies for prisons (Ibid). However, despite the fact that many prison systems make substantial investments in drug supply reduction measures, there is little solid and consistent empirical evidence available to confirm their efficacy in reducing levels of drug use in prisons and whether the risks are associated with the means of taking drugs among the prisoners is healthy. Therefore, this study strives to establish preparedness by the Kenyan prisons in the managing HIV in prisons by identifying the risks if any with regard to the spread on HIV/AIDS among the inmates.

There are approximately 16 million injecting drug users with an estimated 3 million living with HIV worldwide (PEPFAR, 2010:3). In the United States, eighty percent of injecting drug users have experienced incarceration at least once in their lives (Eshrati et al., 2008:1). In South Africa, only 1.3% of arrestees are injecting drug users, but 17% have been arrested in a year (Pluddemann et al., 2006:11). In Mauritius 17% of juvenile offenders and 50% of adult offenders were injecting drug users, and an estimated 16% of injecting drug users were imprisoned at some time in 2005 (Dewing et al., 2006:121). In Kenya, drug trafficking and trading in prison is common-often brought in by inmates attending court dates or by corrupt security officers who either supply drugs or facilitate entry (NASCOP, 2012:15). Indeed, 13% of all inmate respondents have ever used cannabis inside prison (Ibid), and that 5% of HIV infections in Kenya are attributed to injection drug use (NACC, 2009:30). However, problem of HIV in penal

institutions in other parts of the world are not necessarily problems in Africa and Africa should not rely on research done in other continents especially Europe since they apply more advanced programs. The current study therefore, aims at establishing the preparedness of Kenya prison service in mitigating HIV by identifying the main mode of HIV transmission in prisons. This would enable the Kenyan prison service formulate relevant policies in containing HIV in prisons.

The prevailing types of high-risk behaviour for HIV transmission in the prison environment are rape, sexual assault, drug abuse, and use of contaminated needles or other cutting instruments (Carelse, 1994:5). Inside prisons, sexual activities like homosexuality and rape result in tearing, resulting to higher risk of HIV transmission and other sexually transmitted infections (Ibid). Around the world, reports allege that prison officials sell access to vulnerable inmates and accept payoffs to allow rape to occur (Gear and Ngubeni, 2001:2). In addition, vulnerable inmates engage in “protective pairing” in which the weaker inmate provides sex to a dominant inmate in exchange for protection from assault by others (HRW, 2001:92). In California, prison population comprises 57% of those reporting sexual assault in custody (Jeness, 2007:78). The Centre for the Study of Violence surveyed inmates in a Gauteng correctional centre in South Africa to understand the nature and circumstances of sex and sexual violence taking place in men's prisons (Gear and Ngubeni, 2003:14). The latter study revealed that newly arrived; first-time offenders were particularly vulnerable as they were the focus of intense inmate attention and were usually confronted with frightening and overwhelming situations (Ibid). From this study, it is clear that violent behaviour by perpetrators is explained by sexual violence in prisons. In addition, gender and sexuality are related to violence in ways that have pertinence far beyond prison walls. In Kenya, 9% of inmates who ever engaged in sex while in prison were forced into it, particularly those aged below 24 years (NASCO, 2012:15). In fact, 13% of interviewed inmates reported to have had consensual sex with their colleagues (Ibid). Same-sex acts in prisons violates institutional rules, and if discovered can result in punitive disciplinary measures. This discriminates against same-sex couples, and creates significant barriers to accessing safer sex materials. However, prison policies and practices contribute to the creation of environments that can make men having sex with men and people living with HIV more vulnerable to health decline in prisons. This study is set to look into the conditions existing in Kenyan prisons and how they impact on the HIV/AIDS status among inmates.

2.9.3 Stigma and discrimination

“Stigma is a powerful means of social control applied by marginalizing, excluding and exercising power over individuals who display certain traits” (UNAIDS 2000:9). “Discrimination on the other hand is the enactment of stigma whereby stigma lies at the root of discriminatory actions, leading people to engage in actions or omissions that harm or deny services or entitlements to others” (Aggleton et al., 2005:9). Related HIV stigmatization is a process by which people living with HIV are discredited (Ibid). Related HIV stigma and discrimination remains prevalent in correctional institutions (Dostoyevsky, 2008:6). Individuals who enter prisons with HIV may face discrimination and threats from correctional officers and other inmates and can be segregated or denied prison jobs, activities, and visiting privileges (Ibid). Stigma and discrimination fuel the transmission of HIV and increasing the negative impact associated with the epidemic, creating major barriers to preventing further infection (Aggleton et al., 2005:1). In Kenya, community stigma and discrimination is widespread (NACC, 2009a:32). In prisons, this attitude can sustain an atmosphere of discrimination from the inmates and staff and potential violence against prisoners living with HIV by the inmates as well as discouraging them seeking voluntary HIV counseling and testing. This study is set to establish whether stigma and discrimination influences the management of HIV in Kenyan prisons. This will help in making appropriate recommendations on the ways of improving these situations.

In many countries worldwide, mandatory HIV testing of prisoners remain standard practice targeting prisoners identified as being at “high risk” (Moller et al., 2007:66). This is used to prevent further HIV/AIDS transmission in the prison and on medical grounds that better care can be provided to prisoners living with HIV by being housed together in a special living unit (Ibid). However, segregating HIV positive prisoners may lead to an increase in high-risk behaviors among a population that incorrectly assumes itself free of HIV infection (Dostoyevsky, 2008:6). Thus, offering repeat voluntary counseling and testing within correctional settings can be an important entry point to HIV-related prevention and care services for at-risk and infected inmates (Dostoevsky, 2008:5). In Kenya, stigma-reduction programs and trainings take place throughout in prisons. However, most programs use multiple components to address stigma including education, skills building and contact with HIV- infected persons at individual levels. Thus, it is difficult to measure status of these programs since there are few published studies of effective stigma-reduction programs. This study therefore is set to establish the status of the programs

used by the Kenya prison service aimed at sensitizing inmates about HIV/AIDS and its impact on mitigating its transmission and spread in Kenyan prisons.

2.9.4 Potential impact of released prisoners on the community healthcare system

The high degree of mobility between prison and community means that communicable diseases and related illnesses from prison are transmitted in the general population (Lines, 2004: 4). Thus, the quality of primary health care in prison depends on the state of development of primary health care in the community, since diseases contracted in prison, become issues of public health for the wider community (Moller, 2007:27). Kenyan prisoners have a high turnover rate; coupled with limited awareness among prisoners, lack of basic supplies and protective means increase the risk of HIV infection among inmates, prison staff and the community in Kenya (NASCOP, 2012:15). Therefore this study will assess the success of current practices of managing HIV/AIDS in Kenyan prisons by investigating the status of health care given to prisoners. This will help the Kenya prison service to predict the impact of released prisoners to the community healthcare system.

The potential impact of prisoners on HIV transmission outside of prison is great, as many prisoners complete their sentence and return to the community (Singh, 2008:78). Therefore, what is done in prisons with regard to HIV, hepatitis, tuberculosis, and drug use has an impact on the general community (Lines, 2002: 12). Thus, maintaining friendships made during incarceration introduce new members into an existing sexual network contributing to rates of HIV infection in the community (Dostoyevsky, 2008:1). In the US, prisoners who become HIV-positive remain knowledgeable sources of infection to the public when they are released back to community (Ayanwale, 2010:1). Given the high HIV seroprevalence among inmates, the reentry of inmates into the community presents a danger of spreading HIV and other infectious diseases (Dwyer et al., 2011:5). On average, 360,000 people are released from South Africa's prisons to the community each year (Singh, 2008:78). They bring their illnesses, infections, and disease with them (Singh, 2008:78). Inadequate screening for HIV and TB with poor prevention practices in Kenyan prisons may increase the risks of HIV and TB co-infection and contribute to higher mortality among prisoners (NASCOP, 2012:15). This problem could be transferred to the community once the inmates leave prison. Thus, inmates need adequate HIV prevention counseling before release to protect themselves and to decrease the likelihood of infecting others

in the community. Therefore, this study will assess the success of counseling as a measure of managing HIV/AIDS in Kenyan prisons by determining its status within and outside the prisons.

2.9.5 Discharge planning

Discharge planning involves providing inmates with information about outside resources, prescribing medications at release, scheduling and accompanying inmates to appointments with health care providers, and assisting with applying for medical and financial assistance (Dostoyevsky, 2008:6). Prisoners who enter the later stages of chronic or terminal illnesses like HIV/AIDS need to access palliative^{iv} care and no prisoner living with HIV should be forced to die in jail (PASAN, 2002:83). In Canada, applications for conditional release on medical or humanitarian grounds are decided by correctional services officials (Lines, 2002: 29). Inmates with progressive life-threatening diseases, including HIV/AIDS, are released from prison earlier in the course of their disease, before they are terminally ill (Ibid). However, African countries do not provide palliative care or compassionate parole, thus many inmates die of HIV/AIDS related causes while inside prisons (Lines , 2002: 84). In 2004, there was increased development of pre-release programs in Kenya, to help in successful transition of prisoners from prison to the outside community (KNCHR, 2005: 32). However, the effect of these programs is yet to be felt. This is due to prisons' inability to provide adequate palliative care services, which is a concern for all prisoners, not only those living with HIV. In addition, many elderly prisoners, as well as those with diseases such as cancer, also suffer under current correctional policies and practices in Kenya. Therefore, this study is set to find out whether policies on discharge planning ever exist in Kenya and if not advocate for such policies to be formulated.

Testing inmates for HIV prior to their release is a critical aspect not only of individuals' own health care needs but also for preventing transmission of HIV to others (Fischl et al., 2001:4). Knowledge of HIV status affects prisoners risk behaviors since after learning that they are infected, they take measures to reduce the risk of transmitting HIV to others (Ibid). Prisoners who enter the later stages of terminal illnesses like HIV/AIDS require specialized end of life care but prisons are ill-equipped to provide such care. This study attempts to investigate the actions taken by those in charge of prisons for inmates perceived to be terminally ill and require close medical attention. This is deemed to be one of the strategies to be used in prisons to ensure adequate HIV/AIDS control.

2.10 Theoretical Framework

All empirical studies should be grounded on theory (Singleton et al., 1988:140). A theory is a body of knowledge attempting to explain a given social reality. It is a way of making sense of a disturbing situation and specifies relationship between variables, with the purpose of explaining the problem in question (Ibid). In this study, theoretical framework is used to guide and explain the management programs applied by the Kenyan prison service in containing HIV/AIDS in prison. This study utilizes institutional and rational choice theories to explain the relationship between and among the study variables.

2.10.1 Institutional Theory

Institutional Theory is a collection of ideas supporting and restricting social behaviour (Scott, 2001). Institutions are set of working rules that are used to determine who is eligible to make decisions, actions allowed, rules used and procedures followed (Ostrom, 1990:16). “Institutions are social pattern characterized by standard sequences of interactions” (Jepperson, 1991:4). Institutional theory attends to the deeper and more resilient aspects of social structure (Berger and Luckmann, 1967:18). It considers the processes by which structures, including schemas, rules, norm, and routines, become established as authoritative guidelines for any social behavior (Ibid). Scott, (2001:178) indicates that, “in order to survive, organizations must conform to the rules and belief systems prevailing in the environment because institutions isomorphism, both structural and procedural, will earn the organization legitimacy”.

In this study, the institutional theory is used in breaking the gap between societal views and organizational views and actions. The aim here is to use the ideas of institutional theory and illustrate its application in HIV/AIDS management in Kenyan prisons by understanding the structures within which inmates access health care in prisons. In Kenyan prisons, rules, norms and routines are established as authoritative guidelines for inmates’ social behaviour. Thus, inmates in Kenyan prisons are expected to conform to the rules and belief systems prevailing in the prison environment and avoid risky behaviours that expose them to HIV/AIDS. On the other hand, Kenya prison service should accept that there exist risky behaviours like homosexuality, prison rape and drug use and formulates relevant policies around these issues instead of denying the existence of these vices. Management is more aware of social views and opinions and more willing to incorporate societal norms and expectations, rules and regulations. If all systems are interacting and emitting positive feedback all the goals are likely to be achieved. Inmates interact

with subsystems like prisons, judiciary, and health care facilities while in confinements. Therefore, it is instrumental in explaining why relationships between various HIV/AIDS programs are important in maintaining the functional equilibrium of the prison health service.

2.10.2 Rational Choice Theory

Rational Choice Theory is also known as choice theory or rational action theory (Blume and Easley, 2008). It is a framework for understanding social and economic behavior (Ibid). Models that rely on rational choice theory often adopt methodological individualism; the assumption that social situations or collective behaviors are the result of individual actions alone, with no role for larger institutions (Jon, 1989). Homans argued that human behaviour, like all animal behaviour, is not free but determined. It is shaped by the rewards and punishments that are encountered.

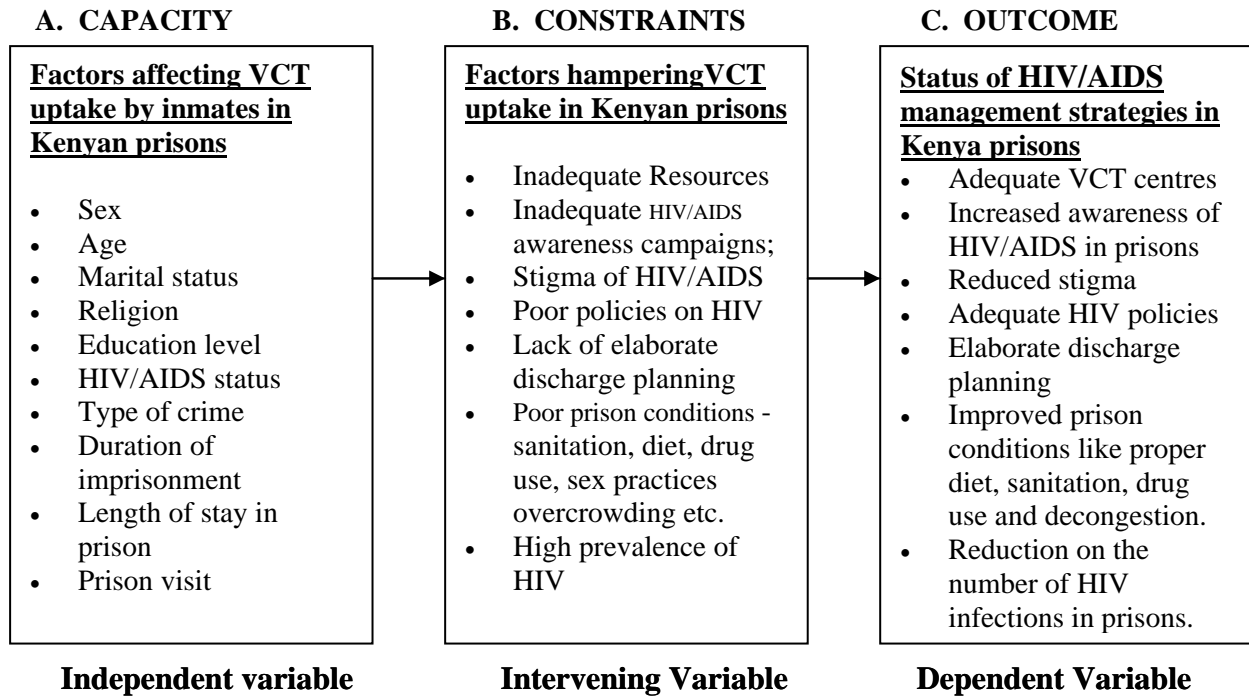
In this study, rational choice theory is used to conceptualize the management of HIV/AIDS in Kenyan prisons. The theory is useful in explaining the behaviour of the inmates' especially sexual relationships which impacts on the spread of HIV/AIDS in prisons. Rational choice theory presumes that the individual decision-making unit in question is representative of some larger group such as inmates in a particular prison. This would help in predicting what transpires in other penal institutions across the nation.

In the context of HIV/AIDS management, the choices of inmates and Kenya prison service are consistent if the measures are readily available in prisons. The rational choice theorist would explain changes in inmates' behaviours by looking for possible causes of changes in management programs available in prisons. Thus, inmates are expected to do those things that lead to rewards and avoid whatever they are punished for. For example, they may choose to avoid sexual activities and opt to abstain. In this context, reinforcement through rewards and punishments (conditioning) is the determining factor in inmates' behaviour that may increase or reduce the transmission of HIV in prisons. Thus, inmates learn from their past experiences, and that's what prison management need to know in order to explain their behaviour.

2.11 Conceptual framework

The literature review has shown that status of HIV/AIDS management strategies in terms of VCT uptake can potentially be influenced by social demographic factors. Figure 2.1 shows how these factors can relate and result into a reduction in the transmission of HIV/AIDS in Kenyan prisons.

Fig 2.1: HIV/AIDS management in prisons.



In the conceptual framework, Boxes A, B and C explain what is happening in Kenyan prison in relation to capacity, constraints and outcome on HIV/AIDS management. It illustrates the relationship between social demographic factors like sex, age, marital status, religion, education level, HIV status, type of crime, duration of imprisonment, length of stay in prison, prison visit and VCT uptake in understanding HIV/AIDS management in Kenyan prisons. Improved status of HIV/AIDS management programs are expected to reduce the prevalence of HIV/AIDS in Kenyan prisons.

2.12 Study hypothesis

‘A hypothesis is a conjectural statement on the relation between two or more variables’ (Kerlinger 1964:20). A good hypothesis needs to be logical, use precise language and should be testable with research or experimentation (Trochim, 2006). It is used to state the relationship between two variables and may be stated as null hypothesis or alternative hypothesis (Buttolph et al., 2012). In null hypotheses, there is no relationship between two variables, while in alternative hypotheses we state the direction of the relationship between two variables (Ibid). In this study, hypotheses is written in a form proposing that if something is done, then something else will occur, with the goal of helping to explain the focus and direction of the study. This directed the

researcher's thought process towards the solution of the research problem, as well as to locate and collect the right kind of data needed for the investigation.

Null hypothesis: H₀: As a result of improved status of HIV/AIDS management strategies, like VCT centres, there would be no significance difference in HIV/AIDS prevalence in Kenyan prisons, or there would be a significance decrease of HIV/AIDS prevalence in Kenyan prisons.

This will be tested against the **Alternative hypothesis** H_A: As a result of improved status of HIV/AIDS management strategies, like VCT centres, there would be significant decrease in HIV/AIDS prevalence in Kenyan prisons.

2.13 Summary of literature review and conclusion

The literature review in this chapter indicates that there is high prevalence rate of HIV/AIDS in Kenyan prisons due to among others, overcrowding, risky sexual practices, and high numbers of injecting drug users in prison. Despite this, the Kenyan prison system lack adequate preventive measures and HIV treatment, making the Kenyan prisons a high risky environment, due to HIV infections. By establishing the status of measures put in place by the Kenya prison service to prevent and control HIV/AIDS in prisons, this study will be able to identify the gap that need to be addressed and recommend effective measures in managing HIV in Kenyan prisons.

The literature review highlighted that the Kenya prison service has a vital role in fighting HIV/AIDS yet few resources are dedicated to prisons by the Government. Security often takes precedence over treatment and health care needs, thereby, undermining the efforts by the Kenya prison service in mitigating the transmission and spread of HIV/AIDS in prisons. By evaluating the available resources and the strategies in place in managing HIV/AIDS in prisons, this study will help in identifying the challenges in the management of HIV/AIDS in prisons.

Another factor that is highlighted in the literature review is stigma and discrimination against HIV/AIDS positive prisoners. It is evident from the literature that discriminatory attitudes sustain potential violence against prisoners living with HIV/AIDS and discourage them from seeking health care services in prisons. These exacerbate their health conditions leading to premature deaths. This study will evaluate the extent of discrimination in prisons and how it impacts on the

control of the spread of HIV/AIDS in Kenya prisons in attempt to make recommendations on the ways of improving the management of HIV/AIDS in prisons.

The literature review has clearly indicated that there is a great disparity between the legal provisions and the actual conditions in Kenyan prisons in regard to space, diet and recreational facilities. Yet Kenya is governed by penal code and constitution that contain fairly liberal laws concerning prisoners. The country has ratified a number of international instruments protecting the rights of prisoners and detainees. By evaluating the policies in place, this study will attempt to establish the status of policies used in controlling the transmission of HIV/AIDS in prisons.

In the study, Institutional theory was used to explain why relationships between various HIV/AIDS programs are important in maintaining the functional equilibrium of the prison health service. Rational choice theory was also used for the study to explain the behaviour of the prisoners in relation to HIV/AIDS in the prisons. This was based on the fact that the theory presumes that the individual decision-making unit such a prison setup is representative of some larger group.

In the study, conceptual framework illustrates the relationship between factors affecting the management of HIV/AIDS programs in Kenyan prisons. In this context, poor prison conditions like overcrowding, injecting drug use, increased sexual activities, HIV/AIDS -related stigma, delay in trial and lack of elaborate discharge planning are the main institutional factors contributing to high rates of HIV/AIDS infections in Kenyan prisons.

In the study, hypothesis is used to state the relationship between two variables that is written in a form proposing that if something is done, then something else will occur, with the goal of helping to explain the focus and direction of the study. This helped the researcher to locate and collect the right kind of data needed for the investigation.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter focuses on the methodological design of the study. Research methodology is a scientific system of explicit rules and procedures upon which the research is based, and against which claims for knowledge are evaluated (Nachmias and Nachmias, 1996:13). It is a systematic way of solving research problem by adopting various steps of studying the problem and logic behind it (Kothari, 1990:10). Methodological design is a general plan on how to execute field work. Design in this study outlines the study area, setting guidelines on who was studied, what was observed and when the observations were made as well as techniques of data collection and data analysis.

Owing to the nature of this study, methodological design covered both quantitative and qualitative research. The use of the two research methods allowed the researcher to build on the strengths of each method and minimize their weaknesses. Weaknesses of the quantitative method, like failure to provide information about the context of the situation, inability to control the environment and pre-determined outcomes was compensated by interaction with the research participants during interviews, learning about the context, and uncovering new research themes.

3.2 Research Site

The study was carried out in Nairobi County. The City and its surrounding area form the Nairobi Region with an area of 689 sq km located 140 kilometers south of the Equator, between the cities of Kampala and Mombasa, adjacent to the eastern edge of the Rift Valley (Cities Alliance, 2002:42). Nairobi enjoys a warm tropical highland climate with an average daily temperature ranging from 24-29° C and an average annual rainfall of 875 mm (Ibid). Over 60% of the Nairobi population lives in slums with a monthly household income among the urban poor ranging from 65 to 78 US\$ (Fernando, 2006:4). The level of income is indeed low which increases crime rate (Ibid). Poverty is a causal factor in which economically deprived people engage in economic practices such as prostitution that puts them at risk to HIV/AIDS (Starvou, 2002:2). Poverty is also seen as a consequence of HIV/AIDS where the infected use all their resources in treatment and are economically unproductive due to their weak bodily condition (Ibid). In Nairobi, extreme economic deprivation is a major factor that provokes risky behaviour especially among the slum dwellers (Agyei-Mensah, 2005; Zulu et al., 2004).

Nairobi area was selected purposively as the research site due to its geographical location and proximity from the city centre where most Government headquarters are located like the prison headquarters and ministry of health. It is also the administrative heart of Kenya where policies including HIV/AIDS are formulated and executed. This therefore made it easier for the researcher to access prison records as well as some key informants who participated in the study. It is also cosmopolitan with diverse social and cultural orientation. Thus, enabling the researcher to capture diverse views represented by most communities in Kenya regarding HIV/AIDS management. Last, Nairobi has all categories of prisons, from minimum to maximum and for both genders. In particular, the study was interested in both male and female maximum prisons due to their large concentration of population with varied criminal activities. Most importantly, Nairobi is the only county in Kenya with a maximum prison for female inmates, which is Langata women prison. These qualities made Nairobi the preferred choice for the researcher.

3.3 Research Design

Research design is the plan, structure and strategy of investigation conceived in order to obtain answers to research questions and to control variance (Kerlinger, 1964:275). It involves planning and interpretation of scientific observations (Singleton et al., 1988:67). In this study, the main research design was **quantitative**. Quantitative design is also referred to as the traditional or positivistic approach used to answer questions about the relationship between variables by controlling, explaining, and predicting phenomenon (Leedy, 1997:102). The specific design for the study was a survey research which focused on interviewing individual inmates from the selected prisons in Kenya. The tool for collecting quantitative data was a standard questionnaire with both open and closed ended questions.^vLikert scale was used to ask respondents specify their level of agreement to each of a list of statements (i.e. Agree strongly, agree, disagree & strongly disagree), to measure their attitudes on the HIV/AIDS reality in Kenyan prisons. Quantitative design helped the researcher to describe demographic attributes and quantifying opinions, attitudes and behaviors of inmates in Kenyan prisons regarding HIV/AIDS. In addition, the study was complemented by qualitative design. Qualitative design is also known as naturalistic, constructive or interpretative approach. It is used to answer questions about the nature of phenomenon with the purpose of describing and understanding it from the participants' point of view (Leedy, 1997:102). Specifically, in-depth interviews were held with the key informants and the tool for collecting qualitative data was an interview guide. Qualitative design allowed the researcher to engage in actual interaction with the policy makers in their day-to-day

organizational contexts therefore, providing more authentic and open answers as they were operating in their natural organizational settings.

3.3.1 Survey Research of inmates in the selected Kenyan prisons

Survey research is a technique that describes specific aspects of a given population by examining the relationships between variables whose results are generalized to the larger population (Singleton et al., 1988:233). The researcher was able to choose a large number of respondents from selected prisons in Kenya through probability and non-probability sampling procedures. This ensured a true representation of the entire population of general and HIV-positive inmates in Lang'ata and Kamiti maximum prisons. In this study, a standard questionnaire was used by the researcher to collect data from the general and HIV-positive inmates from Lang'ata women's and Kamiti maximum prisons. The primary purpose of this study was to describe the self-reported characteristics of the Kenyan inmates. This was done by gathering information from both HIV-infected and general inmates for understanding or predicting aspects of their behaviors on the prevention and management of HIV/AIDS in Kenyan prisons. This enabled the researcher to make inferences about the entire population on the status of HIV/AIDS management strategies in correctional settings in Kenya.

3.4 Target Population

Target population is a hypothetical set of people, events or objects to which a researcher wishes to generalize the results of the research (Borg and Gall, 1989:6). This study targeted all inmates incarcerated in all prisons in Kenya, to achieve the objective of the study. The study population (accessible population) was individual inmates from Langata women and Kamiti maximum prisons in Nairobi Region. By studying both male and female genders, the researcher aimed at understanding the prevalence of HIV/AIDS and the main mode of transmission in both prisons. This is due to the fact that women are portrayed as more vulnerable to HIV/AIDS infections due to their biological susceptibility and men's sexual power and privilege. In addition, women often lack bargaining power because they have limited access to education, formal employment, and other resources that could give them a sense of financial and personal independence.

3.5 Unit of analysis

The unit of analysis is the entity around which the variables of interest to the researcher vary (Singleton et al., 1988: 130). It is that which the study attempts to understand (Ibid). In the study,

the unit of analysis was status of HIV/AIDS management strategies in correctional settings in Kenya. Status is perceived as the situation of HIV/AIDS programs employed by the Kenya Prison Service in the fight against HIV/AIDS in terms of sufficient financial resources and skilled staff as well as the extent to which HIV/AIDS problems are resolved.

3.6 Unit of observation

Unit of observation is an element from which information is collected (Singleton et al., 1988:136). In the study, the key observation units were individual inmates from the selected prisons, who had been incarcerated since June 2000 to December 2012. Other observation units covered were the key informants who included managers of HIV/AIDS programmes in the selected prisons and policy makers of the Ministry of Health and prison headquarters in Nairobi.

3.7 Sampling design of the study

Sampling is the process of selecting a subset of cases so as to draw conclusions about the entire set (Singleton et al., 1988:136). The study adopted both probability and non-probability sampling to get the respondents. Probability sampling is a technique where the samples are gathered in a process that gives all the individuals in the population equal chances of being selected (Singleton et al., 1988:137). In non-probability sampling, samples are gathered in a process that does not give all the individuals in the population equal chances of being selected (Ibid).

More specifically, the study adopted simple random, purposive and snowball sampling techniques to identify participants who provided detailed data relevant to the research questions. Simple random sampling is a probability sampling design whereby cases have equal chance of being included in the sample (Singleton et al., 1988:140). Purposive selection is a non-probability method of sampling where the researcher relies on her own judgment to select units that are representative of the population (Singleton et al, 1988:153). It is the deliberate choice of an informant due to the qualities the informant possesses (Bernard, 2002:89). Snowball sampling is a non-probability sampling technique for developing a research sample where existing study subjects recruit future subjects from among their acquaintances (Salganik and Heckathorn, 2004:43).

3.7.1 Selection of Kenyan prisons

Prisons within Nairobi were selected purposively: Langata women, and Kamiti main prisons. Lang'ata Prison is in Nairobi Region, situated on the southern part of Nairobi about 15 km from

the Central Business District (CBD), in Lang'ata Estate (KPS, 2009:26). Kamiti Maximum Prison is also in Nairobi region, next to Kahawa West Estate along Kamiti road, behind Kahawa Garrison, off Nairobi-Thika road, (Ibid). The purposive selection of Kamiti and Langata women's prisons was done since they were the only maximum prisons in Nairobi which hold long-term convicted inmates who were the targeted population for this study. The researcher therefore assumed that these inmates are more acquainted with the situation of HIV/AIDS programs resulting from their long stay in prisons. Purposive selection of Kamiti main and Langata women prisons also ensured diversity with control to gender whereby both male and female prisons were selected.

3.7.2 Selection of primary respondents

The study sampled 142 long-term convicted inmates: 63 general (those who are not infected with HIV/AIDS) and 79 HIV/AIDS-positive inmates, obtained from the total 643 long-term convicted prisoners from the selected prisons in Nairobi. To select general inmates, the researcher used simple random sampling technique, specifically lottery method. Here, the researcher used a list of long-term convicted inmates provided by the Kenya Prison Service. Specifically, a list of 102 and 543 inmates was obtained from Lang'ata women maximum prison and Kamiti maximum prison respectively. The researcher drew a lottery by writing numbers of various units and then putting them in a container. They were completely folded and mixed and the researcher picked certain numbers from the container. Those picked were taken up for sampling. From the picked numbers, some inmates were not willing to participate in the study and others were sick or had attended court sessions. Therefore, not every inmate picked was interviewed. Simple Random Sampling technique was preferred for the population because it gave equal chance for each member of the group to participate in the study.

In selecting HIV-positive inmates, snowball sampling method was adopted. The prison officers in charge of VCT from the selected prisons purposively identified inmates who were in charge of support group and had declared their positive status and were willing to participate in the study. The researcher used the purposefully identified inmates to find another HIV-positive inmate who referred another inmate until a sample of 79 HIV-positive inmates was obtained from the selected prisons. A total of 142 respondents both general and HIV-positive was sampled as shown in Table 3.1.

Table 3.1: Selection of primary respondents from Lang’ata & Kamiti prisons during data collection

Name of the prison	Total Targeted Population	General inmates	Sampled HIV/AIDS Positive Inmates	Total Sample	Total sample Percentage
Lang’ata Prison	102	19	25	44	43 %
Kamiti Prison	541	44	54	98	18 %
TOTAL	643	63	79	142	22%

Source: (Pris/25/1/3/Stats/Vol.13)

3.7.3 Selection of key informants

In the study, the key informants were selected using the purposive sampling technique. The researcher relied on her own personal judgment to select these respondents, assuming that they held the expertise views on HIV in prisons and were able and willing to share this knowledge. Indeed, a sample of 16 key informants was obtained. These key informants were observant and reflective members of the prison community and Ministry of Health as indicated in Table 3.2.

Table 3.2: Summary of the key informants selected for the study

INSTITUTIONS	CADRE	PROFESSION	RESPONSIBILITIES	TOTAL
Langata Women Maximum Prison	Trustee inmates	Counselor	Inmate in charge of VCT	1
		Counselor	In charge of the support group	1
	Prison Officer	Social Worker	In charge of HIV program in Lang’ata prison	1
		Counselor	In charge of VCT Centre	1
	Health care officer Health Ministry	Clinical officer	In charge of the health centre in Langata prison	1
Kamiti Maximum Prison	Trustee inmates	Counselor	In charge of VCT Centre	1
		Counselor	In charge of the support group	1
	Prison Officer	Social Worker	In charge of HIV program in Kamiti prison	1
		Counselor	In charge of VCT Centre	2
Health care officer Health Ministry	Clinical officers	In charge of the health in Kamiti maximum prison	2	
Ministry of Health	Policy makers from ministry of health	Doctors	Officers, AIDS control Unit	2
Prison Headquarters	Policy makers from prison department	Social Workers	Officers, AIDS control Unit	2
TOTAL				16

Source: Primary data, October 2012.

Table 3.2 shows that the key informants included 2 inmates in charge of the support group, 2 inmates in charge of VCT Centers, 3 prison officers in charge of VCT centers, 2 officers in charge of HIV/AIDS programs and 3 health care providers from the selected prisons. Two policy makers from the prison head quarters and two from the Ministry of health were also selected.

3.8 Type and sources of data

In this study, both primary and secondary sources of data were used to understand the status of HIV/AIDS management strategies in Kenyan prisons as indicated next.

3.8.1 Primary sources of data

Primary data was gathered directly from individual inmates (Key respondents) from the selected prisons and key informants, by use of a standard questionnaire and interview guide respectively.

Observational data involved noting and recording of events and behaviors of inmates that facilitated the transmission and spread of HIV/AIDS in Kenyan prisons by use of observation checklist. The researcher observed and recorded VCT rooms and use of these rooms by inmates, health centres and their accessibility by inmates, sickbay and laboratories that were used by both general and HIV-positive inmates, as well as availability of support of various service delivery points. The researcher was able to collect data even when respondents were unwilling or unable to provide data through questionnaire or interviews. The researcher discovered things that participants were afraid of talking freely about in the interview. Through observation more quantitative and qualitative data was obtained. Information collected through this method was used to support the information collected through other instrument such as the questionnaires and interview guides.

3.8.2 Secondary sources of data

Secondary data was obtained from prisons records, local and international published and unpublished works, journals from public and private organizations, periodicals, books and the internet as well as existing literature on HIV/AIDS in prisons.

Documentary materials were also reviewed by checking prison records that included prison registers and files that recorded the total number of convicted long-term inmates from Kamiti and Lang'ata maximum prisons. The researcher sought permission from officers at prison headquarters go through the prison files.

3.9 Techniques and tools of data collection

Data collection is an essential component of methodological design (O'Leary, 2004:150). Data collection technique depends upon the research goals and advantages and disadvantages of the method. This study was largely **quantitative** supplemented by qualitative data. In obtaining

quantitative data, face to face **interviews** were conducted with individual inmates from Kamiti maximum prison and Lang'ata women's maximum prisons by the researcher herself. The main data collection tool was a questionnaire with both open and close ended questions. In some questions, a Likert scale was used to rate the responses. In obtaining qualitative data, the researcher used in-depth interviews with key informants and the main data collection tool was an interview guide.

In-depth interviewing is a qualitative research technique that involves conducting intensive individual interviews with individuals or a small number of respondents to explore their perspectives on a particular idea, program, or situation (Boyce and Neale, 2006:23). During the study, unstructured interviews were conducted with 12 key informants from Lang'ata and Kamiti maximum prisons using an interview guide. Two policy makers from prison headquarters and two from the ministry of health were also interviewed. The key informants were clinical officers in charge of health care in the selected prisons, prison officers in charge of HIV program in the selected prisons, and officers in charge of AIDS control unit from the ministry of Health and prison headquarters. The key issues covered in the interviews included: HIV situation, HIV management programs, capacity of Kenya prison service in managing HIV, challenges faced in mitigating HIV/AIDS, possible solutions and ways of overcoming these challenges in prisons.

3.10 Data analysis

Data analysis is the process of bringing order, structure and interpretation to the mass of collected data (Bryman and Burgess, 1994:66). The study employed both quantitative and qualitative procedures of data analysis. Quantitative data received from face-to-face interviews with inmates was cleaned, coded, entered into a computer and analyzed using frequencies, percentages, means and standard deviation. In addition, descriptive statistics drawn from the Statistical Package for Social Scientists (SPSS) were applied including cross tabulation. Descriptive statistics are simple statistics methods concerned with organizations and summarizing of data to make it more intelligible (Singleton et al., 1988:130). In the study, descriptive statistics such as frequencies and percentages enabled the researcher to organize data in an effective and meaningful way. A master codebook designed to ensure that all questionnaires are coded uniformly was used. Data was edited for completeness and consistency before analysis. Editing is intended to identify and eliminate errors made by the interviewer or

respondents (Cohen and manion, 1980). Findings were presented using tables. Beyond descriptive statistics, the study also applied univariate and bivariate techniques of analysis.

Univariate analysis as the analysis carried out on only one variable at a time to summarize or describe the variable (Babbie, 2009: 18). It is the first step of data analysis once a data set is ready and provides a convenient way to produce the most useful statistics.

Bivariate analysis is the analysis of two variables (often denoted as X, Y), for the purpose of determining the empirical relationship between them (Babbie, 2009:1). This technique is usually undertaken to establish whether or not one variable is related to another. Further, bivariate analysis could attempt to establish the nature of a relationship between variables i.e. whether or not the relationship is direct/indirect and whether or not it is weak or strong. In the study, the analysis of quantitative data was done by use of Statistical Package for Social Sciences (SPSS) 12.0. Findings are presented in the form of tables. In addition, cross tabulation, chi-square and correlation coefficient are also applied as explained next.

Cross-tabulation is a statistical technique that establishes an interdependent relationship between two tables of values without identifying a causal relationship between the values; also called two-way tabulation (Barron et al., 2007). It displays the distribution of one variable for each category of another variable (Shutts, 1996:400). In the study, cross tabulation enabled the researcher to search for patterns of interaction by tabulating the results of one variable against the other. These gave a basic picture of how variables inter-related.

Chi-square (X^2) is referred to as a "goodness of fit" statistic. It is used for the test of significance of association and reflects the strength of this relationship; the greater the chi-square statistic, the stronger the relationship (De-Vaus, 2002). It provides information based on how to divide up the data but it cannot tell whether the constructed categories are meaningful (Ibid). In the study, the chi-square test was intended to test how likely it is that an observed distribution is due to chance. It is also used to measure how well the observed distribution of data fits with the distribution that is expected if the variables are independent.

Correlation coefficient is the ratio between the covariance and the product of standard deviations of both variables which is denoted by the letter r (Kachigan, 1996:126). Correlation Coefficient measures the strength and direction of the linear relationship between two variables

(Silvestre, 1989). Values in Correlation coefficient range of -1 through 0 to 1. A value close to 1 indicates there is a strong positive linear correlation between two variables; that is, when one variable increases so does the other (Kachigan, 1996:126). A value close to -1 indicates a strong but a negative linear correlation; that is, when one variable increases the other decreases. A value close to 0 indicates that no relationship exist at all (Ibid). Abbott et al., (2013:98) assert that Contingency Coefficient is appropriate for tables of any size. Correlation coefficient is used to provide a measure of association between the tested variables and the upper limit for the value C is 0.7.

NB: All the analyses are done using the Statistical Package for Social Scientists (SPSS 12.0), while all the hypothesized relationships are tested at 95% ($p=.05$) confidence level. This means that the likelihood of a relationship between two variables being due to sampling error is 5 out of 100. If the chance of sampling error is less, for example 1 out of 100 ($p=0.01$), or out of 1000 ($p=0.001$), then the significance level is higher.

In the study, qualitative data derived from structured and semi-structured interviews and field notes written in the course of gathering data is evaluated and analyzed thematically to draw inferences about the population being studied. Responses derived from structured and semi-structured interviews and field notes written in the course of field work were evaluated and analyzed qualitatively. The researcher noted themes that emerged from the data collected qualitatively. She looked for similarities and dissimilarities of pattern of interaction and events that were common to this study as indicated by Barbie, (2009). This assisted in understanding the factors that influence the status of HIV/AIDS management strategies in Kenyan prisons.

3.11 Field Work Experiences

This section presents information on the experiences and challenges faced by the researcher during field work and the probable ways which the researcher managed to overcome them. To carry out this study, the researcher required a research permit from the ministry of education. Adequate time and financial resources were required to facilitate the research process and that confidentiality was paramount while collecting data from inmates.

To get the permit to carry out the field work, the researcher got a letter from the University of Nairobi which was used to acquire the Ministry of education permit for field work. In addition, to get permission to carry out the study in Kenyan prisons takes 3 months during which the

prison training committee reviews the application and make the final verdict on whether or not the research will be carried in prisons. This is a very long period to wait for the permit. However, the researcher had prior knowledge of this and therefore applied for the permit earlier before the field work commenced. Although the researcher had the permit that was issued earlier, the permit had expired and could not be recognized by the selected prisons. This forced the researcher to go back to the prison headquarters for guidance and approval and wasted some credible time. However the head of training department updated the permit and the researcher was allowed to access the selected prisons: Kamiti and Lang'ata women Maximum prisons.

The prison bureaucracy was another challenge during the data collection process. In prisons, security clearance takes some time before the officer in charge of security refers the researcher to the welfare department that later assigns an officer to take the researcher through the research process. In the study, the researcher targeted both general inmates and those infected with the HIVirus. This prompted the assistance of officers' in-charge of VCT centres. This led to loss of time during the data collection forcing the researcher to take more time than she expected.

The study targeted long-term convicted inmates who are mostly capital offenders from Kamiti and Lang'ata maximum prisons. In Kamiti maximum prison, these inmates are considered a security threat to anyone who comes in contact with them especially female visitors. The prison policy clearly indicates that any visitor coming in contact with inmates including researchers must be assigned officers to guard them throughout their stay in prison. Therefore, the researcher was assigned a prison officer who was also in charge of VCT in Kamiti prison to accompany and assist her throughout the data collection period. However, the data collected was sensitive and highly confidential that only required the researcher and the inmate alone. Therefore, the presence of a prison officer in the room could have compromised the quality of data collected. To safeguard the validity of data collected, the researcher requested the officer to stay next to the door while she interviewed each inmate at the right hand corner of the room. The researcher also used low tone and ensured that the officer did not follow the conversation with the interviewee.

The categories of the respondents targeted by the researcher posed different challenges during the data collection. For example, in Lang'ata women prison, those targeted by the researcher requested milk to participate in the study. This was the norm for those who had previously

collected data from the Institution. The researcher therefore gave in to their request which added to the cost of data collection beyond what was budgeted for.

3.12 Ethical considerations

Ethical concerns are considered when conducting survey research (Patton, 2000:404). These guidelines deal with voluntary participation, no harm to respondents, anonymity and confidentiality among others (Ibid). In the study, each guideline was addressed individually with explanations to help eliminate or control any ethical concerns.

The study endeavored to establish the status of HIV/AIDS management strategies in correctional settings in Kenya, which is a sensitive issue due to the stigma and discrimination associated with an HIV positive status. The researchers should abide by the professional ethics that govern the practice (Mugenda and Mugenda, 2003). During the study the researcher sought permission from the prison headquarters before going out to the field. The prisons authorities requested a formal letter explaining the researcher's intentions/interests. The training committee reviewed and later approved the study after 3 months as required by the prison policy on training and research. The researcher also sought permission from the Ministry of higher education. It took two weeks for the study to be approved.

The researcher sought consent from the primary respondents before conducting the interviews, and explained candidly to each respondent the purpose of the research. Some inmates had raised concern that the researcher might share their views with prison officers. The researcher assured each inmate of his/her confidentiality and that there was no name mentioning of those participated in the study even while presenting the final report.

Interviews should not be used as a devious means of selling something to the respondent (Gray, 2004:235). If respondents are uneasy and become upset, the interview can be cancelled or postponed (Ibid). The study respondents were given the right to decline consent to participate in the study and/or to withdraw at any point during the interview. Inside the room the researcher asked the respondents whether they were willing to participate in the study. Inmates that refused to be interviewed from Lang'ata and Kamiti prisons were allowed to leave the interview room while those interested were interviewed by the researcher herself.

CHAPTER FOUR: PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction

This chapter presents the research results from the data collected and explores existing relationships among the key variables. It presents the findings of the study as per the study objectives and discusses the findings that emanate from qualitative and quantitative data collected by the study at univariate and bivariate level of analysis as presented next.

4.2 Univariate analysis

In the study, univariate analysis involved summarizing individual variables in a given data set to produce the most useful statistics. These variables include: Social and demographic characteristics of respondents, knowledge of HIV/AIDS, orientation of HIV/AIDS, exposure to HIV/AIDS information, awareness activities on HIV/AIDS, availability of the VCT Centres, frequency of visit to VCT centres, level of Equipment at the VCT Centres, common practices of managing HIV/AIDS, practices of coping with HIV/AIDS, and protective devices for coping with HIV/AIDS by infected inmates as presented next.

4.2.1 Social and demographic characteristics of respondents

The demographic characteristics of the respondents are essential for understanding their basic attributes. The demographic variables considered to describe the attributes of respondents include: age, sex, education achievement, marital status, religion, HIV status, type of crime, duration of imprisonment, length of stay and prison visits.

a) Age

Age is a key variable in explaining the population in prisons. The study was keen to establish the ages of respondents as the interviews were only conducted among adults of 18 years and above. The respondents were requested to indicate their age by the time of interview and data cross-tabulated with sex to compare how many males/females were represented in specific age group.

Table 4.1 Distribution of the respondents by Age and Sex

Gender	Age Bracket				Total
	Below 25 yrs	26-35 yrs	36-45 yrs	46 yrs & above	
Male	4 (36.4%)	37 (58.7%)	35 (85.4%)	22 (81.5%)	98 (69.0%)
Female	7 (63.6%)	26 (41.3%)	6 (14.6%)	5 (18.5%)	44 (31.0%)
Total	11 (07.7%)	63 (44.4%)	41 (28.9%)	27 (19.0%)	142 (100%)

Data from table 4.2 show that generally, for both sexes, those aged 26-35 years dominated the prisons studied, as they constituted about half 63 (44%) of the respondents interviewed. Of these, 37 (59%) were males as compared to 26 (41%) female respondents. Conversely, those reported to be aged below 25yrs were the least 11(8%). Of these, 7(64%) were females as compared to 4 (36%) male respondents. Apparently, the mean age of inmates was 28.1yrs. This implies that majority of inmates are in sexually active age and may engage in risky sexual behaviours as a result of incarceration that may expose them to HIV infections. This age structure is not unique in that Kenya's population has a very young age structure (KNBS, 2009).

These study findings concur with those in a study by LVCT et al., (2008:3), on sexual health and HIV/AIDS knowledge, practice and prevalence among male inmates in Kenyan prisons that revealed the mean age of inmates to be 31.1 yrs. It however differs with the findings of the Kenya Economic Survey (KES) of 2004 by the ministry of planning (KNBS, 2006:23) that revealed that over 50% of convicted prisoners were aged between 16 and 25yrs, the largest number being males aged 21-25yrs. The latter study revealed that there were more than eight times as many male as female prisoners. In Kenya, youths are hardest hit by poverty due to high unemployment levels caused by slow economic growth. There is a direct correlation between poverty and criminality (Kelly, 2000). Becker's, (1968), economic theory of crime assumes that people resort to crime only if the costs of committing the crime are lower than the benefits gained. Those living in poverty have a much greater chance of committing crime than the general population (Chiu and Maiden, 1998).

b) Sex

Sex is an important variable in studying human behaviour. This is based on the fact that female and male genders determine the composition of a population. In this study, both male and female were covered in a sample of 142 respondents, 98 (69%) were males and 44 (31%) were females. The response rate shows that there were more male inmates in Kamiti than female respondents in Lang'ata women prison that met the study criteria. Generally, male populations usually dominate prisons (Coyle, 2002). The distribution of inmates by gender-where more males were covered than females is also explained by the discrepancies in imprisonment rate between the two genders and the distribution of Kenyan prisons as indicated in (Pris/25/1/3/Stats/Vol.13). This also reflects the national trend, depicted by the findings of an Economic Survey (2004:23) that revealed that there were eight times as many male as female prisoners. This implies that there are

more risky behaviours in prisons like prisons fights and rape that are more common in male prisons that may expose inmates to HIV infections in the selected prisons.

c) Marital status

Marital status is a key variable in explaining the attributes of population in Kenyan prisons. In the study, respondents were requested to reveal their marital status by the time of interview and data cross-tabulated with sex to compare how many male and female respondents were in marital unions by the time of interview. As expected in many African communities, nearly half 70 (49%) of the total sample reported to have been married by the time of interview in the prisons studied. Of these, 58 (83%) were male as compared to 12(17%) who were female respondents. Only about a third 46 (32%) reported to have been single and a meager (9%) who reported to be divorced. Thus, inmates in the selected prison are expected to uphold morality with less risky behaviours like prison fights and sex that may expose them to HIV/AIDS infections as expected in people in family and marital unions. In addition, there are more married men committing crimes than their female counterparts. This could be attributed to more financial burden placed on married males than females in marital unions. These study findings are in tandem with the reality in all societies where more men than women have more family responsibilities. Most significantly, incarceration appears to have a major disruptive effect on pre-existing unions by separating many people who are married, thus weakening already fragile families. These study findings concur with those in a study by Western et al., (2004) that revealed that incarceration increased the risk of separation for individuals in marital or cohabitation unions.

d) Education

Education is a key determinant of one’s social economic status. Respondents were requested to reveal their education achievement by the time of the interview and data cross-tabulated with sex to compare how males and females faired in educational achievement as indicated in Table 4.2.

Table 4.2 Distribution of the respondents by education achievement and Sex

Education Achievement	Level of Education					Total
	None	Primary	Secondary	Post Secondary	University	
Male	3 (50.0%)	38 (73.1%)	37 (63.8%)	10 (66.7%)	10 (90.9%)	98 (69%)
Female	3 (50.0%)	14 (26.9%)	21 (36.2%)	5 (33.3%)	1 (9.1%)	44 (31%)
Total	6 (4.2%)	52 (36.6%)	58 (40.8%)	15 (10.6%)	11 (7.7%)	142 (100%)

Data from Table 4.3 show that there were low 6 (4%) level of illiteracy as indicated by those who had no education at all (none) in the prisons studied and that male and female respondent were equally represented. The study also affirms that the majority 58 (41%) of the respondents had Secondary level of education. Of these, 37 (64%) were male as compared to 21 (36%) who were females respondents.

This implies that due to higher level of education, inmates would be able to protect themselves from HIV. This is due to the fact that educational attainment has a strong effect on behaviours and attitudes (Lochner and Moretti, 2004:7). In economics literature, using census and FBI data, found that more education reduces the probability of incarceration (Ibid). These study findings could be attributed to the fact that in Kenya, girls receive less education than boys (Ondieki, 2012:1). The high number of the literate inmates in the prisons studied could be attributed to the fact that in Kenya, there is a high (62%) national adult literacy rate (KNBS, 2006).

e) Religion

Religion is a powerful tool in understanding social and demographic characteristics of respondents. In the study, respondents were requested to reveal their religious affiliations by the time of interview and data cross-tabulated with sex to compare the distribution of male and female in religion. Given that Kenya is largely a Christian country, it was not surprising noting that the majority 126 (89%) of respondents interviewed reported to be Christians (protestants, catholics). Of these, majority 83 (66%) were male respondents as compared to 43 (34%) who were female respondents. This clearly indicates that christianity was the most practiced religion in the prisons studied, as reflected in the general population. This implies that there are less risky sexual and violent behaviours that may expose inmates to HIV infections as Christians are expected to be morally upright. In fact, religious attendance promotes self-control, a positive allocation of time, attendance at school, and engagement in work (Johnson et al., 2001:22). Compared with less religious counterparts, religiously involved individuals are less likely to carry or use weapons, fight, or exhibit violent behavior (Ibid).

These study findings concur with those in a recent Kenya Demographic Health Survey of 2009 by Kenya National Bureau of Statistics (KNBS, 2010) that revealed that approximately 89% of the Kenyan population is Christian, including 63% protestant and 26% Catholic. An additional 7% of the population is Muslim and 4% indicated that they had no religion.

f) The HIV/AIDS status of inmates

Inmates' HIV status is crucial in determining the status of HIV management strategies in the selected prisons in Kenya. Respondents were requested to reveal their HIV status and data cross tabulated by sex to compare HIV status in male and female prisons as indicated in Table 4.3.

Table 4.3 Distribution of the respondents by HIV status and Sex

Sex	The HIV Status			Total
	Positive	Negative	Don't know	
Male	54 (68%)	28 (68%)	16 (72%)	98 (69%)
Female	25 (32%)	13 (32%)	06 (28%)	44 (31%)
Total	79 (56%)	41 (29%)	22 (13%)	142 (100%)

From this study, it is evidently clear that more than half 79 (56%) of the total sample in the prisons studied reported being infected with HIV. Of these, 54 (68%) were males and 25 (32%) female respondents. Another 41 (29%) of the total sample reported not being infected with HIV. Of these, 28 (68%) were males as compared to 13 (32%) female respondents. Further, reports indicate that 22 (16%) of the total sample reported not to have known their HIV status. Of these, 16 (73%) were males and 6 (28%) female respondents. This is a clear indication that the reported prevalence of HIV/AIDS is higher among the male respondents as opposed to their female counterparts in the prisons studied. This could be attributed to higher risky behaviour like prison fights, sex and rape in male as compared to female prisons studied.

The findings of this study differ with those in a study by NASCOP, (2012:15) in a MARPS surveillance report among most at risk populations in Kenya that found prevalence of HIV/AIDS among the female inmates was higher (19%) compared to male inmates (6%). The prevalence was high for maximum security prisons followed by the women's prisons.

g) Type of crime

Type of crime is key in determining how long respondents are expected to stay in prisons. In the study, data was focused on inmates in maximum security prisons. They were requested to reveal the crime that they had committed which led them into prison. Data was cross tabulated with sex to compare who between male and female committed what type of crime.

Table 4.4 Distribution of the respondents by type of type of crime and sex

Gender	Type of crime					Total (%)
	Robbery with violence	Murder	Other crimes	Assault	Drug Trafficking	
Male	46 (93.9%)	21(75.0%)	14 (56.0%)	11 (47.8%)	6 (35.3%)	98 (69%)
Female	3 (6.1%)	7(25.0%)	11 (44.0%)	12 (52.2%)	11 (64.7%)	44 (31%)
Total	49 (34.5%)	28(19.7%)	25 (17.6%)	23(16.2%)	17 (12.0%)	142 (100)

Data from Table 4.4 clearly show that about a third 49 (35%) of the respondents reported to have been in prison for being charged with robbery with violence. Of these, 46 (94%) were male respondents as compared to 3 (6%) female respondents. This is not surprising noting that the study was carried out in maximum security prisons. However, females had committed less serious crimes as compared to their male counterparts. This could be attributed to financial responsibility bestowed on males as compared to females in the society that making them to offend as they fend for their families. Goffman believes that when someone is stocked with a deviant label his/her fate is changed (Bilton, 1988). Thus, in Kenya today, deviant individuals are subject to sanctions by state authority and suffer from social stigma and loss of status thereby making them engage in irresponsible sexual behaviours.

These study findings however differ with those in a study on youth and crime by the UN Habitat, (2003) in Nairobi that found the major grounds on which young people are charged is theft, assault, drug possession, mugging, and manslaughter.

h) Duration of imprisonment

Duration of imprisonment is an important factor in understanding the seriousness of crime committed by inmates. It is the period an offender spends in prison for committing a certain criminal offence. In the study, respondents were requested to reveal how long they had been jailed for the offence committed and data cross-tabulated with sex to compare who between male and female were jailed for longer periods of time. Around half 80 (56%) of the entire sample were jailed above twelve years. Of these, 72 (80%) were male respondents and 8 (20%) were female respondents. The mean duration respondents had been jailed was 6years 2months. This is not surprising noting that the study was carried out in maximum security prisons where long term inmates are incarcerated. This implies inmates were more knowledgeable about HIV/AIDS since being jailed for longer period would enable them become more acquainted with HIV/AIDS management strategies in the selected prisons hence a reduction in HIV infections. In addition,

male inmates are expected to be more knowledgeable about HIV/AIDS since majority of them would spend longer periods in the selected prisons than their female counter parts.

i) Length of stay in Prison

Length of stay in Prison refers to the actual period an inmate has spent in a specific prison. It is relevant in determining the inmates' understanding of the prison environment and how the prison department operates. The study targeted respondents who had stayed in prison six months and above and data cross-tabulated with sex to compare who among male and female respondents had stayed longer in the prisons studied. Indeed, over two thirds 92 (85%) of the total sample reported to have stayed in prison above 3 years. Of these, 72 (78%) were male respondents as compared to 20 (22%) females. More specifically, 25 (18%) of the total sample reported to have stayed in prison above 12 years. Of this, 21 (84%) are male respondents and 4 (16%) were females. The mean duration respondents had spent in prisons was 4years 4months. This could be attributed to the shorter sentences served by female inmates due to less serious offences as opposed to their male counterparts. In addition, respondents interviewed had stayed in prisons studied long enough to be familiar with the general operational issues of those prisons including how the Kenya prison service managed its affairs including HIV/AIDS programs.

j) Prison visit

Prison visit is essential to the well being and progress of the incarcerated individuals. In the study, respondents were requested to indicate whether or not visitors were allowed to visit them in prison. Visitation data was cross-tabulated by sex to allow comparison. Over three quarters 127 (89 %) of the total sample reported that they had been visited by the time of interview. Of these, 90 (71%) were males as compared to 37 (29 %) who were female respondents. It was also found that 15 (11%) reported that they had not been visited. Of these, 8 (53%) were males and 7(47%) were female respondents. More prison visits could be a clear indication that Kenya prison service has embraced prison reforms tailored towards the overall well being of all inmates which is essential in managing HIV/AIDS the prisons studied. More male inmates visited than females could be attributable to weaker family ties that exist between female inmates and their families once they are imprisoned as compared to their male inmates.

In Kenya, released prisoners encounter few resources to help them secure employment, access substance-abuse treatment, and reestablish family and community ties. The state of the union

address by George Bush translated into state and federal efforts to fund demonstration projects of community and faith-based organizations that strived to integrate ex-prisoners back into the community (Hoffman et al., 2007: 47). This address called for a renewed effort to reduce barriers to social integration for men and women leaving correctional facilities (Ibid).

Respondents who reported that they were visited were further requested to self report 'how often they were visited. The options were: 1.Very often 3.Often 4.Rarely 5.Very rarely 6.Never. Here, 'at least oftenly visited' meant very often, often. Almost two thirds (65%) of the respondents reported to have been at least visited. Of these, 73% were males as compared to 27% female respondents. This implies that prisoners visited were more settled psychologically to make decision in regard to their sexuality thereby reducing HIV infections in the prisons studied. Prisoner's mental health is dependent on his/her contact with the outside world (Hairston, 1991:93). In regard to gender, male respondents were oftenly visited as compared to female respondents. This could be attributed to the fact that fewer women are in prison than men and therefore fewer prisons for women in Kenya (Pris/25/1/Stats/Vol 13). Consequently, women are often imprisoned far away from their homes and families, causing serious problems in the attempt to preserve strong family ties (QCEA, 2007). The distance and costs involved in visiting women imprisoned far from home pose a major obstacle to regular visits (UNODC, 2008).

Findings on high rate of visitation in the prisons studied differ from those by the Minnesota Department of Corrections (MDC, 2011:1) that revealed that nearly 40 percent of the offenders were not visited once while in prison. The latter study concluded that offenders who were visited were significantly less likely to recidivate. Hoffman et al., (2007:47), indicates that, facilitating prisoners' contact with friends and family members while incarcerated through prison visitation, telephone and mail correspondence, conjugal visits and home furloughs is one means for improving prisoners' behavior while incarcerated.

4.2.2 Knowledge of HIV/AIDS by inmates

Knowledge of the prisoners on HIV/AIDS is a key determinant in the management of HIV/AIDS in prisons. It informs the attitude and behaviour of the prisoners when it comes to sexual issues. In the study, respondents were requested to reveal their understanding about HIV/AIDS and data cross tabulated with sex to compare who between males and females understood HIV more.

Table 4.5 Distribution of the respondents by understanding what is HIV/AIDS and sex

Gender	Understanding what is HIV/AIDS						Total
	Human Immunodeficiency Virus	I do not know	A dangerous disease	Killer disease	A virus that causes AIDS	Other	
Male	57 (72.2%)	1 (50.0%)	7 (53.8%)	19 (57.6%)	13 (92.9%)	1 (100%)	98
Female	22 (27.8%)	1 (50.0%)	6 (46.2%)	14 (42.4%)	1 (7.1%)	0 (0%)	44
Total	79 (55.6%)	2 (1.4%)	13 (9.2%)	33 (23.2%)	14 (9.9%)	1 (0.7%)	142

Majority 79 (56%) of the total sample understood what HIV/AIDS is (Human Immunodeficiency Virus). Of these, 57 (72%) were male as compared to 22 (28%) who were female respondents. On the other extreme, only 2 (1%) of the total sample reported to have no idea what HIV/AIDS is. Of these, 1(50%) were male and 1(50%) female respondent. Table 4.5 further show that 14(10%) had ‘some’ (A virus that causes AIDS) understanding about HIV/AIDS. Of these, 13 (93%) were males as compared to 1 (7%) who were female respondents. This is a clear indication that inmates in the prisons studied were knowledgeable about HIV/AIDS. It is therefore assumed that they prevented themselves from getting infected by the virus. In addition, HIV/AIDS program in male prisons are more adequate in managing HIV/AIDS as compared to female prisons. This is because beliefs, attitudes and knowledge are important factors in the control of HIV/AIDS (Lindan et al., 1991). These study findings however differ with (Rotily, 1999:57) whose study on HIV/AIDS knowledge by inmates revealed that the average scores of knowledge and tolerance towards HIV infected people in France were lower among inmates.

The respondents who reported that they understood what HIV/AIDS is were further asked to self report to what extent they knew about HIV/AIDS. The options were: 1.Great deal 2.A lot 3. Moderate 4. Little 5.Very little. Here ‘at least a lot’ means great deal and a lot while ‘at least little’ means little and very little. The findings of this variable are cross-tabulated with sex to compare who among the genders was more knowledgeable about HIV as indicated in Table 4.6.

Table 4.6 Distribution of the respondents by level of Knowledge on HIV/AIDS and sex

Gender	Level of Knowledge on HIV/AIDS					Total (%)
	Great deal	A lot	Moderate	Little	Very Little	
Male	7 (46.7%)	29 (61.7%)	38 (73.1%)	21 (87.5%)	3 (75.0%)	98 (69%)
Female	8 (53.3%)	18 (38.3%)	14 (26.9%)	3 (12.5%)	1 (25.0%)	44 (31%)
Total	15 (10.6%)	47 (33.1%)	52 (36.6%)	24 (16.9%)	4 (2.8%)	142 (100%)

Table 4.6 clearly indicates that about two thirds 62 (44%) of the total sample rated themselves as having at least a lot of knowledge about HIV/AIDS. Of these, 36 (58%) were males as compared to 26 (42%) who were female respondents. On the other extreme, about a quarter 28 (20%) of the total sample rated themselves as having at least little knowledge about HIV/AIDS. The table further show that 52 (37%) rated themselves as having moderate knowledge about HIV/AIDS. The high knowledge level about HIV/AIDS in the prisons studied was corroborated by data from the key informants, whereby 13(81%) out of 16 Key informants perceived inmates as having high level of knowledge. This implies that more HIV/AIDS prevention and control efforts are channeled towards change in attitude to impart change in behaviour of inmates in the prisons studied. These study findings concur with those in a study by LVCT et al., (2008:4) that revealed high knowledge level among inmates in Kenya.

4.2.3 Orientation about HIV/AIDS to Inmates

Inmate orientation helps prisoners to get familiar with services provided in prisons including the HIV/AIDS programs. In the study, respondents were requested to reveal whether or not they were oriented on HIV/AIDS. Data was further cross-tabulated with sex to compare who between male and female inmates were more oriented on HIV/AIDS. Out of the total study respondents, almost all 140 (99%) respondents reported to have been oriented on HIV/AIDS. Of these, 97 (69%), were male as compared to 43 (31%) who were female respondents. Conversely, only 2 (1%) of the study respondents reported not to have been oriented on HIV/AIDS. Of these, 1(50%) was male and 1 (50%) who were female respondents. Of the 16 key informants interviewed, over two thirds 14 (88%) reported that inmate orientation was available in prisons studied. These study findings therefore indicate that inmate orientation was carried out as a fight against HIV/AIDS in the prison studied. This implies that adequate programs are employed by the Kenya prison service in the fight against HIV/AIDS. Prisoner participation in orientation is rather a product of the circumstances within a prison environment but not out of their wish (Donaldson , 1990:31).

The respondents who reported that they were oriented about HIV/AIDS were further requested to self report to what extent they were oriented about HIV/AIDS. The options were: 1.Very satisfied 2.Satisfied 3.Fairly satisfied 4.Not satisfied 5.Never. Here, ‘at least satisfied’ means very satisfied and satisfied. The findings of this variable were cross-tabulated with sex to compare who among genders were more satisfied with HIV orientation as indicated in Table 4.7.

Table 4.7 Distribution of the respondents by satisfaction with HIV orientation and sex

Gender	Satisfaction with HIV/AIDS orientation by inmates					Total
	Very satisfied	Satisfied	Fairly satisfied	Not satisfied	Never	
Male	30 (73.2%)	37 (64.9%)	25 (73.5%)	5 (62.5%)	1 (50.0%)	98 (69.0%)
Female	11 (26.8%)	20 (35.1%)	9 (26.5%)	3 (37.5%)	1 (50.0%)	44 (31.0%)
Total	41 (28.9%)	57 (40.1%)	34 (23.9%)	8 (5.6%)	2 (1.4%)	142 (100%)

Table 4.7 clearly show that 98 (69%) of the total sample reported to have been at least satisfied with HIV/AIDS orientation carried out in the prisons studied. Of these, 67(68%) were males as compared to 31 (32%) who were female respondents. Thus, male inmates appeared more satisfied by HIV/AIDS orientation as compared to their female counterparts in the prisons studied. These study findings clearly indicate that HIV orientation was a key HIV prevention strategy in the prisons studied. In addition, HIV/AIDS program in male prisons are more adequate in managing HIV as compared to female prisons. These findings concur with those in a report on announced inspection in Canada by HM Chief Inspector of Prisons for England and Wales that revealed that inmate-led orientation program was operating well (CSC, 2012:4).

4.2.4 Exposure to HIV/AIDS information by inmates

HIV/AIDS exposure is an essential part of HIV/AIDS prevention in prisons. In this study, respondents were requested to reveal whether or not they were exposed to HIV/AIDS information. Attempts were also made to cross-tabulate HIV/AIDS exposure between male and female to compare how they fared in regard to HIV/AIDS information. It is confirmed that inmates were exposed to HIV information, mainly on mode of transmission and prevention. This is carried out through awareness campaigns by prison staff, care givers and other fellow inmates and through mass media and at the VCT centres. Indeed, around three quarters 127 (89%) of the total sample reported having being exposed to HIV/AIDS information. Of these, 87 (69%) were male respondents as compared to 40 (32%) who were females. On the other extreme, only a meager 15 (11%) reported not being exposed to HIV/AIDS information. Of these, 11 (73%) were males and 4 (27%) female respondents.

This implies that after knowing what HIV/AIDS is, its cost and implications, inmates protected themselves from being infected with the virus. In addition, HIV/AIDS program in male prisons are more adequate in managing HIV/AIDS as compared to female prisons.

The respondents who reported that they were exposed to HIV/AIDS information were further requested to self report to what extent they were exposed to HIV/AIDS information. The options were: 1.Very exposed 2.Exposed 3. Fairly exposed 4. Not exposed. Here ‘at least exposed’ means very exposed and exposed. The findings of this variable were cross-tabulated with sex to compare who between male and female were more satisfied with HIV/AIDS orientation as indicated in Table 4.8.

Table 4.8 Distribution of the respondents by exposure to HIV/AIDS information and sex

Gender	Level of exposure to HIV/AIDS information				Total (%)
	Very exposed	Exposed	Fairly exposed	Not exposed	
Male	24 (61.5%)	41 (69.5%)	32 (80.0%)	1 (25.0%)	98 (69.0%)
Female	15 (38.5%)	18 (30.5%)	8 (20.0%)	3 (75.0%)	44 (31.0%)
Total	39 (27.5%)	59 (41.5%)	40 (28.2%)	4 (2.8%)	142 (100%)

Data from Table 4.8 clearly indicates that about two thirds 98 (69%) of the study sample reported to have been at least exposed to HIV/AIDS information in the prisons studied. Of these, 65(66%) were males as compared to 33(34%) who were female respondents. To the contrary, only a meager 4 (3%) reported that they were not exposed to HIV/AIDS information in the prisons studied. Of these, 3(75%) were females as compared to 25% who were male respondents. These study findings clearly indicate that most inmates in the prisons studied were well exposed to HIV/AIDS information provided by Kenyan prison authorities. In addition, HIV/AIDS program in male prisons are more adequate in managing HIV/AIDS as compared to female prisons.

These study findings concur with the findings by NASCOP, (2012:15) on the MARPS surveillance report that reported high knowledge level on the general awareness of HIV/AIDS transmission and prevention among inmates in Kenyan prisons.

4.2.5 Awareness of HIV/AIDS activities

Creating HIV/AIDS awareness helps in preventing HIV/AIDS among inmates. In the study, respondents were requested to reveal what awareness activities were provided to them in preventing HIV/AIDS in the prisons studied. Both male and female were cross-tabulated to compare how campaigns fared in male and female prisons studied. Over half 75 (53%) of the total sample reported that VCT was the most common awareness activity carried out against HIV/AIDS in the prisons studied. Of these, 51 (68%) were male respondents as compared to 24

(32%) who were female respondents. Abstinence was the least 5 (14%) reported activity against HIV/AIDS by inmates. This clearly implies that awareness on HIV/AIDS services in the prisons studied is a major factor in accessing and using the HIV/AIDS preventing services as indicated by Rotily et al., (1999). Thus is because, proper understanding about HIV/AIDS removes unreasonable fears and stigma about the disease (Duh, 1991:24).

The respondents who reported that HIV/AIDS awareness activities were carried out in the prisons studied were further requested to self report to what extent these activities were effective. The options were: 1.Very effective 2.Effective 3. Fairly effective 4. Not effective 5.Not effective at all. Here ‘at least effective’ means very effective and effective while at least not effective means not effective and not effective at all. The findings of this variable are cross-tabulated with sex to compare who between male and female perceived awareness activities as more effective as indicated in table 4.9.

Table 4.9 Distribution of the respondents by HIV/AIDS awareness activities and sex

Gender	Effectiveness of awareness activities					Total (%)
	Very effective	Effective	Fairly effective	Not effective	Not effective at all	
Male	41 (77.4%)	34 (60.7%)	16 (72.7%)	5 (37.5%)	2 (33.3%)	98 (69.0%)
Female	12 (22.6%)	22 (39.3%)	6 (27.3%)	3 (62.5%)	1 (66.7%)	44 (31.0%)
Total	53 (37.3%)	56 (39.4%)	22 (15.5%)	8 (5.6%)	3 (2.1%)	142 (100%)

Data from table 4.9 clearly show that, around three quarters 109 (92%) of the total sample reported that awareness activities provided were at least effective in the prisons studied. Of these, 75 (69%) were male as compared to 34 (31%) who were female respondents. To the converse, only a meager 11 (8%) reported that the awareness activities were at least not effective. In addition, HIV/AIDS awareness activities in male prisons are more adequate in managing HIV/AIDS as compared to female prisons. The success of awareness activities in the prisons studied could be attributed to commitment by Kenyan prison service in the fight against HIV/AIDS.

These study findings concur with those in a report by the United Nations focusing on Stabilization Mission for Kananga central prison. The latter was an outreach campaign on public awareness about sexually transmittable diseases and HIV/AIDS in the Democratic Republic of Congo (MONUSCO, 2012). This yielded positive results on HIV/AIDS prevention (Ibid).

4.2.6 Availability of VCT Centres

Voluntary counseling and testing is important in response to HIV/AIDS epidemic. In the study, respondents were requested to reveal whether VCT centres were available in the prisons studied and data cross-tabulated with sex to compare whether VCT centres were available in male and female prisons in equal measure. Almost all 141 (99%) respondents reported that VCT centers were available in the prisons studied. Of these, 97 (69%) were males as compared to 44 (31%) who were female respondents. On the other extreme, only a meager 1 (1%) reported that VCT centers were not available in the prisons studied. Of these, none 0 (0%) was female.

The respondents who reported that VCT centers were available in the prisons studied were further requested to self report to what extent VCT services were adequate. The options were: 1. Very adequate 2. Adequate 3. Fairly adequate 4. Not adequate 5. Not adequate at all. Here, ‘at least adequate’ means very adequate and adequate while at least not adequate means not adequate and not adequate at all. The findings of this variable are cross tabulated with sex to compare whether VCT services were adequate in male and female in equal measure in the prisons studied as indicated in table 4.10.

Table 4.10 Distribution of the respondents by adequacy of VCT services and sex

Gender	Adequacy of VCT services					Total (%)
	Very adequate	Adequate	Fairly adequate	Not Adequate	Not adequate at all	
Male	15 (68.2%)	37 (69.8%)	31 (60.8%)	8 (88.9%)	7 (100.0%)	98 (69%)
Female	7 (31.8%)	16 (30.2%)	20 (39.2%)	1 (11.1%)	0 (0%)	44 (31%)
Total	22 (15.5%)	53 (37.3%)	51 (35.9%)	9 (6.3%)	7 (4.9%)	142(100%)

About half 75(53%) of the total sample reported that VCT services were at least adequate in the prisons studied. Of these, 52(69%) were males as compared to 21(31%) who were female respondents. Conversely, 11% reported that VCT services were at least not adequate. Of these, 15(94%) were males as compared to 1(6%) who were female respondents. Of the 16 key informants interviewed, about three quarters 15 (94%) reported that VCT services were adequate in the prisons studied. The researcher also observed VCT centres that were fully equipped and had regular staff who as VCT counselors assisted by trained inmates. At the VCT centres, infected inmates also had formed support groups that met regularly for social and psychological support. More support was provided by nongovernmental organizations that provided the infected inmates with personal effects. Thus, availability and adequacy of services provided by

VCT centers in the prisons studied is an indicator of appreciable strategies for preventing HIV/AIDS in prisons. Hence, a reduction in HIV/AIDS prevalence in Kenyan prisons. These study findings are supported by the fact that in 2003, VCT services were introduced for prisoners in two of Kenya's largest prisons, in Nairobi and Kisumu (NASCOP, 2005:17). In late 2004, the Kenya Prison Service extended the programme to an additional eight prisons, with further expansion in 2005 (Ibid).

4.2.7 Frequency of visits to VCT centres by sex

Voluntary testing and counseling is crucial to the prevention of HIV/AIDS. In the study, respondents were requested to reveal how frequent they visited the VCT centres in the prisons studied. Both male and female were cross-tabulated to compare who among them visited the VCT centre more. Indeed, almost three quarters 103 (73%) of the total sample visited the VCT centre on a monthly basis. Of these, 72 (70%) were males as compared to 31 (30%) who were female respondents. Conversely, 16 (11%) visited VCT centres after 3 months, while 23 (16%) visited the VCT centre 6 months and above. Considering that 79 (56%) of the total sample reported to have been infected with HIV/AIDS, they were expected regularly visit the VCT centres to access the services provided at the centres like testing and counseling, ARVs drugs for those infected. The high trend of visitation to the VCT centre by males' respondents meant that more male inmates are informed about HIV/AIDS than their female counterparts. An interview with key informants revealed that VCT services enabled infected inmates to have early access to medical care, preventive therapy for TB, ARV treatment as well as STI prevention and treatment. They added that peer support was also provided including access to HIV/AIDS support groups, additional counseling to promote behaviour change and acceptance.

The high prevalence of HIV in the prisons studied is in line with the findings of a study by Singh, (2008) on HIV in a male maximum security prison in Durban. The latter study found that there was high prevalence of HIV/AIDS in prison coupled with inadequate access to anti-retroviral treatment.

4.2.8 Level of Equipment at the VCT Centres

Effective management of HIV/AIDS is dependent on the availability of resources and materials requirement. In the study, respondents were requested to indicate whether or not VCT centres had the required equipment for carrying out the required services. An attempt was also made to

cross tabulate both male and female to compare how equipments at VCT centres in the male and female prisons compared. About three quarters 124 (87%) of the total sample reported that the VCT centers were equipped in the prisons studied. Of these, 86 (69%) were males as compared to 38 (31%) who were female respondents. On the other extreme, only a meager 6 (4%) who reported that the VCT centers were not equipped and another 12 (9%) who reported that they did not know whether they were equipped or not. The researcher also observed VCT centres in the selected prisons that had enough space, staff and testing kits. In Kenya, VCT services are core interventions in the comprehensive strategy of the government and its partners to address HIV/AIDS in prisons. Thus, high-quality VCT services should widely and consistently be made available to all inmates to allow them knows their HIV/AIDS status early enough. This would enable them to receive adequate care and support services. HIV/AIDS Counseling and Testing (HCT) is the most important service in HIV/AIDS prevention and care strategies (Nuwaha et al., 2002:79). The best way to understand and improve the quality of VCT is to continuously assess the resources and services offered at these centres (Fylkesnes et al., 1999:36).

The respondents who reported that the VCT centers in the prisons studied were equipped were further requested to self report to what extent the VCT centres were equipped. The options were: 1. Very equipped 2. Equipped 3. Fairly equipped 4. Not equipped 5. Don't know. Here 'at least equipped' means very equipped and equipped. The findings of this variable are cross-tabulated with sex to compare how equipments male & female prisons compared as indicated in Table 4.11

Table 4.11 Distribution of respondents by level of equipment of the VCT Centres

Gender	Level of Equipment of the VCT Centres				Total
	Very Equipped	Equipped	Fairly Equipped	Don't know	
Male	31 (66.0%)	40 (71.4%)	20 (66.7%)	7 (58.3%)	98 (69%)
Female	16 (34.0%)	16 (28.6%)	7 (33.3%)	5 (41.7%)	44 (31%)
Total	47 (33.1%)	56 (39.4%)	27 (19.0%)	12 (8.5%)	142 (100%)

Data from Table 4.11 clearly show that almost three quarters 103 (73%) of the total sample reported that the VCT centres were at least equipped. Of these, 71(69%) were males as compared to 32 (31%) who were female respondents. Further, the table show that 27(19%) of the total sample reported that the VCT centres were fairly equipped while 12(9%) were not sure on the level of equipment at the VCT centres in the prisons studied. High level of equipment in the prisons studied is a clear indication that the government has invested well on equipping the VCT centres in the prisons studied. High level of availability of HIV/AIDS prevention interventions

and VCT services help to improve the management of HIV/AIDS (Klein and Connell, 2002). This implies that better equipped VCT helped managing HIV/AIDS in the prisons studied.

4.2.9 Common practices of managing HIV/AIDS by the Kenya prison service

Prevention of HIV/AIDS is the responsibility of the whole prison community. In the study, respondents were requested to reveal the common practices used by the Kenya prison service to mitigate the transmission HIV/AIDS in the prisons studied. Data on this variable was cross-tabulated with sex to compare what HIV/AIDS preventive measures were available to male and female inmates in the prisons studied as indicated in Table 4.12.

Table 4.12 Distribution of respondents by Common practices of managing HIV and sex

Gender	Common practices of managing HIV/AIDS by Kenyan prison authorities						Total
	Awareness activities	Viable VCT Centres	HIV orientation	Mandatory testing	Condom provision	Other	
Male	57 (64.8%)	3 (50.0%)	5 (62.5%)	28 (84.8%)	3 (60.0%)	2 (100%)	98 (69%)
Female	31 (35.2%)	3 (50.0%)	3 (37.5%)	5 (15.1%)	2 (40.0%)	0 (0%)	44 (31%)
Total	88 (62.0%)	6 (4.2%)	8 (5.6%)	33 (23.2%)	5 (3.5%)	2 (1.4%)	142 (100)

Table 4.12 clearly show that awareness activities was the most common practice of managing HIV/AIDS as reported by the majority 88 (62%) of the respondents. Of these, 57 (65%) were males as compared to 31 (35%) who were female respondents. Condom provision was the least 5 (4%) reported practice by inmates citing that the prison policy does not allow condom distribution since they were regarded as ‘contraband’. However, there was a mixed reaction in regard to condom provision by the prison officials. Indeed, about half, 9 (56%) of the key informants interviewed were totally opposed to providing condoms to inmates citing that condoms would increase immoral behaviours by inmates. Contrary, 7(44%) had no problem with providing condoms to inmates as a measure to mitigate the spread of HIV/AIDS in prisons. This implies that involving inmates in the planning and implementation of HIV/AIDS awareness, education and counseling programs was key in preventing its transmission and spread. The education program promotes life skills such as communication, negotiation and self esteem to enabled inmates protect themselves from infection and to create awareness of the risks and prevention of HIV/AIDS for themselves, peers, family and the community.

These study findings are supported by those in a study conducted by LVCT et al., (2008:7) focusing on HIV/AIDS management in Kenya prisons. The latter study revealed that condom use

in prison settings received mixed reactions with 14 key informants suggesting that condoms should be availed in prisons to avoid HIV transmission.

4.2.10 Practices of coping with HIV/AIDS by infected Inmates

There are different strategies for coping with HIV/AIDS infection. Segregation, isolation and restrictions on occupational activities are not considered useful or relevant in the case of HIV/AIDS-infected people in the community. This study sought to find out the coping strategies used by already infected prisoners in the studied institutions. In the study, respondents were requested to indicate the practices they use in coping with the HIV/AIDS status in the prisons studied. Data on this variable was cross-tabulated with sex to compare what practices were available to male and female inmates in the prisons studied as indicated in Table 4.13.

Table 4.13 Distribution of respondents by practices of coping with HIV/AIDS and sex

Gender	Practices of coping with HIV/AIDS by the infected inmates					Total
	Segregation	VCT services	ARV/ARTS	Special diet	Other	
Male	1 (50.0%)	56 (69.1%)	18 (54.5%)	14 (87.5%)	9 (90.0%)	98 (69%)
Female	1 (50.0%)	25 (30.9%)	15 (45.5%)	2 (12.5%)	1 (10.0%)	44 (31%)
Total	2 (1.4%)	81 (57.0%)	33 (23.2%)	16 (11.3%)	10 (7.0%)	142 (100%)

Table 4.13 reveals that the majority 81 (57%) of the respondents reported that VCT services were the commonly used HIV/AIDS coping mechanism by the infected inmates in the prisons studied. Of these, 56 (69%) were males as compared to 25 (31%) who were female respondents. Conversely, segregation was the least 2(1%) mentioned practice of coping with HIV/AIDS. In-depth interviews conducted with the key informants revealed that inmates infected with HIV adopted VCT as HIV/AIDS coping mechanism in the prisons studied. This is a clear indication that the prisons studied had put in place adequate VCT centres aimed at helping those already infected to cope with HIV/AIDS infection. This was more prevalent in the male prison studied.

These study findings are supported by the fact that the Kenyan Government prioritized policy formulation to guide appropriate action in response to the HIV/AIDS pandemic. Of special mention is the National AIDS Control Council (NACC), which was established in 2000 under the Office of the President to steer the process of policy making and coordinate a national multi-sectoral response to HIV/AIDS.

4.2.11 Protective devices for coping with HIV/AIDS by infected Inmates

Protective device refer to wearable equipment that is intended to protect an individual from exposure to infectious agents (Pratt et al., 2001). It acts as a barrier against exposure to blood borne pathogens, such as hepatitis B virus, hepatitis C virus, and human immunodeficiency virus (Ibid). The selection of any protective device is based on the nature of interaction and potential for exposure to blood, body fluids or infectious agents (Clark et al., 2002). Examples of protective devices include gloves, condoms, shaving blades, gowns, face masks, respirators, goggles and face shields. For instance, gloves are used in situations involving possible contact with blood/body fluids, mucous membranes, non-intact skin or potentially infectious material. In the study, respondents were requested to reveal what protective devices they used in preventing HIV/AIDS in the prisons studied by the time of interview. Data on this variable was cross-tabulated with sex to compare practices available to male and female inmates in the prisons studied as indicated in Table 4.14.

Table 4.14 Distribution of respondents by HIV/AIDS protective devices and sex

Gender	HIV/AIDS Protective devices					Total
	Gloves	Condoms	Shaving blades	Others	Don't get them	
Male	30 (53.6%)	2 (100%)	61 (100%)	4 (40.0%)	1 (7.7%)	98 (69%)
Female	26 (46.4%)	0 (0%)	0 (0%)	6 (60.0%)	12 (92.3%)	44 (31%)
Total	56 (39.4%)	2 (1.4%)	61 (43.0%)	10 (7.0%)	13 (9.2%)	142 (100)

Almost two third 30 (54%) of the total sample reported that gloves were the commonly used devices by inmates for coping with HIV/AIDS in the prisons studied. Shaving blades were only reported by almost two thirds of the respondents. This implies that shaving blades were made available to male prisoners while gloves are provided in male and female prisons in Kenya as an adequate measure of managing HIV/AIDS in Kenyan prisons.

The respondents who mentioned any HIV/AIDS protective device were further asked to what extent these protective devices were effective. The options were: 1.Very effective 2. Effective 3. Fairly effective 4.Not effective 5.Not effective at all. Here at 'least effective' means very effective and effective while not effective means not effective and not effective at all. Data on this variable was cross-tabulated with sex to compare how HIV/AIDS protective devices among male and females inmates in the prisons studied compared as indicated in Table 4.15.

Table 4.15 Distribution of respondents by Effectiveness of HIV protective devices and sex

Gender	Effectiveness of HIV protective devices					Total
	Very effective	Effective	Fairly effective	Not effective	Not effective at all	
Male	45 (77.6%)	40 (67.8%)	6 (60.0%)	3 (42.9%)	4 (50.0%)	98 (69%)
Female	13 (22.4%)	19 (32.2%)	4 (40.0%)	4 (57.1%)	4 (50.0%)	44 (31%)
Total	58 (40.8%)	59 (41.5%)	10 (7.0%)	7 (4.9%)	8 (5.6%)	142(100)

Data from Table 4.15 show that about three quarters 117 (82%) of the total sample reported that the devices were at least effective. Of these, 85 (73%) were male as compared to 32 (27%) who were female respondents. The table further shows that less than a fifth 15 (11%) reported that the devices were not effective. The respondents who reported that HIV/AIDS protective devices were effective may positively influence the efforts by the Kenya prison service to fight against HIV/AIDS. Thus, significant progress is achieved in meeting HIV/AIDS prevention needs of inmates in the prisons studied.

These study findings concur with those in a survey conducted by Klein and Connell, (2002) that examined the extent of HIV/AIDS prevention interventions provided by the Criminal Justice Initiative in New York State and explored barriers to offer prevention services. The latter study revealed that there was a high level of availability of HIV/AIDS prevention interventions and services.

4.3 Bivariate analysis

This section attempts to test key relationships by examining and interpreting the relationship among independent and dependent variables of the study.

The independent variable here is social demographic variables of inmates that included: age, marital status, HIV status, duration of imprisonment and length of stay in prison.

The dependent variable here is frequency of visiting the VCT centre.

Frequency of visiting the VCT is key in the management of HIV/AIDS as it may indicate the level of awareness of HIV/AIDS among inmates in prisons. It is measured by finding out whether or not inmates visited the VCT centers either on a Monthly basis, after three months or six months or above. The VCT services target prisoners and it is therefore likely that frequency of visiting the VCT centres is based on personal health needs of prisoners. Therefore, greater awareness and knowledge of HIV/AIDS contributes to a more supportive environment for

mainstreaming HIV/AIDS. Thus, various statistical tools like cross tabulation, chi-square, and contingency coefficient, are used to provide an understanding on the relationships between the key dependent and independent variables as indicated in the consequent sections.

4.3.1 Age and frequency of visiting VCT centres

The study attempts to measure whether there is any relationship between age and frequency of visiting the VCT centres. The rationale here is to determine whether or not age influences frequency of visitation in the prisons studied. It is expected that younger inmates would utilize VCT services more than the older inmates.

To be able to use the chi-square statistic, age of inmates was transformed into a categorical variable viz. young (Below 35yrs) and old (Above 35yrs). Inmates are grouped by their frequency of visiting VCT centre as tested in Table 4.16.

Table 4.16 Relationship between age and frequency of visiting VCT

Age	Frequency of visiting the VCT centres			Total
	Monthly	After 3 Months	6 Months and above	
Below 35yrs	47 (63.5%)	14 (18.9%)	13 (17.6%)	74 (52.1%)
Above 35yrs	56 (82.4%)	2 (2.9%)	10 (14.7%)	68 (47.9%)
Total	103 (72.5%)	16 (11.3%)	23 (16.2%)	142 (100)

* Figures in parenthesis indicate row percentages

$X^2 = 9.942$ Contingency Coefficient= 0.088 Significance 0.007 df = 1

From Table 4.16, 56 (82%) of the inmates aged above 35 yrs compared to almost two thirds 47 (64%) of inmates below 35yrs visited the VCT centres on a monthly basis. It can probably be argued that age has influence on frequency of visiting the VCT centres by inmates. Thus, older inmates appeared to have utilized the VCT services more than the younger inmates, therefore less HIV infections. As far as young people are concerned, VCT can result in a reduction in risk taking tendencies and promote behaviour change (De Zoysa et al., 1995).

The findings of this study are contrary to those in a study by Otele, (2013) on gender disparities in the utilization of VCT services in Nairobi Region that suggested higher utilization of VCT services by young people. In the latter study, the main reason reported to have influenced VCT utilization was the need to know one's HIV/AIDS status and plan for the future.

The relationship between age and frequency of visiting the VCT centres is statistically significant at 95% confidence interval. The association between sex and frequency of visiting the VCT centre is very weak as indicated by the value of Contingency Coefficient (0.09). This statistical finding suggests that the two variables are statistically significant but the relationship between them is very weak. This implies that there are other key factors that influence the frequency of visiting the VCT centres by inmates in the prisons studied.

4.3.2 Marital status and frequency of visiting VCT centres

The study attempted to establish whether or not prisoners' attributes like marital status influence their frequency of visiting the VCT centre. The variable marital status was cross-tabulated with frequency of visiting the VCT centre. It is expected that single inmates would utilize VCT services more than the married inmates. Being single is mostly associated with young age implying that people in this category are in sexually active ages.

To be able to use the chi-square statistic, marital status of inmates was transformed into a categorical variable viz. Single (Single/divorced/widowed) and Married (Married). The inmates were grouped by frequency of visiting VCT centre. This relationship is tested in Table 4.17.

Table 4.17 Relationship between marital status and frequency of visiting VCT

Marital status	Frequency of visiting the VCT centres			Row totals
	Monthly	After 3 Months	6 Months and above	
Single	54 (75.0%)	9 (12.5%)	9 (12.5%)	72 (50.7%)
Married	49 (70.0%)	7 (10.0%)	14 (20.0%)	70 (49.3%)
Column totals	103 (72.5%)	16 (11.3%)	23 (16.2%)	142 (100%)

* Figures in parenthesis indicate row percentages
 $X^2 = 1.552$ Contingency Coefficient = 0.327 Significance 0.460 df = 1

Table 4.17, clearly indicates that three quarters 54 (75%) of single inmates compared to 49 (70%) of married inmates visited the VCT centres on a monthly basis. It can be observed that marital status probably has some influence on frequency of visiting the VCT centres by inmates. Indeed, single inmates appeared to have utilized the VCT services slightly more than the married inmates in the prisons studied. Reports have confirmed that majority of those who contract the HIV/AIDS virus fall under the age of 30 years (KNBS, 2013).

A study by Ikuteyijo et al., (2008), focusing on level of awareness by inmates regarding HIV/AIDS found that that over half of the inmates were single, while almost 45% were married. A similar study by Getachew, (2004) focusing on factors associated with VCT utilization in guraghe zone, in Ethiopia found that the majority (81%) of the study respondents were single. The latter study also noted that the main reason for VCT utilization among cases was pre-marital 160 (76%). The relationship between marital status and frequency of visiting the VCT centres is not statistically significant at 95% confidence interval.

The association between marital status and frequency of visiting the VCT centre is weak as indicated by the value of Contingency Coefficient (0.33). This statistical finding suggests that the two variables are not only statistically insignificant but the relationship between them is also weak. This implies that there are other key factors that influence the frequency of visiting VCT centres by inmates.

4.3.3 Status of HIV/AIDS and frequency of visiting VCT centres

The study attempts to measure whether or not there is any relationship between HIV/AIDS status and frequency of visiting the VCT centre. The rationale here is to determine whether or not HIV/AIDS status influenced how frequent inmates visited the VCT centre in the prisons studied. It is expected that the HIV/AIDS positive inmates would have higher frequency of visitation. Indeed, the HIV/AIDS-negative inmates have no good reasons to for visiting VCT frequently. In the study, the relationship between HIV/AIDS status and frequency of visiting VCT centers is tested in Table 4.18.

Table 4.18 Relationship between HIV/AIDS status and frequency of visiting VCT centers

HIV/AIDS Status	Frequency of visiting the VCT centres			Row total
	Monthly	After 3 Months	6 Months & above	
Positive	58 (73.4%)	7 (8.9%)	14 (17.7%)	79 (55.6%)
Negative	31 (75.6%)	7 (17.1%)	3 (7.3%)	41 (28.9%)
Don't Know	14 (34.1%)	2 (9.1%)	6 (27.3%)	22 (15.5%)
Column total	103 (72.5%)	16 (11.3%)	23 (16.2%)	142 (100%)

* Figures in parenthesis indicate row percentages
 $X^2 = 5.803$ Contingency Coefficient= 0.563 Significance 0.214 df=1

From Table 4.18, about three quarters 31 (76%) of inmates that reported to be HIV-negative, as compared to 58 (73%) inmates who were HIV/AIDS -positive visited the VCT centre on a

monthly basis. The table further reveals that about a third 14(34%) of inmates who didn't know their status inmates visited the VCT centre on a monthly basis. However, the data show that there was no categorical difference in utilization of VCT centre between those inmates who are HIV/AIDS-negative and those who are positive. The high level of uptake among the inmates who are HIV-negative can be linked to eagerness to learn their status and being knowledgeable about HIV/AIDS. Visitation by the HIV/AIDS-positive inmates may be due to factors such as knowledge of the availability of VCT centres and free access to ART that may motivate inmates to visit the VCT centres.

In a study by Isingo et al., (2012:23), focusing on trends in the uptake of voluntary counseling and testing for HIV/AIDS in rural Tanzania revealed that HIV/AIDS-infected individuals had higher odds of VCT uptake compared to uninfected individuals. The latter study also noted that 25% of HIV -positive individuals took up VCT services after ART introduction. This was geared towards the achievement of the necessary coverage to enable universal access to treatment.

These study findings differ with those by Fati et al., (2012) in a study focusing on VCT uptake in Burkina Faso that found that only 12% of HIV/AIDS -infected individuals regularly visited the VCT centre. The relationship between HIV/AIDS status and frequency of visiting the VCT centres is statistically significant at 95% confidence interval.

The association between HIV/AIDS status and frequency of visiting the VCT centre is modest as indicated by the value of Contingency Coefficient (0.56). This statistical finding suggests that the two variables are not statistically significant and the relationship between them is modest. This implies that there are other key factors that influence the frequency of visiting the VCT centre in the prisons studied.

4.3.4 Duration of imprisonment and frequency of visiting VCT centres

The study attempts to measure whether or not there is any relationship between duration of imprisonment and frequency of visiting the VCT centre. Inmates jailed for longer duration are expected to have higher levels of visitation. To be able to use the chi-square statistic, duration of imprisonment of the sample was transformed into three groups: 5yrs and below, 6-11yrs and 12 yrs and above. This relationship is tested in Table 4.19.

Table 4.19 Relationship between duration of imprisonment and frequency of visiting VCT

Duration of imprisonment	Frequency of visiting the VCT centres			Row totals
	Monthly	After 3 Months	6 Months & above	
5yrs and below	13 (61.9%)	2 (9.5%)	6 (28.6%)	21 (14.8%)
6 yrs -11 yrs	28 (68.3%)	9 (22.0%)	4 (9.8%)	41 (28.9%)
12yrs and above	62 (77.5%)	5 (6.3%)	13 (16.3%)	80 (56.3%)
Column totals	103(72.5%)	16 (11.3%)	23 (16.2%)	142 (100%)

* Figures in parenthesis indicate row percentages

$X^2 = 9.734$ Contingency Coefficient = 0.187 Significance .045 df=1

From Table 4.19, around three quarters 62 (78%) of inmates that reported to have been jailed 12yrs and above, as compared to 13 (62%) of those jailed between 5yrs and below, visited the VCT centre on a monthly basis. Those inmates jailed six years and above appear to have utilized the VCT services more than those jailed five years and below. This implies that inmates jailed six years and above are more acquainted to HIV management strategies employed by the Kenya prison service in the prisons studied.

These study findings concur with those in a study by Karl et al., (2011) focusing on factors associated with utilization of VCT services in South Africa that found that length of incarceration was positively associated with HIV testing acceptance in prison.

The relationship between duration of imprisonment and frequency of visiting the VCT centres is statistically significant at 95% confidence interval. However, the association between HIV/AIDS status and frequency of visiting the VCT centre is weak as indicated by the value of Contingency Coefficient (0.19). This statistical finding suggests that the two variables are statistically significant but the relationship between them is also weak. This implies that there are other key factors that influence the frequency of visiting the VCT centre.

4.3.5 Length of stay in prison and frequency of visiting VCT centres

The study attempts to measure whether there is any relationship between length of stay in prison and frequency of visiting the VCT centre. The rationale here is to determine whether or not length of stay in prison influenced how frequent inmates visited the VCT centre in the prisons studied. Inmates who have stayed in prison longer are expected to have higher levels of visitation. To be able to use the chi-square statistic, length of stay in prison of the sample was

transformed into three groups: 5yrs and below, 6 yrs -11 yrs, and 12 yrs and above. This relationship is tested in table 4.20.

Table 4.20 Relationship between length of stay and frequency of visiting VCT

Length of stay in prison	Frequency of visiting the VCT centres			Row totals
	Monthly	After 3 Months	6 Months & above	
5yrs and below	55 (68.8%)	9 (12.3%)	16 (20.0%)	80 (56.3%)
6 yrs -11 yrs	29 (78.4%)	3 (8.1%)	5 (13.5%)	37 (26.1%)
12yrs and above	19 (76.0%)	4 (16.0%)	2 (8.0%)	25 (17.6%)
Column totals	103 (72.5%)	16 (11.3%)	23 (16.2%)	142 (100%)

* Figures in parenthesis indicate row percentages
 $X^2 = 3.114$ Contingency Coefficient= 0.196 Significance 0.539 df=1

Table 4.20 reveal that about three quarters 29 (78%) of inmates that reported to have stayed in prison between 6 yrs -11 yrs, as compared to 55 (69%) of the inmates who have stayed in prison 5yrs and below visited the VCT centre on a monthly basis. The table further reveals 19 (76%) of those whose length of stay was 12 years and above visited the VCT centre on a monthly basis. Thus, those inmates who had stayed in prison for 6 years and above seem to have relatively higher frequency of visitation than those who had stayed in prison 5 years and less. This implies that inmates jailed 6 years and above are more acquainted to HIV/AIDS management strategies employed by the Kenya prison service in the prisons studied. The longer the length of stay of inmates in prison, the greater their exposure to the infectious diseases and the higher the risk of infection (Sanchez et al., 1995).

The study findings concur with those of Maura, (2009), in a study focusing on Tuberculosis infection and the length of stay of County Jails prisoners in the western sector of the city of Sao Brazil. The latter found that the longer the length of stay in prison, the higher the rate of Tuberculosis and other infectious diseases.

The relationship between duration of stay in prison and frequency of visiting the VCT centres is not statistically significant at 95% confidence interval. The association between HIV/AIDS status and frequency of visiting the VCT centre is weak as indicated by the value of Contingency Coefficient (0.20). This statistical finding suggests that the two variables are not only statistically insignificant but the relationship between them is also weak. This implies that there are other key factors that influence the length of stay in prison and frequency of visiting the VCT centre.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of the key findings obtained during the study followed by the conclusions that lead to the study's recommendations and areas for further research.

5.2 Summary of the study's key findings

This study attempted to establish the status of HIV/AIDS management strategies in correctional settings in Kenya. From the study findings, we found that the mean age of inmates was 28.1yrs. This implies that prisons covered were dominated by young adults. Data on marital status suggests that majority of inmates in the prisons covered were in the age bracket that is likely to be married. On education achievement of the inmates imply that people who are most likely to go to prison are those with low level of education. Our findings support the observation that more education reduces the probability of incarceration and arrest. Findings on HIV status of inmates imply that the reported prevalence of HIV/AIDS is higher among inmates as compared to the general population. The findings further reveal that more males than female inmates reported being infected with HIV/AIDS in the prisons studied. Therefore, the prevalence of HIV/AIDS in the prisons studied is higher among male respondents as opposed to their female counterparts. This could be attributed to the fact that the study targeted HIV/AIDS positive inmates and covered more males as opposed to female inmates.

The study attempted to establish the extent to which inmates were exposed to HIV information. The study found that majority of inmates reported to have been exposed to HIV/AIDS information in the prisons studied. VCT centre was the place where majority of inmates got exposure on HIV/AIDS. An interview with key informants revealed that VCT services enabled infected inmates to have early access to medical care, preventive therapy for TB, ARV treatment as well as STI prevention and treatment. This therefore implies that there are appreciable practices of ensuring that inmates are well informed about HIV/AIDS in Kenyan prisons.

Further, the study measured frequency of visiting the VCT centre by inmates in the prisons studied and inmates requested to reveal how frequent they visited the VCT centre. The study found that almost three quarters of the total sample visited the VCT centre on a monthly basis.

This implies that inmates made use of the available resources at the VCT centre in the prisons studied. An interview with key informants revealed that apart from Testing for HIV/AIDS, peer support including access to HIV/AIDS support groups, and additional counseling to promote behaviour change and acceptance was also provided at the VCT centre.

To assess how prisoners perceive the scourge of HIV/AIDS in Kenyan prisons, the study measured their level of knowledge about HIV/AIDS. It was found that inmates were well knowledgeable about HIV/AIDS.

On measuring perception of inmates on the selected HIV related issues, the study measured HIV related challenges. It was found that almost 3/4 of the respondents strongly agreed that HIV was a serious health problem in the prisons studied. About half of inmates strongly agreed with the statement that there is poor access to health care in the prisons studied. The study further found that nearly half of the respondents strongly agreed that prison congestion facilitated the transmission and spread of HIV in the prisons studied. Other challenges affirmed by prisoners that hinder effective management in the prisons studied included: denial, availability of lesbianism and homosexuality, stigmatization, prison congestion and lack of special diet.

Beyond the univariate analysis, this study adopted bivariate analysis to basically measure relationships between and among variables. Bivariate analysis attempted to find out how the background factors like age, marital status, HIV status, duration of imprisonment and length of stay in prison influenced the frequency of visiting the VCT centre by inmates in prisons studied.

Of the five back ground variables age and frequency of visiting the VCT centre was statistically significant relationships at 0.05 probability levels but relationship between them was weak as indicated by the value of Contingency Coefficient (0.09). Duration of imprisonment and frequency of visiting the VCT centre was statistically significant relationships at 0.05 probability levels, but their relationship was weak with value of Contingency Coefficient of (0.19).

The relationship between other independent variables (marital status, HIV/AIDS status and length of stay in prison) and frequency of visiting the VCT centre were found not to be statistically significant. This could be attributed to the small sample size of 142 respondents covered by the study. With a small sample size, statistical comparisons may show there to be no statistically significant difference between variables (Chuele and Justice, 2006).

5.3 Conclusions

This study attempted to establish the status of HIV/AIDS management strategies in correctional settings in Kenya. Based on the study findings, the main obstacles to effective implementation of HIV management programs in Kenyan prisons appear to be high prevalence of HIV/AIDS by inmates, lack of clear and proper mechanism of identifying the HIV/AIDS-positive inmates, prisons congestion, poor access to health care services, inadequate knowledge about HIV/AIDS, inadequately exposure to HIV/AIDS information by inmates, poor facilitation of continuity of HIV/AIDS programs in the transition from prison to community as well as lack of elaborate post-release or discharge planning program to sick and terminally ill patients.

Drawing from the study findings, it can be concluded that, about half 79 (56%) of the inmates covered were infected with HIV/AIDS. This could be attributed to high prevalence of HIV/AIDS among inmates in the prisons studied. Thus, their statuses require that they get access to specialized medical, psychosocial and even rehabilitation services. This could however pose a great challenge to the already over stretched health care provision in prisons.

It can also be concluded that, not all inmates were aware of their HIV/AIDS status. This could be attributed to lack of clear mechanism of identifying the HIV/AIDS-positive inmates. To encourage inmates know their HIV/AIDS status, the prison department should introduce mandatory HIV/AIDS testing on entry but keep the HIV/AIDS status of inmates confidential to reduce stigma and discrimination.

Majority of inmates admitted that prisons congestion facilitate the transmission and spread of HIV/AIDS in the prisons studied. Prison congestion could be attributed to lack of elaborate decongestion program available in Kenyan prisons. This contributes to poor supervision and safety, which significantly increases the risk of gang activity like rape and violence. Thus facilitating the transmission and spread of HIV/AIDS in Kenyan prisons.

The study further observes that there is poor access to health care services in Kenyan prisons. This further worsens the health status of HIV/AIDS-positive inmates in Kenyan prisons.

This study found that the majority 62 (44%) of the inmates covered were found to be knowledgeable about HIV/AIDS, about a fifth of the inmates were not knowledgeable about HIV/AIDS. This could be attributed to lack of appropriate measure of informing inmates about

HIV/AIDS upon entry to prison. Therefore, HIV/AIDS information should be made available to all individual inmates upon entering and exiting the correctional facility

On exposure to HIV/AIDS information, the study found that over two thirds 98 (69%) of inmates reported to have been 'at least' exposed (very exposed and exposed) to HIV/AIDS information in the prisons studied. In addition, VCT centre was the place where majority (57%) of inmates got exposed to HIV/AIDS information in the prisons studied. Thus, VCT centre played a key role in informing inmates about HIV/AIDS.

From the study findings, the vast majority of inmates visited the VCT centre on a monthly basis. In addition, five important variables were identified as predictors for the frequency of visiting the VCT centre in the prisons studied. They include age, marital status, HIV/AIDS status, duration of imprisonment and length of stay in prison. However, age & duration of imprisonment and frequency of visiting the VCT centre were the only statistically significant relationship. By frequency of visitation to the VCT centre, it is quite obvious that HIV/AIDS Voluntary Counseling and Testing is a critical entry point to both HIV/AIDS preventions and care as well as acting as a support mechanism for both infected and affected inmates in the prisons studied.

5.4 Recommendations

Based on the study findings, the following recommendations are suggested that could empower the Kenyan prison authorities to address the issue of HIV/AIDS management in Kenyan prisons.

1. Some inmates are not aware of their HIV/AIDS status in Kenyan prisons. Therefore, the prison department should introduce mandatory HIV/AIDS testing on entry. This would enable inmates to discover their HIV/AIDS status and learn how to live with a negative or positive HIV/AIDS status. However, HIV/AIDS status of inmates should be kept confidential to reduce stigma and discrimination which is most easily avoided if a prisoner can keep her or his HIV/AIDS status confidential. In addition, HIV/AIDS related information in the possession of medical providers should be released to prison authorities only under extraordinary circumstances and only with the consent of the prisoner.
2. From the study findings, it is clear that HIV/AIDS is a reality in Kenyan prisons. Indeed, out of the 142 inmates covered in this study, 79 (56%) reported being infected with HIV/AIDS. Therefore, inmates who are infected with HIV/AIDS should be supported to access

specialized medical, psychosocial and even rehabilitation services. In particular, infected inmates should have access to qualified HIV/AIDS primary care physicians. Support should be extended to the family members to start coping and dealing with the trauma early enough once the inmate is released.

3. Given the high prevalence of HIV/AIDS among prisoners, there is a dire need for promoting HIV/AIDS and VCT services in correctional centres in Kenya. Inmates need to be encouraged to participate in these programmes so that further infections can be prevented and inmates infected with HIV/AIDS have prompt access to antiretroviral therapy. VCT information should be given to inmates on admission when they are being orientated about health care services available in the correctional centres.
4. It is clear that not all inmates are well knowledgeable about HIV/AIDS in Kenyan prisons. Indeed, majority 62 (44%) of the inmates covered in this study, rated themselves as having 'at least' a lot (great deal and a lot) of knowledge about HIV/AIDS. However, notwithstanding the fact that the majority of inmates are knowledgeable about HIV/AIDS, not everybody is knowledgeable about HIV/AIDS. Therefore, HIV/AIDS information should be made available to all inmates (male and female) individually upon entering and exiting the correctional facility. In addition, Kenya Prisons Health Service (KPHS) should consider establishing a country wide health education programme to increase comprehensive knowledge about HIV/AIDS. This could be done in collaboration with other development and technical partners.
5. On the extent of HIV/AIDS exposure, majority (127 (89%) of inmates are exposed to HIV/AIDS information. However, despite appreciable efforts made by the Kenyan Government to ensure that inmates are well exposed to HIV/AIDS information, not all inmates are adequately exposed to HIV/AIDS information. The study therefore recommends that HIV/AIDS education be made compulsory for all inmates and all staff providing services for the incarcerated inmates. The government through the prison department should create incentives to encourage the inmates to undergo HIV/AIDS testing and counseling. Similarly, enough awareness activities regarding ways of transmission as well as effective preventive measures should be regularly provided to inmates in Kenyan prisons.

6. There is poor access to health care services by inmates in the prisons studied. Indeed, 78 (55%) of the inmates covered strongly agreed with the statement that there is poor access to health care services in the prisons studied. Therefore, a standard of prison medical services, including HIV/AIDS care and support that meets the principle of equivalence should be provided to inmates in Kenyan prisons. In addition, health promotion strategies for prisoners living with HIV/AIDS should be delivered more effectively by public health authorities than by the prison system in order to slow down the progression of HIV/AIDS. Functioning systems of referral and cooperation between drug treatment services inside and outside prisons should be created to improve continuity of drug services upon imprisonment and after release. This would ensure consistency and frequent access to the health care services by inmates as well as strengthening the link between health care provision in the community and in prisons.
7. Prison congestion is a serious issue in the prisons studied as mentioned by 68 (48%) of inmates covered. Prison congestion contributes to further deterioration of the physical conditions of the prison premises. It also translates into the mixing of prisoners across categories of those incarcerated (pre-trial detainees, convicts and juveniles). This results to poor supervision and safety, which significantly increases the risk of gang activity like rape and violence, which facilitate the transmission and spread of HIV/AIDS in prisons. Therefore, an elaborate and consistent decongestion program should be implemented by the Kenyan prison authority to ensure that prisons in Kenya only hold the required capacity of inmates in a conducive living environment.
8. The majority 40 (56%) of inmates covered were HIV/AIDS-positive and that 62 (44%) of the inmates covered were imprisoned below 10 years, it is clear that some will return back to the community after serving their sentences. Therefore, the continuity of HIV/AIDS programs in the transition from prison to community should be facilitated. The Kenya prison Services should consult with communities that eventually receive ex-prisoners as well as agencies that provide services and education to people with HIV/AIDS in an attempt to provide a comprehensive aftercare strategy. These agencies and groups should be allowed access to provide such services in prison, in order that a link can be established for the inmate prior to release into the community.

9. Majority 79 (56%) of inmates covered were HIV/AIDS-positive and that about a half 77(54%) of inmates covered were serving capital offences, elaborate post-release or discharge planning program should be made available to inmates in Kenyan prisons. This should be done by ensuring that prisoners who enter the later stages of chronic or terminal illnesses like HIV/AIDS access palliative care. As a suggestion, no prisoner living with HIV/AIDS should be forced to die in jail. Therefore, inmates with progressive life-threatening diseases, including HIV/AIDS, should be released from prison earlier in the course of their disease, before they are terminally ill. Applications for conditional release on medical or humanitarian grounds should be done to the weak and sick inmates. Upon release, they should be provided with information about outside resources, prescribed medications at release, scheduled and accompanied to appointments with health care providers.
10. At the academic level, the study recommends that more research be conducted related to health care in prison setting specifically on HIV/AIDS, TB and drug abuse to establish the burden and predictor variables for effective formulation of interventions. This would increase the knowledge of inmates and prison personnel with regards to drug use, HIV/AIDS and other blood-borne diseases, including ways to reduce potential risks. This will ensure better health care services available to inmates.

5.5 Further Research

This study was carried out in Lang'ata women maximum prison and Kamiti maximum prison. The researcher therefore recommends that other studies be done in other female and male prisons in Kenya to determine the prevalence of HIV/AIDS and challenges facing the management of HIV/AIDS among prisoners which was not the concern of this study.

The research adds to the limited body of literature addressing the intricate relationship between health care provision and the HIV/AIDS management in Kenyan prisons. Additional work is needed that explores the subjective experiences of end-users responsible for achieving enhanced quality outcome possible with use of effective strategies of managing HIV/AIDS in Kenyan prisons. Inmate population is the ideal population to provide this insight considering that they are the most infected by HIV epidemic in Kenyan prisons. They therefore need to be integrated in planning and implementation of HIV/AIDS programs targeting them in Kenyan prisons.

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APPENDIX I:

LETTER OF TRANSMITTAL

My name is Lucy Wanjiku Musili, a post graduate student from the University of Nairobi, Department of Sociology and Social Work, pursuing a masters of Arts degree in Sociology.

I am carrying out a research on the status of HIV/AIDS management strategies in correctional settings in Kenya targeting Lang'ata Women and Kamiti maximum prisons in Nairobi Region.

The study findings will inform policy makers in designing new policies on management of HIV/AIDS in Kenyan prisons. As a result, the study will contribute in increasing the capacity of the Kenya prisons service in preventing, controlling, and mitigating the transmission and spread of HIV/AIDS in Kenyan prisons.

However, the information that you will provide, will be treated with utmost confidentiality, and will be used in the purpose explained above. The interview will take about 40 minutes.

Please be sincere and answer the questions as honestly as possible. Your cooperation in this study will be highly appreciated.

Lucy Wanjiku Musili

Section C: Knowledge and perception of HIV/AIDS by prisoners

22. In your understanding, what is HIV/AIDS?

23. How much do you know of HIV/AIDS? _____

1. Great deal 2. A lot 3. Moderate 4. Little 5. Very little

24. What do you know about HIV/AIDS in prisons?

25. Are inmates oriented on HIV/AIDS? 1. Yes 2. No

26. If yes, how satisfied are inmates with HIV/AIDS orientation.

1. Very Satisfied 2. Satisfied 3. Fairly Satisfied 4. Not Satisfied 5. Never

27. Who orient inmates on HIV/AIDS in prisons?

1. Fellow inmates 3. Staff 4. Care givers 5. Other, Specify _____

28. Are inmates well exposed to HIV/AIDS information? 1. Yes 2. No

29. If yes, how would rate the level of exposure?

1. Very Exposed 2. Exposed 3. Fairly Exposed 4. Not Exposed 5. Never

30. Are there adequate HIV/AIDS awareness campaigns provided to inmates in this prison?

1. Yes 2. No

31. If yes, what are the HIV/AIDS awareness activities you have witnessed in this prison?

32. How would you describe these activities?

1. Very effective 2. Effective 3. Fairly effective
4. Ineffective 5. Very ineffective 6. None

33. Who carry out the HIV/AIDS awareness campaigns in this prison?

34. Where do inmates get HIV/AIDS information in this prison?

1. Staff 2. Other inmates 3. Caregivers/Medical staff
4. Mass media 5. VCT Centre 6. Other, specify _____

35. Who provide HIV/AIDS information to inmates?

1. Staff 2. Other inmates 3. Caregivers/Medical staff
4. Mass media 5. Magazines 6. Other, specify _____

36. How useful is the information on HIV/AIDS to inmates?

1. Very useful 2. Useful 3. Fairly useful
4. Not useful 5. Not useful at all

37. How frequent are inmates talked to about HIV/AIDS?

1. Very frequent 2. Moderate 3. Frequent
4. Not frequent 5. Never

38. Do inmates appreciate information on HIV/AIDS? 1. Yes 2. No
39. If yes, to what extent is HIV/AIDS information appreciated?
 1. Highly appreciated 2. Appreciated
 3. Moderately appreciated 4. Not appreciated 5. Never
40. How receptive are inmates to HIV/AIDS information?
 1. Very receptive 3. Moderate
 2. Receptive 4. Not receptive 5. Never
41. Are inmates well exposed to HIV/AIDS information? 1. Yes 2. No
42. If yes, how would you rate the level of exposure?
 1. Very exposed 2. Exposed
 3. Fairly exposed 3. Not exposed 4. Never

Section E: Management of HIV/AIDS in prisons

43. Do you know what Kenyan prison system is doing to stop the transmission and spread of HIV/AIDS in this prison? 1. Yes 2. No
44. If yes, what are the common practices by prison authority of preventing HIV in this prison?
 1. Awareness campaigns on HIV/AIDS 2. Inmate orientation on
 3. Mandatory HIV/AIDS testing 4. Viable VCT centres
 5. Condom provision 6. Other, Specify _____
45. What are the common practices by inmates to stop contracting HIV/AIDS in this prison?

46. What assistance do inmates get from prison authorities in stopping HIV in this prison?
 1. VCT centres 2. Condom provision 6. Other, Specify
 3. HIV/AIDS Orientation 4. Awareness campaigns _____
47. Is there a viable VCT centre in this prison? 1. Yes 2. No
48. If yes, how do you rate the services offered at the VCT centre?
 1. Very adequate 2. Adequate 3. Fairly Adequate
 3. Not adequate 4. Not adequate at all
49. How frequent do you visit the VCT centre in this prison?
 1. Monthly 2. After 3 months 3. 6 months and above
50. Are inmates provided with HIV/AIDS protective devices in this prison? 1. Yes 2. No
51. If yes, which are these protective devices? _____
52. If yes, how effective are these protective devices?
 1. Very effective 2. Effective 3. Fairly Effective
 4. Not effective 5. Not effective at all

53. Do inmates make their efforts to protect themselves against HIV/AIDS?
1. Yes 2. No

54. If yes, where do they get these protective devices from? _____

55. If yes, how do they get these protective devices? _____

56. In your understanding, are the prison authorities doing enough to prevent HIV/AIDS in this prison?
1. Yes 2. No

57. How would you rate the efforts made by the prison authorities to prevent HIV/AIDS in prison?
1. Very adequate 2. Adequate 3. Fair
4. Inadequate 5. Not adequate at all

Section D: HIV/AIDS coping mechanisms in prisons

58. How does the prison establish the HIV/AIDS status of inmates?
1. Mandatory HIV/AIDS testing on entry 2. At the health centre
3. At the VCT centre 4. Other, Specify _____

59. What are the common practices of coping with HIV by the infected inmates in this prison?
1. Segregation 2. VCT services 3. ARV/ART 4. Special diet

60. What are the common practices of coping with HIV by uninfected inmates in this prison?
1. Abstinence 2. VCT services 3. HIV/AIDS orientation Other, specify _____

61. Do inmates get any assistance from this prison to cope with HIV/AIDS?
1. Yes 2. No

62. If yes, to what extent do you consider this assistance adequate?
1. Very adequate 2. Adequate 3. Fairly adequate
4. Inadequate 5. Not adequate at all

63. What efforts are inmates doing on their own to cope with HIV/AIDS in this prison?
1. Counseling sessions 3. Using ARV/ART
4. Eating special diet 5. Attending ill inmates

64. Do you have any other strategy of coping of coping with HIV/AIDS among the infected inmates in this prison?
1. Yes 2. No

65. If yes, what are these strategies? _____

Section E: HIV/AIDS related challenges

66. Do you face any problem related to HIV/AIDS in this prison?
1. Yes 2. No

67. If yes, what are these problems? _____

68. What are the possible challenges in this prison? _____

69. What are some of the problems associated with HIV/AIDS in this prison? _____

70. In your understanding, what practices should be employed by the Kenya prison authorities to cope HIV/AIDS challenges in this prison? _____

71. What practices should be employed by inmates to cope with HIV challenges in this prison? _____

Kindly, state your level of agreement or disagreement regarding HIV in this prison. Use the following scale: 1.Strongly Agree 2.Agree 3.Indifferent 4.Disagree5.Strongly disagree

Statement		Level of Agreement				
		1	2	3	4	5
72.	HIV/AIDS awareness campaigns are regularly carried out in this prison					
73.	Adequate counseling services are provided to inmates in this prison					
74.	Friendly procedures are used in identifying inmates with HIV/AIDS					
75.	Inmates are willing to disclose their HIV/AIDS status in this prison					
76.	HIV/AIDS training is regularly provided to prison staff in this prison					
77.	The VCT centre in this prison has enough counselors/other care givers					
78.	ARVS/ART is provided to HIV/AIDS positive inmates in this prison					
79.	Terminally ill patients are well taken care of in this prison					
80.	HIV/AIDS is a serious health problem in this prison					
81.	Prison congestion facilitate the transmission and spread of HIV in this prison					
82.	There is poor access to health care in this prison					
83.	HIV/AIDS positive inmates are segregated in this prison					
84.	Inmates with HIV/AIDS are not well treated in this prison					
85.	Inaccessibility of ARVs in this prison					
86.	There is inadequate food for inmates in this prison					
87.	There is poor diet for HIV/AIDS positive inmates in this prison					

Section F. Way Forward

88. In your opinion, how has the Kenyan prison system fared in preventing HIV in this prison? _____

89. In your opinion, do you think the Kenyan prison system is putting adequate efforts to assist inmates with HIV/AIDS _____

90. Do you think current practices have worked in preventing HIV/AIDS in this prison? _____

91. In your understanding, what practices should be employed by inmates to cope with HIV/AIDS challenges in this prison? _____

92. What practices should be employed by the Kenyan prison system to cope with HIV challenges in this prison? _____

93. In your opinion, is there need to involve inmates in planning HIV/AIDS activities? _____

94. Is there room for improving HIV/AIDS activities in this prison? _____

95. In your opinion, how do you think prison system could be improved to stop HIV/AIDS? _____

THANK YOU FOR YOUR CO-OPERATION!

APPENDIX III:

INTERVIEW GUIDE FOR KEY INFORMANTS

Name of the key informant: _____
Profession: _____
Employer: _____
Position: _____

Interview Guide

- **HIV/AIDS situation in Kenyan prisons.**
 - ❖ Introduction on Kenyan prisons.
 - ❖ Magnitude of HIV/AIDS in Kenyan prisons.
 - ❖ Role played by the key stake holders (Staff, inmates, policy makers) in regard to transmission and spread of HIV/AIDS in prisons.
 - ❖ Perception by inmates about HIV/AIDS scourge in prisons.

- **HIV/AIDS management programmes in Kenyan prisons**
 - ❖ Practices put in place by the prison authority in mitigating the transmission and spread of HIV/AIDS and their effectiveness in prisons.
 - ❖ Role played by inmates and policy makers in mitigating the transmission and spread of HIV/AIDS in prisons.

- **Capacity of the Kenyan prison authority in managing HIV/AIDS in prisons.**
 - ❖ Capacity (Staff, facilities) by the Kenyan prison system in the management of HIV/AIDS in prisons.
 - ❖ Capacity by inmates in the management of HIV/AIDS in prisons.

- **Challenges faced by the Kenyan prison authority in mitigating HIV/AIDS in prisons and possible solutions.**
 - ❖ Major obstacles that hinder the effective implementation of HIV/AIDS management programs by the Kenya prison system.
 - ❖ Major obstacles that hinder inmates from preventing themselves from contracting HIV/AIDS.
 - ❖ Roles of Key stake holders (Staff, inmates, policy makers) in the management of HIV/AIDS in prisons.

- **Overcoming the HIV/AIDS challenges.**
 - ❖ Helping the prison staff to cope with HIV/AIDS in prisons.
 - ❖ Helping the caregivers and other health staff to cope with HIV/AIDS in prisons.
 - ❖ Helping inmates to cope with HIV/AIDS in prisons.
 - ❖ Roles of Key stake holders (Staff, caregiver's inmates, and policy makers) in overcoming HIV/AIDS health challenges in prisons.

THANK YOU FOR YOUR CO-OPERATION!

APPENDIX IV : END NOTES

ⁱ **Categories of Kenyan prisons:** Maximum Security Prisons, Medium Security Prisons, Minimum Security Prisons, Borstal institutions and Youth Corrective Training Centres (BMBPS2009:25).

Maximum security prisons hold the most dangerous criminals jailed for capital and other serious offences. Kamiti and Lang'ata women prisons are the only maximum prisons for males and females offenders respectively in Nairobi region.

Youth Corrective Training Centre rehabilitate boys aged 17-21 years who have not committed capital offence for a maximum period of 4 months. Borstal institutions rehabilitate boys aged 15-18 years by offering vocational trainings and also as a punishment for the wrongs committed. Borstal institutions are also referred to as approved schools.

ⁱⁱ **Categories of prisoners:** Convicted prisoners include, Star class, Ordinary class, Special-death row convicts and Lifers while non-convicted prisoners are Ordinary, Capital and Robbery with violence Remandees (BMBPS, 2009:27).

ⁱⁱⁱ **Individual prisoners** are classified into four. categories: Young offenders-who are convicted criminals under the age of 18; Star class-consist of prisoners who are not young offenders but are first offenders; Ordinary class-prisoners in neither young nor star classes while un-convicted class are prisoners awaiting trial (BMBPS, 2009:25).

^{iv} **Palliative care** is an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual (WHO, 1998:18).

^v **A likert scale** is a type of psychometric scale named after Rensis Likert, who invented the scale in 1932 as a measuring device used in quantitative social science (Webster online dictionary).