KNOWLEDGE, ATTITUDES & PRACTICES ASSOCIATED WITH HIV/AIDS TRANSMISSION & PREVENTION AMONG INMATES OF KADUNA CONVICT PRISON, KADUNA STATE

BY

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MPH/MED/32628/2002-03

A THESIS SUBMITTED TO THE POSTGRADUATE SCHOOL, AHMADU BELLO UNIVERSITY, ZARIA IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF PUBLIC HEALTH DEGREE

FEBRUARY 2005

DECLARATION

I hereby declare that the Project entitled "KNOWLEDGE, ATTITUDES & PRACTICES ASSOCIATED WITH HIV/AIDS TRANSMISSION & PREVENTION AMONG INMATES OF KADUNA CONVICT PRISON, KADUNA STATE" is a product of my Personal Research effort and that it has not been presented previously by me in any Institution for an Academic Award. All sources of information have been specifically acknowledged by means of references in accordance with the rules for Presentation of Project.

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DATE

CERTIFICATION

This Project/Thesis entitled "KNOWLEDGE, ATTITUDES & PRACTICES ASSOCIATED WITH HIV/AIDS TRANSMISSION & PREVENTION AMONG INMATES OF KADUNA CONVICT PRISON, KADUNA STATE", by DR. JOSHUA ISTIFANUS ANEKOSON meets the Regulations Governing the Award of the Degree of Master of Public Health of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This Research is dedicated to ALMIGHTY GOD foremost, then my ever beloved Parents: Late JOSHUA UTU and Mrs. MARTINA JOSHUA. You People are Second to none! I forever remain grateful!!

ACKNOWLEDGEMENT

I wish to express my profound gratitude to Almighty God. A work like this can hardly be accomplished without the assistance of others either directly or indirectly.

First and foremost, my heart felt gratitude goes to my wonderful supervisor; Dr. Kabir Sabitu for all his goodness and academic contribution which has made this work a success. Others include Dr. A. U. Shehu, Dr. C. L. Ejembi, my beloved sisters (Rose, Asaba, Abaka) and brothers (Emmanuel and Yammu), Dearest Wazi, Dr. Idi Danladi, Dr. Nuhu Kumangh, Dr. (Mrs.) Rene Mary Mathew, Dr. Austin Ahmadu, Dr. John Adakole, Mr. Bitrus Eku-Anyang, Mr. Timothy Alumbugu, Mr. Stephen Kwaya, Mr. Sam Jatau, Susan Wakyu, Bola Ogboja, Mr Gasi Garba (Staff) of Kaduna Convict Prison, Mallam Saidu Adamu (former MD, ABU Press), Mallam Abdullahi Hassan K/Sauri (MD, ABU Press), Mallam Ahmed Tijjani Usman and Mrs. Monica Alokwe of ABU Press. Persons/Entities too numerous to mention here who have rendered various contributions at various times and levels towards achieving this noble goal for which no words of expression can adequately convey.

ABSTRACT

HIV/AIDS has become a pandemic affecting millions of people around the world. Nigeria has prevalence of 5% and prisons could serve as breeding grounds.

A cross sectional study was carried out to elicit the socio-demographic characteristics, knowledge, attitudes and practices among the inmates of Kaduna Convict prison associated with transmission and prevention of HIV/AIDS.

Four hundred and forty (440) inmates were interviewed using structured questionnaires after pretesting and 2 FGD sessions. Also the seven departments of the prison were appraised in the area of HIV/AIDS control programmes.

The study demonstrated that majority of the inmates (75.9%) were between the ages of 20 – 39 years, males (87.4%), 54% had secondary education, 54% were singles, 26.9% traders and 55% were incarcerated for 1-5 years. Fraud/forgery/cheating were the most common crimes committed (16.8%). Almost all the respondents (96.1%) had heard of AIDS mostly through reading (25.5%), although only few had seen or known cases of AIDS (15.4%). Despite the fair to average knowledge about the causative agent, modes of transmission of the virus, methods of prevention, wrong conception and attitudes, some inmates indulged in high risk behaviours and practices (sexual and non-sexual) associated with AIDS transmission. There were no concrete programmes on ground by the prison authorities for the prevention and control of the disease.

It is recommended that there should be well organize IEC sensitization programmes on HIV/AIDS for both the prison staff and the inmates, increase the ratio of staff to inmates to improve supervision, proper classification of cells, provision of social amenities and drugs among others (e.g. Anti TB, ARV etc) to the inmates like other members of the society, provision of harm reduction devices such as barbing clippers, condoms, etc by the prison

authorities and provision of soft loan and/or employment to inmates on completion of sentences to enable them start a meaningful life.

Abbreviations

AIDS	-	Acquired Immune Deficiency Syndrome
HIV	-	Human Immune Deficiency Virus
US	-	United States
UN	-	United Nations
CDC	-	Centre for Disease Control and Prevention
WB	-	World Bank
SSA	-	Sub-Saharan Africa
ILO	-	International Labour Organisation
CSWs	-	Commercial Sex Workers
FHI	-	Family Health International
WHO	-	World Health Organisation
IV	-	Intravenous
IDU	-	Intravenous Drug Users

ARV	-	Anti-Retroviral
IEC	-	Information, Education and Communication
LAV	-	Lymphadenopathy Associated Virus
HTLV	-	Human Lymphotropic Virus
RNA	-	Ribonucleic Acid
DNA	-	Deoxyribonucleic Acid
STIs	-	Sexually Transmitted Infections
PLWHA	-	People living with HIV/AIDS
IMR	-	Infant Mortality Rate
TB	-	Tuberculosis
NGOs	-	Non-Governmental Organisations
NACA	-	National Action Committee on AIDS
SACA	-	State Action Committee on AIDS
UNAIDS	-	United Nations AIDS

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CHAPTER ONE

1.1 INTRODUCTION

AIDS is the acronym for Acquired Immune Deficiency syndrome, which is a disorder cause by the Human Immune Deficiency Virus (HIV). It was discovered by a French Researcher; Professor Luc Montagnier in 1981. The first cases were reported in America in 1981 in five homosexuals who were undergoing treatment for a rare disease of the lungs called *pneumocystic Carinii* pneumonia. The modes of infection are through sexual intercourse (most common), transfusion of infected blood and blood products, use of infected unsterilised piercing objects and from infected mother to foetus. AIDS has aroused much interest probably because of its sexual connections and more so because of its association with homosexuals in America and Europe. Since its discovery it has become a global problem and the United Nations (UN) and the International Community is worried over it. Describing AIDS, Dr. Ward Cater of the United States (US) Centre for Disease Control (CDC) said that this disease has a potential "….. much worse than anything mankind has seen before".[1]

Africa is widely considered the epicenter of the AIDS epidemic and the impact of the disease there has been devastating. More than 25 million people in the Sub-Saharan Africa (SSA) are infected with HIV out of the total 34.3 million people infected worldwide, giving SSA approximately three-quarters of the world's HIV/AIDS case. The disease is literally reshaping the demographics of Africa. According to the UN, approximately 10% of children in SSA are parentless as a result of AIDS. The disease has claimed more human lives than plague or nuclear weapons took in their history.[2] Since 1986 when the first case of HIV/AIDS was reported in Nigeria, this deadly scourge has spread rapidly to reach pandemic proportions. In Nigeria, the first official report of the HIV/AIDS, the prevalence of infection has shown a steady increase in all

groups that have been monitored. Today, it is estimated that about 5 million Nigerians are infected with the virus.[3] The disease has resulted in gradual reduction in life expectancy, decimation of skilled and productive work force and high medical bill. The new International labour Organization(ILO) data prepared for the AIDS epidemic at UN Special Session June, 2001 show that of the estimated 23million working people suffering from HIV/AIDS, about 17.5million,or the vast majority, are in 43 African States, where the epidemic has created a state of emergency. AIDS is not only a work place issue, but also a challenge to development worldwide. It has been demonstrated that sexual transmission is the most important mode of transmission of HIV in Nigeria. AIDS strikes maximally at the sexually active, economically productive age bracket of 15 – 49 years. The disease in Nigeria has crossed the critical epidemiological threshold of 5%. The significance of this is that, Nigeria has entered into a critical phase of the epidemic as the possibility of sexual contact with an infected person has increased significantly at that level, this may just be a tip of the iceberg.[4]

The vast majority of the people who become infected with the virus are from vulnerable segments of the population; children, youths, women, prisoners, Refugees, migrant workers, ethnic minorities, the military, people who live in poverty, long distant drivers and commercial sex workers (CSWs) are some of the most vulnerable population.[5] During the Presidential Forum of March 9, 2002, titled "HIV/AIDS in Nigeria: The Road Ahead," Dr. Joseph Perriens, World Health Organization (WHO), and Dr. Berhe Constantinos, UNAIDS Nigeria, also addressed the need for appropriate allocation of HIV/AIDS resources, highlighting the evidence on the importance of targeting high risk groups. Information, education and communication are very important in the prevention and control of HIV/AIDS in Nigeria and the World at large.

1.2 RATIONALE

As we all know that prevention of HIV/AIDS is cheaper, better and more effective than **NO CURE**. It has often been stated that the primary strategies available to control and eventually reduce the spread of the disease are improving the awareness of the general population and more importantly the high risk groups through information, education and communication. Several studies have shown that over 60% of those affected are within the age 15-49 years. Most prison inmates are also within this age bracket. These inmates are often injecting drug users (I.V-intravenous) before they enter prison. They continue (or begin) this practice while in prison, often with shared, unsterilised needles and syringes. In addition, they may have unprotected penetrative sex with other men or women, and may be tattooed with shared, unsterilized equipment.

There has been increasing radio news analyses on the increasing incidence of HIV/AIDS among prison inmates and the need for concerted effort in the prevention.

Although many behavioural studies and public enlightenment campaigns have been undertaken by both local and international governmental and non-governmental organizations in the general public, only few such studies have been documented on prison inmates in Nigeria. This research aimed at documenting information about the prison inmates' social variables, their knowledge, attitudes and practices associated with the transmission and prevention of HIV/AIDS.

Also only few studies have been carried out to appraise programmes on ground (if there are) by the prison authorities that will help in the prevention of HIV/AIDS among the prison inmates in the area of information, education and communication, so that plausible recommendation could be made.

1.3 AIMS AND OBJECTIVES

Aim: The broad aim of this study is to determine the knowledge, attitudes, and practices associated with the transmission and prevention of HIV/AIDS among inmates in Kaduna Convict prison.

OBJECTIVES:

1. To determine the extent of knowledge of HIV/AIDS among the prison inmates.
2. To find out their attitudes concerning HIV/AIDS transmission and Prevention.
3. To find out practices that predisposes the inmates to HIV/AIDS.
4. To appraise the programmes on ground by the Prison authority on providing the prison inmates with information, education and communication in relation to HIV/AIDS prevention.
5. In the light of the findings, to offer recommendations on behavioural modification that will reduce the exposure of the prison inmates to the disease.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

As the World enters the 3rd decade of the AIDS epidemic, the evidence of its impact is undeniable. Wherever, the epidemic has spread unchecked, it is robbing Countries of the resources and capacities on human security and development dividends. In some regions, HIV/AIDS, in combination with other crises, is driving every larger part of Nations toward destitution.[5]

Prisoners are also population at risk among others. At any time, there are approximately 10 million people imprisoned world wide. This has serious implications for the global epidemic since prisons and other custodial settings are breeding grounds for diseases such as HIV, TB and hepatitis.

Prison populations come largely from the most marginalized groups in the society – people in poor health and with chronic untreated conditions, the vulnerable and those who have engaged in activities with high risk of HIV exposure such as injecting drugs and risky sex. The vast majority are released into the wider community at some point.[6]

2.2 PATHOGENESIS

AIDS is a syndrome, a combination of illnesses. The HIV attacks the immune system and leaves the body vulnerable to a variety of life threatening diseases, so called opportunistic infections such as tuberculosis, etc.[7]

HIV infection occurs when the virus enters the body and attaches itself to host cells. The virus attacks a particular set of cells in the human immune system known as CD 4 cells. There are two main types of CD 4 cells. The first types are CD4 positive T cells, which organize the body's overall immune response to foreign bodies and infections. These T helper cells are the prime target of HIV. The virus attacks immune cell called macrophages. These cells engulf foreign invaders and ensure that the body's

immune system will recognise them in the future. Once the virus has penetrated the wall of the CD 4 cell it is safe from the immune system because it copies the cell's DNA (Deoxyribonucleic acid) and therefore cannot be identified and destroyed by the body's defense mechanisms. Virus particles Lurk in the cells until their replications is triggered. Once this happens, they make new virus particles that bud for the surface of the host cell in vast numbers, destroying that cell as they do so. These viruses then go on to infect more CD 4 cells. In a healthy person, there are 1,200 CD 4 cells per microlitre of blood.

When a person is infected, a battle commences between the virus and the immune system. There is an initial burst of activity during which many cells are infected, but the immune system fights back, manufacturing immense numbers of antibodies. This period is marked by an unseen and unfelt war in a person's body. The viral load is high, the immune system is taking a knock, and the person's HIV Status cannot be detected using standard tests. This is commonly called the 'window period' and lasts from several weeks to several months. At this stage, a person is highly infectious, as his or her viral load (the number of viral particles they are carrying) is considerable. This fact is of epidemiological importance. The more people there are in the early stage of infection, the greater the chance of effective transmission between people. The window period is followed by the long incubation stage.

2.3 INCUBATION PERIOD

The incubation period which is the period between infection with the HIV and the appearance of symptoms and signs varies; it ranges from 3 months to five years or more.[8,9] The virus can lie salient in the body for many years. The percentage of people infected with HIV who will develop clinical disease remains uncertain. However, it is estimated that 75 percent of those infected with the virus will develop AIDS by the end of ten years. During this phase, the viruses and the cells they attack are reproducing rapidly and being destroyed as quickly by each other. Up to 5% of the body's CD 4 cells (about 2,000 millions cells) may be destroyed each day by the billions of virus particles.[10] Eventually, the virus is able to destroy the immune cells more quickly than they can be replaced and slowing the number of CD 4 cells falls. As infection progresses, the number will fall. When the CD 4 cell count falls below 200, opportunistic

infections begin to occur and a person is said to have AIDS. Infections will increase in frequency, severity and duration until the person dies. These opportunistic infections cause the syndrome referred to as AIDS.

The period from HIV infection to illness and death is crucial it was generally believed that, in the Rich World, on average, people lived for ten years before they began to fall ill. Without treatment, the normal period from the onset of AIDS to death was thought to be a further 12-24 months.

Recent evidence suggests that viral resistance to anti-retroviral drugs is growing. Approximately 20% of new HIV diagnoses in the UK are of drug resistant mutations.

The incubation period in the developing world was thought to be shorter between six and eight years. This was based on the assumption that people in the poor world had more challenges to their immune systems, poorer nutrition, and less access to health care. It seemed inevitable that they would progress to symptomatic AIDS faster.

However, of six African studies reported in 1996, four suggested progression rates similar to those in the industrial world, and two found shorter periods.[10] Data then were scanty and are limited to SSA.[11] Schoub notes, 'little is known as yet about the rate of progression in African patients where the prognosis appears to be considerably worse (than among homosexual men in western countries).[10]

One recent study found that the time from HIV illness to death is shorter for untreated patients in Uganda than in the Rich World, and the spectrum of HIV/AIDS related disease is different. However, the period from infection to illness did not seem to vary. This suggests that tropical diseases and infections such as TB or sexually transmitted infections do not hasten the progression of HIV to AIDS in Uganda.[12]

2.4 MODES OF TRANSMISSION

These are either through sexual or asexual routes. The asexual routes includes, transfusion of blood or blood products, or transplanted tissues or organs obtained from HIV infected donor, using skin piercing instruments or injecting equipment that is contaminated with the virus, transmission from infected mothers to child during pregnancy, labour or following birth through breastfeeding.

2.4.1 Sexual Transmission

The most common route (man to man, man to woman, woman to woman).[13] The available information indicates that transmission of the AIDS virus from person to person is initiated as a result of sexual intercourse between homosexual or heterosexuals. AIDS is first and foremost a sexually transmitted disease. Homosexual men undertake anal intercourse while heterosexual men and women engage in penile – vaginal intercourse. Both methods carry various risks of contracting AIDS. Oral intercourse called felatio, may be considered as some sort of sexual intercourse which involves the rhythmic sucking of the penis or the licking of the vagina with the tongue with the aim of inducing orgasm.[1]

The most frequent contributors to the transmission of the AIDS virus by sexual methods are those engaged in anal intercourse, i.e. both homosexuals and bisexuals. It has been reported that homosexuals are very promiscuous, and this is a factor that helps in promoting the disease transmission among the male population. It is for instance reported that the frequency with which some homosexuals change their sexual partners ranges from 10-1000 partners in one year.[1] In the US, over 70% of the cases were in homosexuals or bisexual men. In contrast in Equatorial Africa, AIDS is acquired mainly through heterosexual contact.

The magnitude of the risk is affected by a number of factors, which include the presence of sexually transmitted infections (STIs), the sex and age of the uninfected partner, the type of the sexual act, the stage of the illness of the infected partner, virulence of the HIV strain involved, etc. Among the homosexuals, it has been observed that there is a direct correlation between the frequency of infection and the methods of anal intercourse. For example, those who engage in receptive anal intercourse have a greater risk of AIDS than the insertive partners because usually, it is the receptive partners who receives the largest inoculum (Semen containing large amounts of AIDS viruses) in contrast with the insertive partner whose chances of receiving large dose of viruses is much smaller. Secondly, the walls of the human rectum especially the mucous membrane are not as ruggedly designed as the vaginal walls to take the kind of frictions and rough usage that occur in anal coitus and semen easily gain entry into the victim's body (the victim in this case is usually the receptive homosexual). Thirdly, the skin of the penis may get

bruised during anal intercourse and again infection could enter the insertive partner's body and cause infection. To facilitate the ease of penetration of the penis into the rectum, homosexuals apply lubricants such as Vaseline, or any other jellies and chemical relaxants such as amyl and butyl nitrates. The latter chemicals have the properties of relaxing the anal sphincter and also increasing sexual excitation during coitus.

Homosexuals are also frequently at risk of contracting a number of STIs, such as herpes, gonococcal infection of the Urethra (urethritis), syphilis, infection of the rectum by the gonorrhoea organism (proctitis) and "amoebic bowel disease" or invasion of the large bowel by *entamoeba histolytica* which causes ulceration of the mucous membranes of the large intestines with its consequent diarrhoeal episodes. These areas of inflammation caused by the bacteria makes penetration by the AIDS virus and then into the blood stream during anal intercourse. Up to 80% of HIV has been credited to sexual transmission in Nigeria.[14, 15]

(i) Penile-Vaginal Intercourse

Heterosexual intercourse is regarded by many people as more refined, more decent and attractive, and if anything, a more socially accepted way of sexual indulgence in the Homo sapiens.[1] In comparison with anal intercourse, however, it carries a limited risk of AIDS infection especially among the non-prostitute group. At December 1986, in America, 4 out of 10 AIDS patients were blacks and Hispaniacs and of these, only between 0.8% and 1% contracted the disease through heterosexual intercourse. It has been reported in US and Europe that transmission from women to men is common especially among prostitutes and their male partners. Generally, women are more vulnerable to HIV infection because of a large surface (vagina) is exposed than Penis of men and semen contains higher concentration of HIV than vaginal or cervical fluids. Female prisoners have more chance of having HIV/AIDS.[16] Parillo and Freeman found out that women sexually abused in childhood, may therefore engage in HIV risky sexual behaviour to a greater extent than women abused in adolescence. For vaginal sex, risk is higher when the woman is menstruating.[17]

Lesbianism refers to homosexuality in women or sexual activity between 2 women or several women which may lead to orgasm or sexual satisfaction. Lesbians and gay women in

America and Europe are often associated with intravenous drug abuse, and it is probably under these circumstances that such women stand the greatest risk of contracting AIDS.

(ii) Oral Intercourse

Some people practice oro-anal or oro-vaginal intercourse as a means of obtaining orgasm or sexual satisfaction. This kind of sexual intercourse may promote the spread of some STIs such as syphilis of the penis, of the lips or of the tongue. However, transmission of AIDS this way has not yet been reported probably because of the low incidence of the method.

The virus has been detected in the saliva of healthy or sick carriers, this means, therefore, that transmission through saliva is practically possible especially if the kissing is passionate, intensive, intimate and aggressive. This can happen if the kissing leads to damage to the soft tissues (mucous membranes of the mouth, tongue or gums). Such injuries or cuts could become the entry points for the AIDS viruses to penetrate the blood stream. Gingivitis, stomatitis, glossitis and tonsillitis could also be other entry points.

2.4.2 The Asexual Routes of HIV/AIDS Transmission

These are:

(i) Transfusion of blood or blood products, or transplanted tissues or organ obtained from HIV infected donor. Blood transfusion may cause AIDS if the virus is passed on through blood transfusion to non-AIDS sick patients. Studies in the US and Europe, showed that of all the AIDS patients seen over a five year period (1981 – 1986), about 1.4 – 1.7% were those who received various blood transfusions.

In Nigeria, blood transfusion is the second most common source of transmission of AIDS, accounting for 10% of HIV transmission.[15,18,19] Hemophiliacs were reported as being a special risk group for AIDS transmission in the US and Europe. A study carried out in the US in April 1985 showed that nearly 71 hemophiliacs there had prevalence rate of 0.36% were attacked by the disease in the UK, about the same time as in the USA, only 5 cases had been reported which is equivalent to a prevalent rate of 0.11%. Hemophiliacs are those people suffering from a type of genetic blood disorder, usually associated with missing factor VIII (Hemophilia A) or loss of factor xi (Haemophilia B) and

also called 'Christmas disease'. Sicklers also have increased risk.; and The risk of contracting HIV from a unit of blood is 95%.[9]

(ii) Using skin piercing instrument or injecting equipment that is contaminated with HIV.

Needle – sharing by I.V drug users is a major cause of AIDS in many countries. Any skin piercing such as ear piercing, tattooing, acupuncture, scarification, barbing, shaving, manicure, pedicure etc. can transmit the virus if the instruments used have not been sterilized and have been used on an infected person.

Transmission by the intravenous route is probably encouraged by the sharing of the same needles by the drug addicts. These young addicts often sit in small groups and share syringes and needles, taking turn one after the other. Drug addicts in most countries cover the entire socio-economic spectrum of the society. These are prisoners, business executives, actors, musicians and all grades of professionals including lawyers and doctors. Others include, drop–out from schools, ex-convicts etc. They may also be homosexuals and therefore, such people stand a greater risk of contracting and spreading AIDS. Hair saloonists, traditional doctors etc. can spread HIV with contaminated equipment.[9]

(iii) Transmission from infected mother to child during pregnancy, labour or following birth through breastfeeding.

There is evidence to show that neonates or infants may acquire AIDS through their mother's milk or in the uterus. The latter can happen if the AIDS virus from the mother passes through the placenta into the blood system of the foetus. Also, it has been reported that while the baby is passing through the vagina during delivery, viruses in the mother's blood or amniotic fluids may enter the newborn through the umbilical cord and thus, predispose to AIDS.

In Australia in 1985, a baby contracted AIDS through the mother's breast milk. The mother on the other hand may have received the AIDS virus through blood transfusion.[1]

About one-third of the children of HIV positive mothers get infected through vertical transmission. About 23% of this transmission is intrauterine, 65% is intrapartum and early postpartum while 12% is late postpartum.[20] Vertical transmission

constitutes about 10% of cases in Nigeria and 20% world wide.[9, 15]

A baby who is fed both the breast milk of an HIV positive mother and poorly made-up formula feed is "getting the most of both worlds".[21]

2.5 EPIDEMIOLOGY

The statistics of the AIDS epidemic can be almost overwhelming, sometimes perhaps even obscuring the fact that each case is a personal tragedy. HIV/AIDS has been reported from every inhabited continent and from every country; it is a pandemic.[22] The history of the disease can be divided into three periods which are: Silence (mid 1970s – 1981); initial discovery (1981 – 1985) and global mobilization (1986 – 1988). The disease is now the 4th biggest killer worldwide [23] and is the greatest health problem that is greatly challenging science and mankind and may remain so for a long time.[24]

In 2003, approximately 40 million individuals were living with HIV/AIDS worldwide. SSA is the region most affected. Now, it is the leading cause of adult morbidity and mortality in that area. Most, if not all of the 26.6 million people in SSA who are living with HIV/AIDS (PLWHA) will have died by the year 2020, in addition to the 13.7 million Africans already claimed by the epidemic. HIV/AIDS is also spreading dramatically in Asia and India leads the region in absolute numbers of HIV infections, estimated at 3 –5 million. China too, has a growing HIV/AIDS problem, with approximately 0.5 million AIDS cases and according to private estimates by Chinese specialists, up to 10 million HIV infections. Asia will overtake SSA in absolute number before 2010; by 2020 it will be the HIV/AIDS epicenter. [22]

According to data published by the UNAIDS report, everyday 16,000 people throughout the world are infected by the virus. Among them 60% are in the age group 15 – 24 years, but rate of infection is 2 times higher among young girls than among boys.

Global summary of the HIV AIDS epidemic (UNAIDS Report), end 2000.[25]

People newly infected with HIV in 1999 Total 5.4 million
Adults 4.7 million
Women 2.3 "
Children < 15 yrs 620,000

Number of people living with HIV/AIDS Total 34.4 million
Adults 33.0 million
Women 15.7 "
Children < 15 yrs 1.3 m
AIDS deaths in 1999 Total 2.8 million
Adults 2.3 million
Women 1.2 "
Children < 15 yrs 500,000
Total No of AIDS deaths since the beginning of the epidemic:
Total 18.8 million
Adults 15.0 million
Women 7.7 "
Children < 15 yrs 3.8 m
Total No. of AIDS orphans since the beginning of the epidemic
13.2 million

Evidence of high HIV prevalence in prison is widely available. In South Africa, where prevalence of HIV infection for adults is more than 20%, the level in the prisons is double.[26] In US., the proportion of confirmed cases of AIDS in prison is estimated to be four times higher than that in the general population.[27] In Europe, reported HIV infection level are as high as 26% in Spain, 17% in Italy, 13% in France and 11% in both Switzerland and Netherlands. Many HIV infections have also been reported in Countries in Eastern Europe, such as Ukraine, and recently Lithuania, while prisons in Brazil have infection levels ranging from11 to 22 %.[28]

Globally, most prisoners are men, but women prisoners are also at risk of HIV. In Brazil, Canada and US, women prisoners are more likely to be HIV +ve than their male counterparts, largely because a high proportion are incarcerated for drugs and sex work.[29]

2.6 HIVAIDS AND THE PRISON

Nigeria with a proportion of about 120 million people represents about 1/5 of the total Africa population and HIV prevalence is 5.0 %.[30]

The Nigeria prison system is an extreme symptom of a chronic illness affecting our criminal justice system and it suffers from a basic lack of humanity. There are about 152 prisons in the country with estimated over 20,000 Nigerians awaiting trials nation wide.[31] It has become normal for inmates to spend an average of 10-15years in our prisons awaiting trial. Investigations revealed that the prison services have been neglected more than any other criminal justice agency and most of them are overcrowded. Prisons are breeding grounds for HIV/AIDS and since the beginning of the epidemic little has been done in prison communities in Nigeria.

NARHS 2003 survey showed that urban dwellers are more knowledgeable on HIV issues than the rural folks.[30] There is also misconception around the effectiveness of awareness creation programs in improving knowledge. Behavioral surveys and individual research work have however, shown clearly that while awareness of HIV/AIDS has increased considerable, knowledge and understanding of HIV transmission modes is only fair and that misconception still exist.[30]

Wrong impressions also exist about treatment options and the correct attitudes to be shown to PLWHA. The same survey also showed that 60% of the respondents knew that a HIV infected person may appear healthy, 51% knew 2 methods of

prevention of HIV while only 19% had complete knowledge of HIV transmission.[30]

Charles *et al* in a study to elicit knowledge about AIDS and sexual behaviours of inmates of Agodi prison in Ibadan showed males constituted 94.5%, and 49.3% were less than 30years.[32] Most respondents knew that HIV is transmitted through sex (96.6%) and transfusion with infected blood (94.0%), nevertheless, 30% believed that the virus could spread through shaking infected person's hand. Concerning sexual behaviour, 53.3% practice masturbation, 46.5% engaged in risky sexual behaviour comprising men who had unprotected sex with male partners (53.5%). Homosexual practices prior to incarceration were reported. Only 70% of sexually active prisoners used condom. Although the prisoners in Agodi were knowledgeable about HIV/AIDS, risky sexual practices persist.

Life Link Organization (LLO) which is a NGO and a nonprofit group founded in Nigeria in May 1994 has been working in selected prisons in 5 States which are Lagos, Kano, Abuja, Edo and Uyo on reproductive health issues related to the prevention of STIs and HIV/AIDS. Its activities target four groups which are prisoners, prison staff, their wives and youths.[33] In 1990 a pilot study was undertaken in Lagos by the prison officer's wives Association. The findings were; 10% of the 400 respondents said they knew at least one person involved in homosexual practices. Yet most prisoners were not aware of AIDS. Many did not even know about STIs other than gonorrhea, and few knew how to prevent these infections.[33]

In 1998 during the 12th world AIDS Conference in Geneva, Switzerland, study, conducted among a high security prisons in the Northern and Southern parts of Nigeria showed high level of unprotected sexual activities going on behind the prison walls. The study found that there were homosexual practices in 15% of the prison population in Kano and 8% at Kirikiri maximum Security prisons in Lagos. It also showed that 32.5% of inmates at Kirikiri , 34% of inmates in Kano were aware of AIDS.[34] The same study also revealed that majority of the inmates who engaged in homosexual activities in the prisons are actually circumstantial homosexuals who would not have become involved in the practice if they were not confined.[34]

HIV/AIDS KABP studies conducted in Nigeria showed that as far as 1991, a high population (96%) claimed to have heard of AIDS [35] and this proportion increased to 99% in 1995.[36]

Another study on AIDS awareness and blood handling practices of health care workers in Lagos, Nigeria showed that despite the fact that majority (83.0%) knew that AIDS is caused by a virus but many confused mode of transmission with causative agent.[37]

Many Nigerians (adolescents and adults) have been documented to indulge in high-risk sexual behaviour that promotes the spread of HIV/AIDS. As many as 25% of an adult study population reported having multiple sexual partners.[38]

AIDS knowledge, attitude and practice studies of the public revealed high level of awareness (97.1%) [39] and relatively very poor knowledge of causative agent (14.7%).[40] In addition, knowledge on the mode of transmission was found to be poor. However, despite the intensive social marketing of condoms (male and female) for the control of AIDS and STIs in Nigeria, its acceptance and use are low. A study evaluating the acceptance of condom in Nigeria reported that about 60% of the study populations were unwilling to use the condom.[41]

Anal sex usually practiced by homosexuals is responsible for about 3.7% cases of HIV/AIDS in Nigeria, Pastor Zacch Akinyemi, an Expert on HIV/AIDS and the General Manager, social marketing society for Family Health has disclosed.[42]

A Survey by Bamgbala et al revealed that a significantly higher proportion of in-School respondents (67%) as compared to out-of-School (37%) adolescents had good knowledge of transmission of HIV and the main source of information about HIV/AIDS was electronic media.[43]

The findings of similar study in Lagos showed that the age range of the respondents was 12 to 21years, 83.9% were single, 97.2% had heard of HIV/AIDS. Their main sources of information were the radio (93.4%), television (68.7%) and friends (65.8%). Only 1.1% received information from their parents while 26.1% received information from health workers. Most (84.3%) of the respondents were aware that HIV can be transmitted during sexual intercourse, 17.2% had incorrect believes on transmission such as

touching, insect bites and kissing. About 85.9% were aware that a healthy looking person can have HIV infection and 25.5% have known someone who has HIV/AIDS or died from it.[44]

There are approximately 188,000 prisoners incarcerated in South Africa prison at this time. Over 40% of the prisoners are incarcerated for 2yrs or less, only 2% are serving life sentences.[45] On the average, more than 30, 000 people are released from South Africa prisons and jails each month.[45] The greatest concern should not be directed at the risk of HIV transmission inside prison, but the potential impact of former prisoners living with HIV outside prison. If their illnesses or infections of prisoners are not properly treated while in prison, the prisoners will return with these to their communities and may constitute a health risk.

Behaviour pattern, social environments, age, race, gender among others are significant predictors of HIV infection rates. Young people are at risk of HIV infection.[46] Because people between the ages of 18-35yrs are less likely to be in monogamous relationships and have a wider sexual network, they are more likely to contract HIV as well as other STIs. Further more, the presence of STIs in one or both partners increases the risk of HIV transmission not only because the presence of sores allows the virus to enter the skin, but also because untreated STIs can increase the viral load in genital fluid.[25]

Nationally, 76% of prisoners in South Africa are black men between the ages of 18-35yrs, with the most significant portion between the ages of 25 –

35yrs.[47] These are the most productive and reproductive age groups and sexual activity between male inmates is not uncommon in prisons and jails.

In the case of U.S, as of December 31, 2001, 6 million people lived under the jurisdiction of the criminal justice system and 2.1 million were in jail or prison. Prison population have multiplied in recent decades, primarily because incarceration has been the central tactic of the war on drugs in the U.S. Fifty seven (57%) of Federal prisons inmates were incarcerated for drug offences in 2001.The AIDS rate is 6 times higher in State and Federal prisons than in the general U.S population.[48]

Although women account for over 5-10% of the prison population and have represented a smaller percentage of total CDC defined AIDS cases, women prisoners have had a higher rate of HIV antibody sero prevalence than male prisoners (3.0 compared with 2.0 % respectively).The New York State Commission of correction published the first extensive report on State prison cases of HIV. At year end 1999, 25% of all U.S inmates known to be HIV infected were in New York prisons. Most recent sero positive information from New York States prison was reported in 2000, 4.7% of men and 13. 9% of women were HIV positive upon entry to the State prison.[49, 50, 51, 52, 53]

2.7 HIV TRANSMISSION IN THE PRISON

Numerous activities known to occur among prisoners pose a risk for HIV transmission. Homosexual practices exist among certain inmates, blood

contaminated instruments such as razor blades can be shared, and some prison guards can be exposed to high risk behaviors because they are regularly transferred from one post to another but are unable to take their wives.[26] Several studies have identified HIV transmission in prison based on sero – testing for HIV antibody, some identifying, sero-conversion in inmates after more than 5 years of continue incarceration.[54,55,56,57] Molecular analysis of 14 HIV positive inmates in Glenochil in Scotland in 1993, found sequencing Similarities and chemical histories in 13 of the 14 indicating that transmission has occurred at the institution.[58]

Prisons in other Nations first reported AIDS cases several years after the U.S. However, the rate of increase in cases has been steep. Countries with particularly high Seroprevalence identified among prisoners include Brazil (15%) in 2001, Cote d'Ivoire (27.5%) in 2001, South Africa (15%) in 2001, Zambia (26.7%), Nigeria (9.0%), Honduras (6.8%) Russian federation (3.1%) Netherlands (3.1%), France (4.1%) and Spain (16.4%) in 2000.[59, 60,61,62,63, 64]

No confirmed cases of HIV infection among U.S prison staff have been attributed to contact with inmates. There is a report from Australia of sero conversion of an officer who was infected by an inmate with a syringe full of his own blood.[65] A federal Bureau of prisons study in 1982 reported that 30% of federal prison inmates engaged in homosexual activity while in prison.[66] Tennesse prison inmates have been reported to practice homosexualism while in prison by 1984 study.[67] Generally; sexual activity between male inmates is not

uncommon in prisons and jails. There have been reported uses of devices such as fingers of latex & gloves for safe sex by prisoners when condoms were not available by a survey in New York.[68]

Cases of homosexual rape in jails and prisons are extremely difficult to estimate. Such victims who report rape in prison face a probability of further suffering and worse injury. Study by the Federal Bureau of prisons reported that 9-20% of Federal inmates especially new or homosexual inmates were victims of rape.[66]

Some of the factors that play role in the transmission of HIV/AIDS in the prisons among others are:

(i) Contaminated Needles

I. V. drug use is not common in South African prison, perhaps because these types of substances are far too expensive and are normally used by socioeconomic segments of the population that are typically not sent to prison.[26]

A recent study on AIDS and Human development has confirmed that, drug use through injection appears to be limited and sharing of needles does not, at this stage, appear to be a very significant mode of HIV transmission in South Africa. From interviews with 274 prisoners at Westville medium B, only 6 had ever tried I.V drugs, only 3 had use I.V drugs in the 12 months prior incarceration and none had used I.V drugs since entering prison.

Although imprisoned IDUs do not use drugs with the frequency that they can outside, they do share injection equipment more and sterilize it less because of scarce resources. Prisoners may also share toothbrushes, another potential source of HIV infection in facilities where they are not issued, where inmates are unable to purchase their own, or where infection control precautions are not understood.

Tattooing is widely practised in prisons and is usually performed with shared unsterilized instruments. It involves multiple skin punctures with recycled, sharpened and altered implements such as staples, paper chips and the plastic ink tubes from ball point pens.

In South Africa, tattooing is part of the extremely powerful gang structure within the prisons. The inmates use home made tools for the procedure, either a bit of metal, or even a spoon that has been sharpened to a point which is able to cut the skin. The prisoners do not have access to any materials to clean these implements, such as bleach or disinfectant.[26]

Tattooing is against the regulations in prisons, so a prisoner is not likely to seek medical attention for an infected wound resulting from it. Study also showed that sometimes prison staff supply needles or in other ways promote tattooing within the prison. They are often involved in the gang power structures themselves as they are easily bribed into complicity or bought into association with a specific gang.[26] At the 12th World AIDS Conference in Geneva, a number of presentations addressed the unique problem confronting

those managing HIV disease in prisons who are incarcerated. On a global scale, the Geneva Conference reaffirmed that correctional facilities continue to serve as reservoirs of HIV infection, Hepatitis and TB.

(ii) High Risk Sex

In South Africa, up to 65% of male prisoners have sex with other prisoners and an estimated 80% of prisoners awaiting trial are robbed and raped by convicted prisoners with whom they share cell. Prisoners' communities participate in sexual activity either voluntarily or through threats and coercion. It is a fact that while many prisoners and prison guards will not admit it or discuss it, homosexual intercourse and rape is rife.[26] One former prisoner, when asked to estimate or quantify the amount of sex which takes place in South African prisons, simply stated that it is an "every night, every day occurrence".[26]

(iii) Over Crowding

The condition inside prison can contribute in varying degrees to the risk for HIV transmission, the progression of HIV, and the deterioration in health of a person with full blown AIDS. Incarceration speeds the progress of the disease from infectious stage into the full blown malady as found in U.S. Over crowding can impede effort to deal with HIV/AIDS in that it exacerbates the health problems of those who are already ill, and also lead to increased high risk

behaviours. Conditions of over crowding in prisons are linked to the spread of TB which is an airborne communicable disease.[69] In the U.S., prisons have become an incubator for TB due to over crowding and poor ventilation; so is the case in Nigeria. In most prisons TB is one of the most commonly treated illnesses. Prison over-crowding invariably leads to a deterioration of hygiene, care and supervision. In addition, the incidence of rape within a prison varies with the intensity of over crowding. The risk of sickness and violence are obvious. The more crowded is the prison, the greater is the likelihood of acts of rape and homosexuality.[26] Over crowding can lead to high risk behaviours in that the increasing scarcity of simple items such as blankets, shoes, beds, etc are then used as commodity which can be exchanged for sex. It is not surprising that sharing a bed with another prisoner can lead to homosexual activity.

(iv) Stress

Imprisonment carries with it a number of stresses, including being separated from family and other support structure, frustration of goals or plans for the future, interruption of familiar activities, and intimidation and fear resulting from bullying or victimisation from other prisoners.[26] Depression of the immune system is enhanced by stress, thereby increasing susceptibility to diseases.

(v) Nutrition

Studies showed that inmates in most prisons (Nigeria inclusive) complain of inadequate feeding both in quality and quantity. Some inmates may exchange sex for food and well to do prisoners may use this to lure poor prisoners for sexual activity. The resulting restricted access to adequate nutrition has an impact on health concerns of all kinds. Poor nutrition and vitamins among HIV positive inmates accelerates the development of HIV into AIDS.

(vi) Gangsterism

Many high risk behaviours are directly related to gang activity. Membership in both gangs frequently includes tattooing, and it's not uncommon for more than one inmate to be tattooed at a time using the same needle.[26]

Violence between prisoners which leads to bleeding is also a product of gang activity. While the 26S engage in stabbings, the primary activity of the 28S is sex and prostitution. The 28S hierarchy consists of 2 lines. One is then 'men' and the other is their 'wives'. The men do the fighting and protecting and the wives are the sexual partners of the fighters, "men". In addition to being receptive in sexual partners, the wives perform many traditionally considered feminine roles, including washing and other domestic chores.[26]

Prison wardens have been reported to be involved in gang activities, and gang members will actively recruit prison wardens as means of increasing their power. For example, if a members of the 28S wishes to obtain a specific

prisoner as a wife, he may be able to gain the complicity of a warden in transferring the targeted prisoner to the gangster's own cell. The warden's involvement with either 26S or 28S can also extend to the smuggling of food, weapons, cigarettes, drugs, and other items as well as the prostitution of juveniles to other prisoners.[26]

2.8 PREVENTION OF HIV/AIDS IN THE PRISON

Prevention is the main stay of the response to AIDS, but is seldom implemented at a scale that would turn the tide of the epidemic. Globally, less than 1/5 of inmates do have access to prevention services which is important for the prevention and control of HIV/AIDS in prisons.[6]

Prisons historically have approached prevention of HIV transmission in 2 very different and often contradictory ways: either quarantine and education or education.

Prevention of HIV transmission in the prison has to do with improving prison conditions in general than with specifically addressing HIV and overcrowding, corruption and gangs are the primary culprits behind rape, assault and violence in prisons, and this environment is horrifying even without the risk of HIV. Security and the provision of safe custody must be a priority.

The people who are more likely to be incarcerated are also those who are more likely to have HIV. The socioeconomic factors that significantly contribute to the prevalence of HIV within a specific population are very similar

to those that lead to criminal activity and incarceration.[26] Poverty is a defining characteristic of both prisoners and populations living with HIV. In Nigeria, as in South Africa, HIV flourishes most in areas that are burdened by unemployment, homeless, welfare dependency, prostitution, crime, a high school drop-out rate, and social unrest.[70] The impact of joblessness, illiteracy and a general environment of lawlessness, all commonly considered contributing factors towards criminal behaviour, have also been studied as factors in HIV infection. The uneducated and illiterates are less likely to be reached by HIV education programmes, and have lower levels of HIV/AIDS knowledge and awareness.[71]

In addition to environmental factors, however, there are several aspects of pre-incarceration behaviour that places prisoners at high risk for HIV infection. High risk behaviour for contracting HIV includes unprotected sex, particularly multiple partners, CSWs, or sex that takes place in exchange of drugs, etc. Drug use is also high risk behaviour, in that the influence of drugs usually leads to other risk taking behaviour including high risk sex as well sharing needles for I.V drug use.

Since the beginning of the AIDS epidemic, Life Link is the only group that has targeted prison communities with its HIV prevention and control programmes. Before the education programme, knowledge of HIV/AIDS and STIs was low. The results of Life Link activities includes : a good number of prison community members are well informed about HIV/AIDS and STIs, and

unsafe homosexual practices have been reduced in prisons where HIV/AIDS prevention activities have been carried out. Negative attitudes towards PLWHA have changed, and there is now a greater readiness to help those who are infected with the disease. Infected inmates have started to benefit from dietary supplements, as well as palliative drugs and ointments for treatment of rashes and other skin diseases.[33] The ARV treatment should reflect the principle that treatment and care for prisoners should be equivalent to that available outside the prison settings, as most recently stated in the Feruary, 2004 Dublin Declaration on HIV/AIDS in prisons in Europe and Central Asia. Clean shaving instruments, needles and syringes have been provided to the prisons' medical units for inmates and staff as part of the effort to curb further spread of infection within the prison system.[33] The prisons now carry out HIVAIDS prevention programmes in collaboration with NACA and SACA. Other activities include organization of seminars and training workshops for prison officials etc.

In 2000 Alabama, Mississippi and South Caroline still tested and placed all those identified as HIV +ve in segregated housing.[48] Prisoners represent a conical and huge target population for HIV education programs; prisons concentrate on persons at risk who are not easily reached in the community by such efforts. As many as 50% of U.S prisoners are functionally illiterates; so is the case with Nigerian inmates. The general available literature on HIV infection and AIDS either cannot be understood by most inmates or fails to address many of their particular needs.

Accurate and adequate information for staff and inmates can reduce fears and ultimately affect institutional policies in ways that can profoundly alter prisoners' lives. All persons entering prison must be informed in their own language in clear and simple term about how to avoid transmission of HIV and other communicable diseases such as TB, STIs, etc. Educational programs can reduce fears about HIV and its transmission among the majority of staff and inmates.[26]

Increasing staff to prisoner ratios, classifying and housing inmates properly, decreasing overcrowding, and providing activities for inmates prevent transmission through non-consensual behaviour such as violence including rape. Preventing violence including rape is the ongoing responsibility of prison staff.

Condom availability in prison is one of the many issues over which legal and public interests conflict most prison administrators have not permitted the distribution of condoms to inmates. It is argued that condom distribution would condone and promote sexuality activity, prison cells are not regarded as places of privacy so sex between prisoners is illegal.[72] Also condoms in institutions are considered contraband; a container for hiding drugs or other illegal things that inmates may swallow and later retrieve. However, in Mississippi condoms are sold from vending machines at institutional canteens.[73] Condoms have been available to inmates of Canadian federal prisons since January 1992, so in the New York City jail in Rikers Island, state prison of Vermont and San Francisco

county jail. A 1998 report of a survey of prison systems in 20 European countries found that condom availability is becoming widely accepted.[74]

The distribution of sterile syringes to inmates has also been discussed as a mean of preventing HIV transmission but does not occur in Nigeria or US prisons. Several European prisons have made sterile syringes available to their inmates.

In conclusion advocacy, information, education and communication, monitoring, evaluation and continuous counseling are important for the success of prevention and control of HIV/AIDS in the prisons and the approach should be multidisciplinary and comprehensive.

CHAPTER THREE

3.0 METHODOLOGY

3.1 DESCRIPTION OF THE STUDY AREA

The Kaduna convict Prison was established in 1915 during the colonial administration. It is located along independence way Kaduna just opposite the High Court and adjacent to Magistrate Court. It is the largest in the whole of northern states of Nigeria and has the goal of rehabilitation, reformation and re-integration of inmates after serving sentence.

The prison was to accommodate about 550 on establishment but the number of inmates presently is between 800-1200.The total staff strength is 179.

The category of Prisoners includes condemned criminals, lifers, those awaiting trial and the convicted. However, the types of cells are Special class cells, lifers' cells, Armed Robbery cells, minor offence cells Sick-Bay cell and the condemned criminal cells.

The prison is divided into units for proper and easier management; these includes the administrative, Medical, record office, welfare, the industrial and work shop has sub units such as electrical, carpentry, tailoring among others. These different units play roles in rehabilitating, reforming and reintegrating the prisoners thereby helping them to become better members of the society after discharge.

There is a Mosque, a Church, a class room and a Library to meet the spiritual and educational needs of the inmates respectively. However, recreational facilities are lacking, poor general sanitary and housing conditions, over crowding etc.

3.2 STUDY POPULATION

The study population included all categories of prisoners i.e. those convicted and those awaiting trial during the period of the study; 1st June to 1st August, 2004, from 8.00am to 2.00pm daily to coincide with the period the prison authorities permit safe access to the premises.

3.3 STUDY DESIGN

The study was descriptive, cross sectional survey of the inmates in Kaduna Convict Prison which assessed their knowledge, attitude and practices associated with HIV/AIDS transmission and prevention.

3.4 SAMPLING TECHNIQUE

The stratified sampling technique was used to select the actual subjects for the study. The 50 cells containing different categories of inmates were used as strata. Averages of 9 inmates were selected from each of the 50 cells for the research. This was done using systematic method through a predetermined

sampling interval after drawing the sampling frame. Those that were not interested in the research were replaced accordingly.

Convenient sampling method was used to select those members of the study population who provided the needed information. Two sessions of FGD were conducted into 2 separate groups of males and females (each group consisting of 8 persons). Hausa and English were the media of communication used. Circular sitting arrangement was used and each session lasted 60 – 90 minutes and the researcher moderated at each session. The selected subject were informed a day before the exercise and those that were not interested were allowed to pull out.

3.5 SAMPLE SIZE DETERMINATION

The sample size for the study will be computed using the formula:

$$n = \frac{Z^2 pq}{d^2}$$ (64)

n = the desired sample size

z = the standard normal deviate, usually set at 1.96 which corresponds to the 95% confidence interval

p = The proportion in the target population estimated to have a q = 1 – p a particular characteristic.

d = Degree of accuracy desired (0.05)

The prevalence of HIV/AIDS among Prisoners in Nigeria = 5.8 %[65]

Therefore minimum sample size $n = \frac{(1.96)^2 \times 0.58 \times 0.42}{(0.05)^2} = \frac{3.84 \times 0.2436}{0.0025} = \frac{0.9744}{0.0025}$

$= \frac{0.9744}{25}$ $n = 374$

The total sample size that will be used in the study (i.e. minimum+10%)= 440

3.6 DATA INSTUMENT

These were quantitative method using pretested structure questionnaires and qualitative method using Focus Group Discussion to seek information about prison inmates' social data, their knowledge attitudes about HIV/AIDS including its transmission and preventive social data, and their indulgence in HIV/AIDS risky practices**.**

3.7 DATA COLLECTION

5 Prison staff including the Head of the Clinic and 4 medical students were trained and used to administer the questionnaires for the period of the research. Completed questionnaires were reviewed by the principal researcher and the co-investigators at the end of each day.

3.8 DATA ANALYSIS

The data generated from structured interviews using standardized questionnaires were cross-checked for omissions in response and the collation of the research data was done. The data were coded and analyzed in a computer using Superior Performance Software System (SPSS version 7.5).

Data presentation formats such as bar and pie charts were drawn using Excel ’98 software package. Cross tabulations were also carried out

The core issues emanating from the FGDs were also highlighted.

3.9 LIMITATIONS OF THE STUDY

Only few similar studies have been carried out in Nigeria, so no much literature is available for wide comparison especially in the northern part of Nigeria.

The information to be collected is sensitive and there is no way of varying them. So the information the inmates will give may not be gospel truth, more so that some of the inmate are criminals.

3.10 ETHICAL ISSUES

Informed consent will be obtained from the department of community medicine, ABU Zaria, prison Authorities in Kaduna and the inmates. Any of the inmates that are not interested will be replaced by the ones interested using the systematic random sampling.

CHAPTER FOUR

4.0 RESULTS

4.1 RESPONSE RATE

Four hundred and forty (44) questionnaires were distributed while actual number for the study was 374. This was to accommodate drop outs and losses during data collection as well as to accommodate questionnaire that were incompletely or wrongly filled. The range for the missing cases is 0-20, giving the response rate of 95%. The valid percentages were used.

From the above, it shows that the response rate of 95% is very good. This could be due to the fact that the questionnaires were largely administered by the research and the research assistants, while only few were self-administered to the literates among the study group.

4.2 Socio-Demographic Characteristics

Table 1: **Socio-demographic Variables of the respondents**

Variable	No	%(n=440)
Age group		
< 20 yrs	9	2.1
20-24	63	14.4
25-29	119	27.3
30-34	84	19.3
35-39	65	14.9
40-44	56	12.8
45-49	24	5.5
50-54	11	2.5
≥ 55	5	1.1
Sex		
Male	383	87.4
Female	55	12.6
Marital status		
Single	230	54.1
Married	195	45.9
Educational Level		
Illiterate	25	5.9
Primary	81	19.0
Secondary	230	54.0
Post-Secondary	90	21.1
Period of incarceration		
< 1yr	116	28.6
1-5yrs	226	55.8
6-10yrs	42	10.4
11-15yrs	14	3.5
16-20yrs	3	0.7
> 20 yrs	4	1.0
Occupation		
Applicant	90	21.0
Farmer	65	15.2
Traders	115	26.9
Schooling	59	13.8
C/Servant	90	21.0
Others	9	2.1

Age distribution:

The age distribution of the study population showed that the majority (41.7%) were is the age group 20 –29 years, followed by 30-39 years age group (34.2%). The age groups with the lower percentages were 55years (1.1%) and <20yrs (2.1%)

Sex Distribution

The majority of the inmates were male (87.4%) while females constituted 12.6%

Marital Status

The single inmates were 54.1% and the married were 45.9%, these marital were before incarceration.

Educational Status

54.0% had secondary education while 21.1% had post-secondary education: primary education 19.0% and 5.9% had no formal education.

Period of incarceration

An analysis of their period of incarceration showed that 36.0% had been incarcerated for 1-2 yrs. Followed by <1yr (28.8%) 15.5 of them were for 3-4yrs followed by those for 5-6yrs (7.4%), 9-10yrs (5.4%), >10yrs (5.2%) and the least were those incarcerated for 7.8yrs (1.7%).

Occupation

Traders constituted the largest group (26.9%), followed by applicants (21.0) and Civil Servants (21.0%) each, farmers constituted 15.2% while those schooling were 13.8%.

Figure 1: Nature of Crime Committed

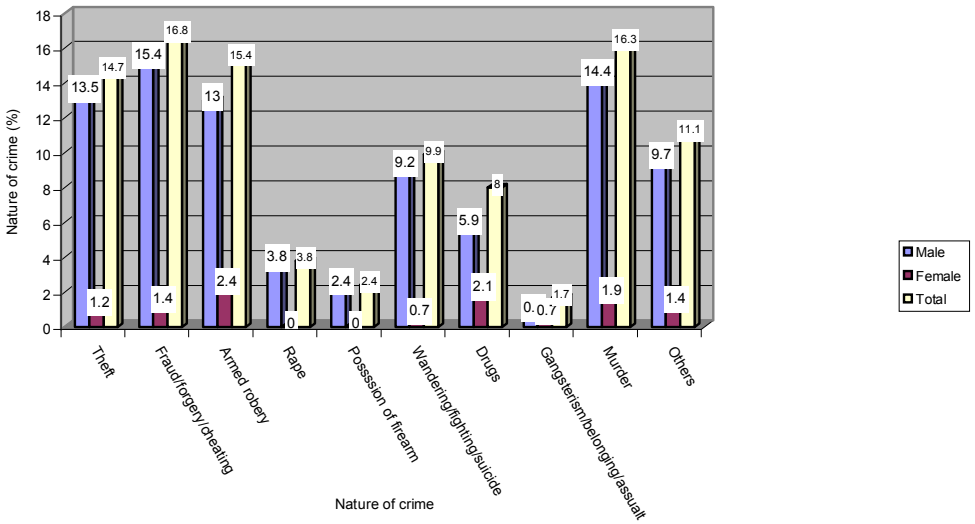


Figure 1: Nature of crime committed with respect to sex of the imates

Nature Crime Committed

Majority of the inmates were incarcerated cheating/fraud/forgery 16.8% (i.e 15.4% males, 1.4% females). Followed by murder cases 14.4% males, 1.9% females). Cases of armed Robbery constituted 15..4% (13% males, 2.4 females). Theft wardering/fraud/attempted suicide, drugs, rape, illegal possession of fire arms and Gangsterism were 14.7%, 9.9%, 8.0%, 3.8%, 2.4% and 1.7% respectively.

4.2 Knowledge about HIV/AIDS Transmission/Prevention by the respondents

Table 2: **Knowledge about HIV/AIDS**

Areas examined	No	%
Hearing about HIV/AIDS		
Yes	415	96.1
No	17	3.9
Causative Agent of AIDS		
Virus	315	71.6
God's punishment	62	14.1
Witchcraft	12	2.7
Bacteria	55	12.5
Don't Know	9	2.0
Others	4	0.9
Mode of transmission of AIDS		
Sexual route	375	85.2
Blood transfusion	44	10.0
MCT	39	8.9
Infected Instrument	39	8.9
Seeing or knowing AIDS patient		
Yes	66	15.4
No	363	84.6
Healthy looking person having HIV/AIDS		
Yes	390	90.5
No	41	9.5

Hearing about HIV/AIDS

96.1% had heard about the disease and only 3.9% has not (Table 2).

Knowledge about the causative agent of HIV/AIDS

Majority of the inmates (30%) knew that AIDS is caused by virus while those that said its caused by God's punishment, Bacteria and witchcraft were 14.1%, 12 .5% and 2.7% respectively, 2.0% accepted they don't know and 0.9% chose other options listed.

Knowledge on the mode of transmission of AIDS

85.0% knew sexual route as the commonest, followed by blood transfusion (10.0%) while transmission from infected mother to the foetus and use of infected piercing objects were 8.9% each.

Seeing/knowing HIV patient

84.6% responded no while 15.4% yes.

Knowledge on a healthy person having HIV

90.5% of the inmates were aware that HIV the patient may look healthy while 9.5% were not aware.

***Figure* 2: Source of Information about HIV/AIDS**

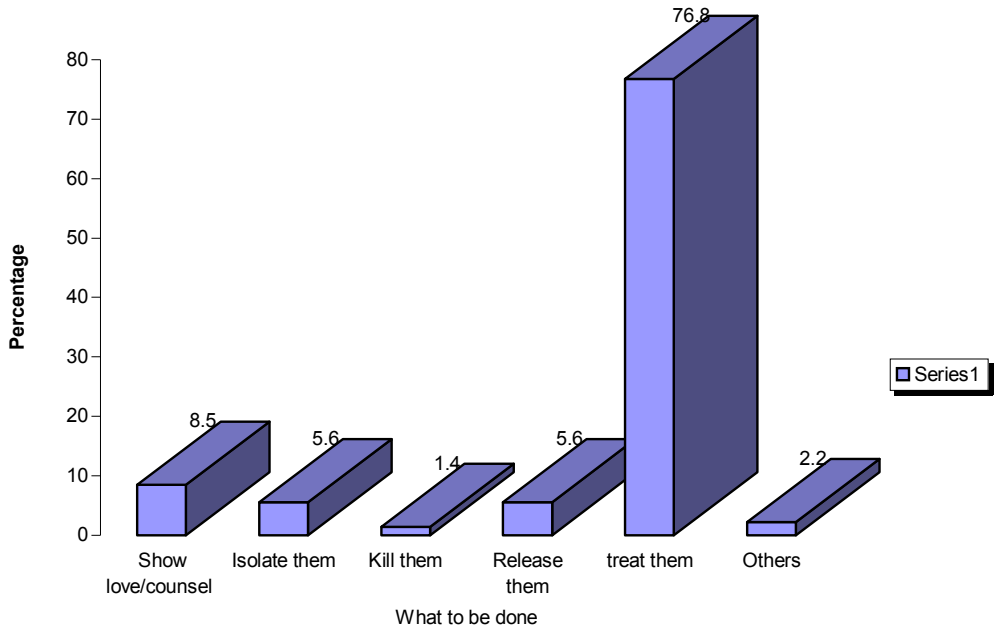
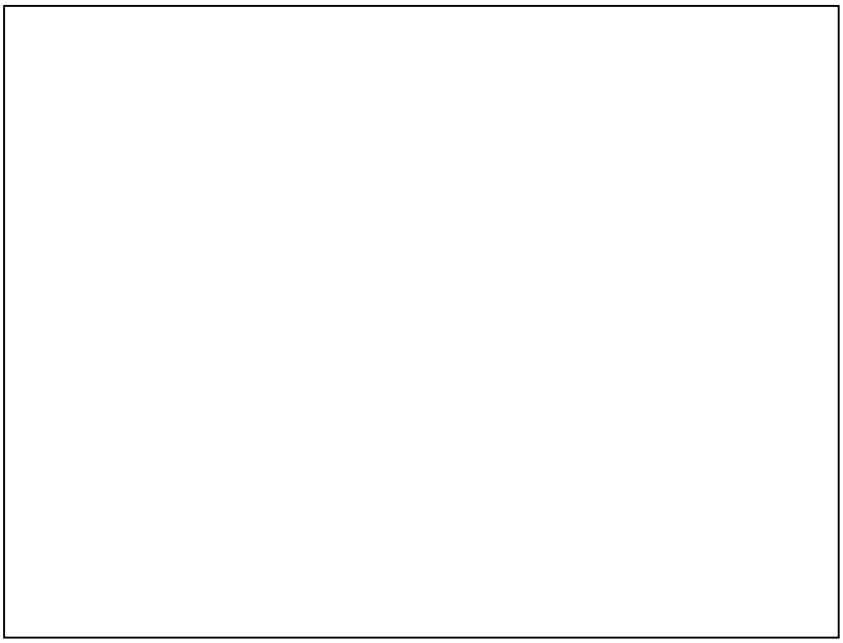


FIgure 10: What to be done to imates that have HIV/AIDS

About ¼ (25.5%) of inmates had their source of information about the disease from reading about it, followed by mass media, health talk, friends/relations, mosques/church, prison authorities, fellow prison inmates and others with the following percentages respectively; 23%, 13%, 8.6%, 8%,5.2%,4.3% and 1.8%.

***Figure* 3: Knowledge of practices that go on in the prison by the respondents**



The most prevalent sexual practice claimed to have been seen by the inmates was homosexualism (72.6%), followed by masturbation (28.1%), oral sex (15.5%), Lesbianism (14.8%) and heterosexualism (0.7%) respectively.

***Figure* 4: Knowledge on getting HIV/AIDS using infected Razor/Needles**

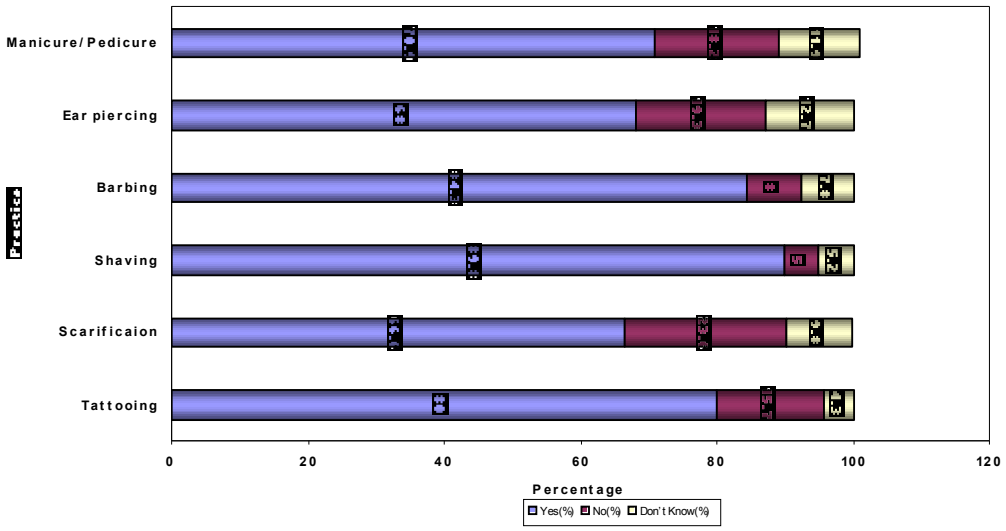


Figure 4: Awareness of imates getting HIV/AIDs using infected instruments.

Tattooing - 80% of the inmates agreed that one could contract the disease by above mention practice, 15.7% disagreed and 4.3% were not sure.

Shaving - 89,8% were aware of contracting HIV/AIDS, 23.6% were not aware of that while 9.8% chose that they did not know.

Barbing - 84.3% of the respondents knew that once could get the disease using the above listed objects for barbing. 8.0% responded that one can not get the disease while 7.8% did not know.

Ear Piercing, Manicure/pedicure – those that chose yes were 68%, 71%, No while 19%, 18% and those that had no idea were 13% and 12.0% respectively.

***Figure* 5: Knowledge on getting HIV/AIDS through Mosquito bites, kissing, and shaking hands**

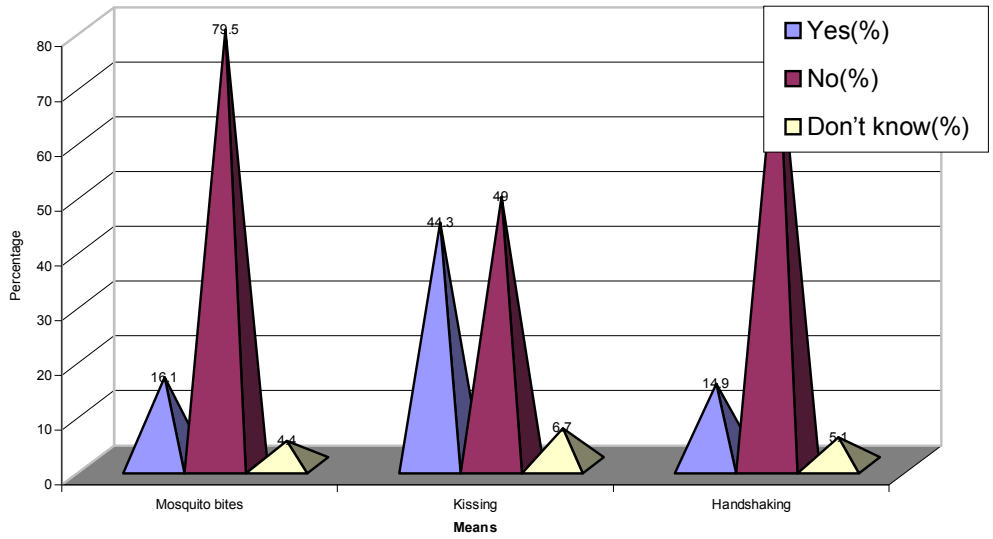


Figure 5: Awareness on getting HIV/AIDS through mosquito bites, kissing and hand shaking

***Table 3:* Knowledge about symptoms and methods of diagnosis of HIV/AIDS**

Areas examined	No	%
Knowledge of Symptoms of AIDS		
Fully correct	328	76.5
Partially correct	57	13.3
No idea	44	10.2
Knowledge of method of diagnosis of HIV/AIDS		
Fully correct	29	7.1
Partially correct	373	90.5
No idea	10	2.4

Knowledge of the symptoms of AIDS

76.5% had fully correct 13.3% had partially correct 8.9% had totally incorrect knowledge of the symptom of AIDS. 1.3% had no idea.

Knowledge of the method of diagnosis of HIV/AIDS

The responses for fully current, partially current and no idea were 7.1%, 90.5% and 2.4% respectively.

***Figure* 6: Knowledge of method of prevention of HIV/AIDS by the respondents**

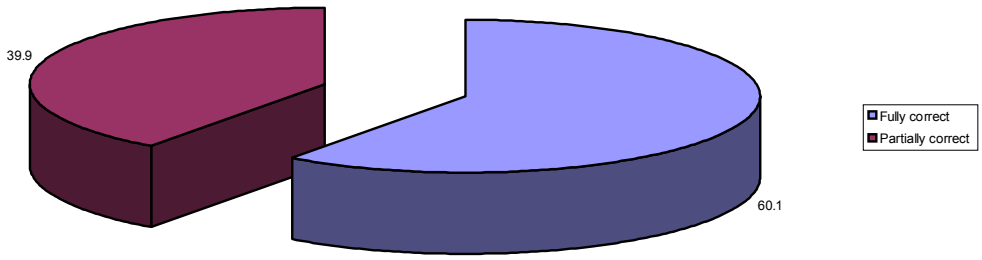


Figure 6: Knowledge on modes of prevention of HIV/AIDS

60.1% had fully correct knowledge of modes of prevention of the disease and 39.9% had partially current knowledge.

Table 4: **Knowledge about the existence of HIV/AIDS by the respondents**

Areas examined	**No**	**%**
Existence of HIV/AIDS in Nigeria		
Yes	416	95.0
No	16	3.6
Don't know	6	1.4
HIV/AIDS as a public Health problem in Nigeria		
Yes	409	93.6
No	23	5.3
Don't know	5	1.1
Existence of HIV/AIDS in the prison		
Yes	363	83.1
No	32	7.3
Don't know	42	9.6
Belief that there are inmates with HIV/AIDS		
Yes	319	73.2
No	62	14.2
Don't know	55	12.6

4.3 ATTITUDES OF THE INMATES ASSOCIATED WITH HIV/AIDS TRANSMISSION/PREVENTION

Existence of HIV/AIDS in Nigeria

Majority of the inmates (95.0%) were aware of the existence of HIV/AIDS in Nigeria, 3.6% were not and 1.4% had no idea.

Existence of HIV/AIDS as a public health problem in Nigeria

93.6% accepted that the disease was a public health problems in Nigeria while 5.3% responded that its not 1.8% had no idea.

Existence of AIDS in the Prison

83.1% of the inmates believe of the existence of HIV/AIDS in the prison while 7.3% did not believe and 9.6% were blank.

Belief that there are inmates that have HIV/AIDS

About 73.1% also accepted that there were inmates infected with the virus, 14.2% said No while 12.6% had no idea.

Figure 7: Provision of antiretroviral drugs to affected inmates

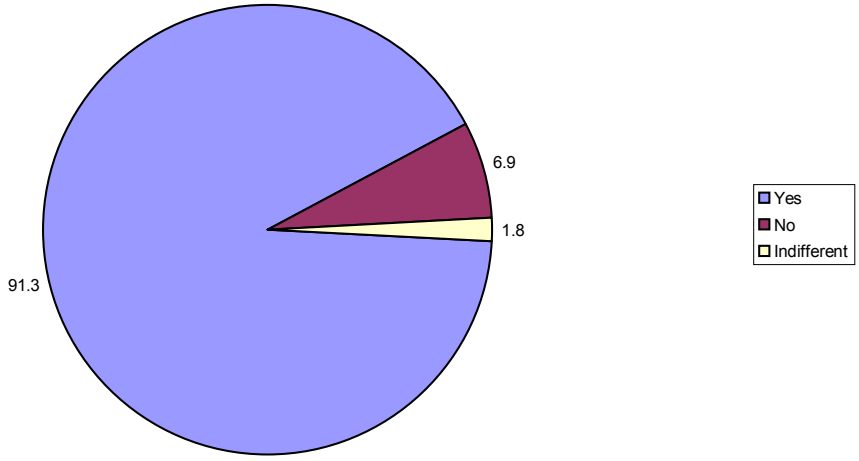


Figure 7: Supply of antiretroviral drugs to affected imates

90.3% of the inmates supported the idea of providing HIV infected inmates with antiretroviral drugs while 6.9% did not. 1.8% were indifferent.

Figure 8: Distribution of condoms to inmates

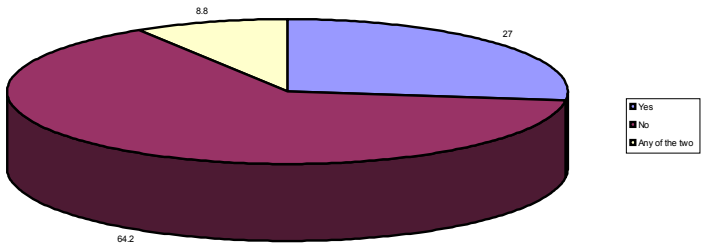


Figure 8: Disribution of condoms to prison imates

About 2/3 (64.2%) of the inmates did not support the distribution of condom to the inmates while 27% supported the distribution. 8.8% responded that any of the 2.

Figure 9: Attitude of inmate towards HIV/AIDS affected victims in prison.

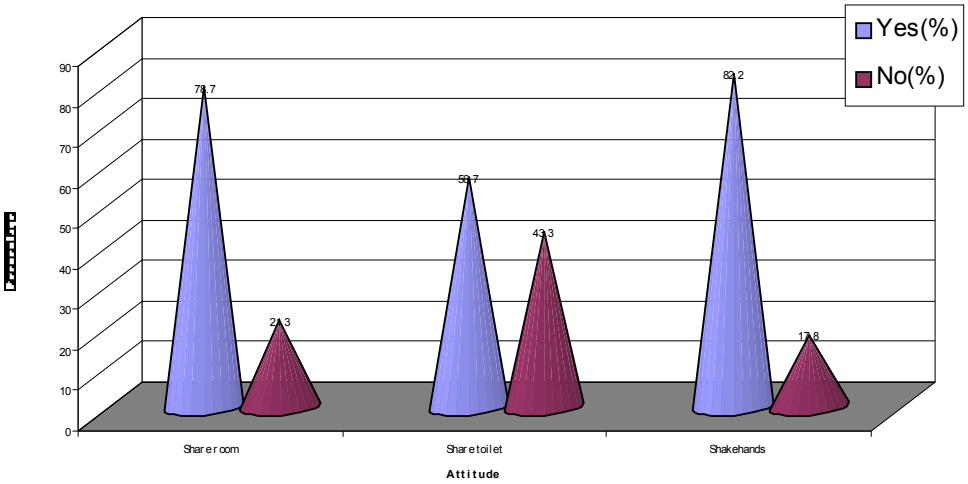


Figure 9 : Attitudes of the imates towards HIV/AIDS affected victims in the prison

The diagram showed that 78.7% responded that they will share room with such inmates while 21.3% will not. 56.7% accepted that they will share toilet while 43.3% will not. 82.2% did not see anything wrong in shaking hands with them but 17.8% responded that they will not shake such inmates.

Figure 10: What to be done to inmates that have HIV/AIDS

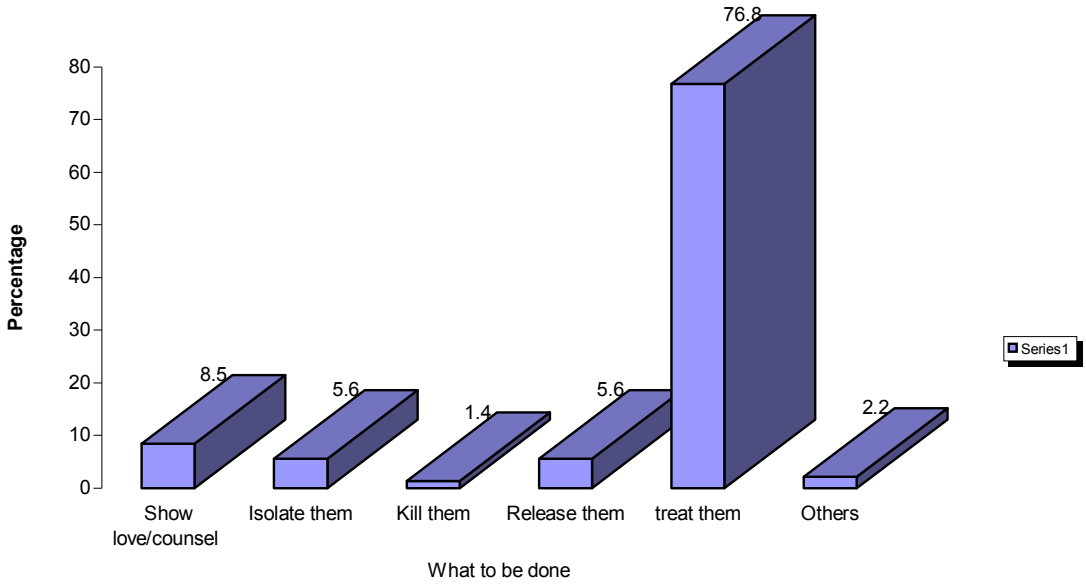


FIgure 10: What to be done to imates that have HIV/AIDS

Majority (76.8%) responded that they should be treated like any other member of the society infected. 8.5% that they should be counselled/shown love. 5.6% suggested that they should be released, another 5.6% that they should be isolated from others. 1.4% said that they should be killed! Other responses constituted 2.2%.

4.4 Practices in the prison associated with HIV/AIDS transmission/prevention by the respondents

Table 5 sexual practices by the inmates

Areas examined	**No**	**%**
Sexual intercourse at least once since incarceration		
Yes	64	14.9
No	366	85.1
If yes, with who?		
Male(s)	36	56.2
Female(s)	28	43.8
If yes, did you use condom?		
Yes	28	43.8
No	36	56.2
No. of sexual partners		
None	345	83.3
One	48	11.6
Two	15	3.6
Three and above	6	1.4
Treatment for STI		
Yes	130	30.5
No	282	66.2
Not sure	14	3.3

Having at least one sexual intercourse since incarceration, with who and condom use

The majority of the inmates (85.1%) responded that they have never had sexual intercourse since incarceration while (46) 14.9% accepted having at least one intercourse 56.2% with males

and 43.8% with females. 28 (43.8%) did used condoms while 36 (56.2%) did not used condom.

No of sexual partners since incarceration.

The inmates with none, one, two, three and more sexual partners in the prison are 83.3%, 11.6%, 3.6% and 1.4% respectively

Inmates treated for STI since incarceration.

66.2% of the respondent were never treated for STI since incarceration, 30.5% were treated while 3.3% were not sure.

Figure 11. Sexual practices by the inmates

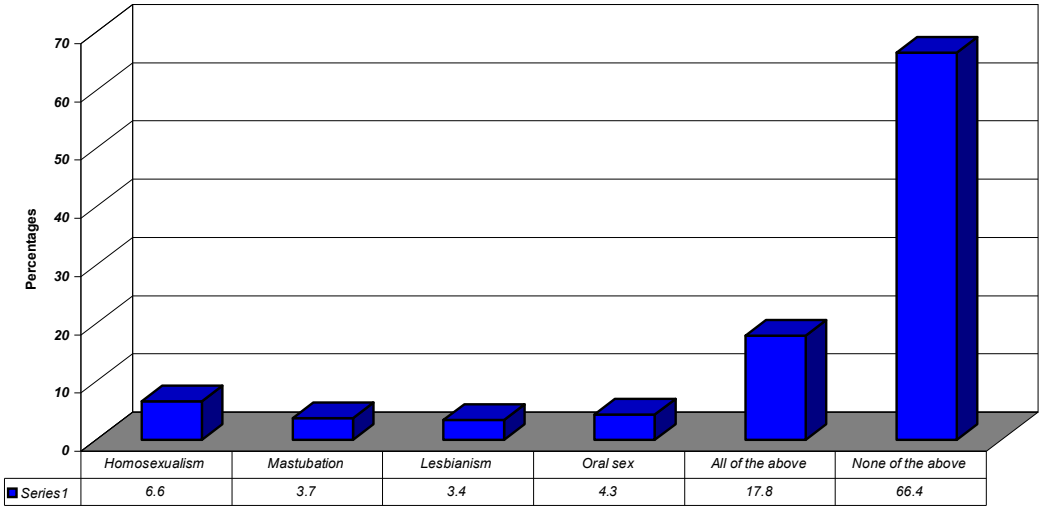


Figure 11: Sexual practices by the imates

Homosexualism is the most prevalent sexual practice with 6.6% followed by oral sex (4.3%), masturbation (3.7%) and lesbianism (3.4%)

Figure 12: Practice by the inmates using shared instruments/objects.

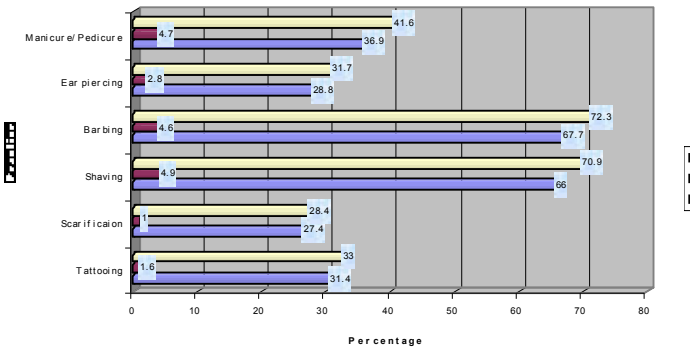


Figure 12 : Practices by the imates using shared instruments/ objects

The commonest practice was barbing (72.3%) followed by shaving (70.8%). Manicure/pedicure, tattooing, Ear piecing and scarification were 41.6%, 33%, 31.7% and 28.3% respectively.

4.5 APPRAISALOF HIV/AIDS CONTROL STRATEGY OF KADUNA CONVICT PRISON

APPRAISAL OF HIV/AIDS CONTROL STRATEGY OF CONVICT PRISON KADUNA

Department or unit	Do you have any organised programme on ground to do with HIV/AIDS control in the Prison?	Any method of information, Education & Communication in increase awareness & change risky behaviour among inmates that has to do with HIV/AIDS? If yes, how regular?	Any collaboration with Governmental or NGOs?	Do you see cases of STIs among inmates?	What do you think of condom distribution to inmates?
1.	No	Yes, through health talk, Advise against the sharing of razors and avoiding homosexualism, but these are very irregular and not coordinated	No	Yes	Not Advisable
2	No	Yes, through health talk, screening of blood before transfusion and single use of needles and syringes but these are very irregular and not coordinated	No	Yes	Impossible
3	No	No, Nil	No	Don't know	Not Advisable
4	No	Yes, through advise against sharing of needles and syringes and sharing instruments but very irregular and not coordinated	No	Yes	Not Advisable
5	No	No, Nil	No	Yes	Not Advisable
6	No	No, Nil	No	Yes	Not Advisable
7	No	No, Nil	No	Don't know	Not Advisable

CHAPTER FIVE

5.0 DISCUSSIONS

5.1 SOCIODEMOGRAPHIC CHARACTERISTIC

Due to its large population size, Nigeria now has the 4th highest number of HIV infected people in the World, behind S/Africa, India and Ethiopia (NARHS, 2003).

Prisoners are among the neglected risk groups that are susceptible to HIV/AIDS in Nigeria. This study is one of the few earliest documentation of assessment of the inmates' knowledge, attitudes and practices associated with transmission and prevention of HIV/AIDS and the appraisal of the control strategy by the prison authorities. The NARHS 2003 showed the sero prevalence of HIV/AIDS in Nigeria to be 5.0% as against the 5.8% of NHDS 1999. A study gave the sero prevalence among Nigerian prisoners as 6.0% (Odujirin *et al,* 2001).

The AIDS epidemic has been costly for Nigeria not only in human terms but also financially and economically. Dr. Pia Maleney of Harvard University presented macro economic estimates suggesting that the per capita GDP of Nigeria is already 5.0% lower than it would have been in the absence of the disease, a cost that is projected to escalate rapidly if the epidemic is not brought under control (Presidential Forum, 2003). The epidemic is destroying the economic and social fabric in the country, reversing years of declining death

rates and causing dramatic rise in mortality among young adults, prisoners inclusive.

Large percentage (75.9%) of the inmates were within the reproductive and productive age group of 20-39 years, 8.0% were the age group 40-49 years and 1.0% were 50 years and above. This is in line with the expectation of the epidemiology of crime. 87.4% were males and only 12.6% were females. This is because most crimes are committed by males. 54.1% of the prisoners were single and 49.8% married before incarceration.

The majority of those studied were educated; 54.0% and secondary educations while 21.1% had post-secondary education and 19.0% had primary education. Only 5.9% had no formal education. 99% of the inmates were incarcerated for the period of 1-5 years and less than 1% for 6-10 years. These result are similar to the study carried out by Odujinrin (2001). In addition, a significant proportion (26.9%) were traders, followed by applicants (21.0%) and civil servants (21.0%). One expects the largest percentage of the inmates to be applicants because of idleness but this was not the case. 20.5% constituted by civil servants is also high which should not be so. However, this may be connected with the high cases of fraud/forgery/cheating which is about 16.1%. This is followed by murder (15.3%), and armed robbery (14.8%). Analysis showed that the majority of the victims of these crimes were males.

The level of education among criminals may not be unconnected with the poor economic situation of the country which may be due largely to insincere

government policies, corruption, bad leadership, bad followership, lack of fear of God etc. This level of education can however be taken advantage for the successful implementation of a well-defined AIDS education programme for prisoners in Nigeria.

5.2 KNOWLEDGE ABOUT HIV/AIDS

The level of HIV/AIDS awareness and knowledge among people (prisoners inclusive) influences the future course of the HIV/AIDS pandemic. Almost all (96.1%) of the respondents in the study had heard about HIV/AIDS. This agrees with a study by Odujirin and Akinkuade (1991) on adolescents in Nigeria. in which 96% of the adolescents were reported to have heard of the disease AIDS, 97.2% (O.M.T. Odujirin et al, 2001), 93.4% (Folorunsho, 2002) and Unuigbe and Ogbeide (1999). This is also consistent with the findings of NARHS 2003. However, this disagree with similar study that found only 32.5% of inmates at Kirikiri and 34.5% of inmates in Kano were aware of AIDS (Olayide, 2001). It is important to note that like in the general public, the problem is not that of awareness in most cases but that of behaviour modification. Despite the high level of awareness, only 30% knew that the disease is cause by a virus and majority did not had idea of the cause (28.5%). In addition, inspite of the relatively high level of educational attainment, a high proportion confused mode of transmission with causative agent similar to the findings by Ezeoke et al (2003)

About 84.6% of the respondents claimed not to have seen or known AIDS victim and only 14.4% responded to have seen/known such victims. This may be as a result of such patients not opening up due to discrimination and stigmatization. However, the findings here disagrees with that of NARHS 2003 which showed that 24.9% of the respondents said they had seen some one with HIV or known someone died of AIDS, 25.5% in a study by Odeyemi. 90.5% of the inmates were aware that a healthy looking person could be carrying HIV. This result is similar to the findings of Odujirin and Osibogun (2003) with the figure 85.9%. However, NARHS report 2003 showed a lower figure of 60%. This knowledge may help the inmates to take preventing measures.

Over 80% (85.2%) were aware of the transmission of the disease through sexual intercourse similar to 84% finding of NARHS report (2003), 10% through blood transfusion while from infected mother to the child and sharing of infected objects were 8.9% each. This is not consistent with the findings of 60.3% in a study by Odujirin (2001).

Correct knowledge of HIV transmission and prevention is important to enable the design of interventions that will minimize the spread of the virus.

The commonest sources of information about the disease were reading (25.5%), Mass media (23%) and Health talk (13%). These maybe related to the low proportion of the inmates that are illiterates, i.e large proportion of them are educated. This is consists with the study by Folorunsho (2002). 8.6% and 8.0% had friends /Relations and mosque /church as their sources. Only 5.2% and

4.3% of the inmates claimed to be educated on HIV/AIDS through the prison authorities and fellows inmates respectively. This shows that lots need to be done by the prison authorities in the area of information, education and communication. There should be regular and well organised health talks to increase awareness, knowledge and to improve healthy attitude and behaviour modification in order to prevent the spread of the disease in a language the inmate understands.

76.5% of the respondents had fully correct knowledge of the symptoms and signs of the disease, 13.3% had partially correct response and 10.2% had no idea. However, the responses for fully correct, partially correct methods of diagnosis of HIV/AIDS were 7.1% and 90.5% respectively. 2.4% had no idea. 60.1% gave fully correct response while 39.9% gave partially correct response on the mode of prevention of the disease. Knowledge of safe sex as means of prevention of HIV transmission does not necessarily translate into actual safe sex practices. Improving HIV/AIDS prevention in the prison is a good public health policy. Intensive AIDS education has been demonstrated to be significantly useful for reducing certain risk behaviours of high risk groups such as prisoners as in the Main jail of New York city ( ).

A very good number of the respondents were aware of getting HIV/AIDS using piercing infected instrument/objects for tattooing (80%), scarification (66.6%). Sharing (89.8%), barbing (84.3%), ear piercing (68%) and manicure/pedicure 70.9%). Only few respondents had wrong conception of not getting HIV/AIDS

sharing instruments for above practices. However, it is important to note that this high level of awareness may not stop these practices of these criminally involved people. Figure 8 shows a good number of people still practices this procedure. Knowledge of the possibility of such practices made some correctional institutions/systems to suggest the provision of bleach for disinfections of such instruments/objects used. Half of the 20 European countries' prison systems survey showed the provision of disinfectants in 1998 (Laporte and Bolinni) safer injecting practice information is included in education and counselling programs of many correctional systems especially abroad.

Misconceptions about how HIV is transmitted was shown in figure 9 which presents level of misconception about how the disease is transmitted from one person to other by the inmates. Majority of them (79.5%) were aware that mosquito could not transmit HIV through its bites. 16.1% had misconception of transmission by mosquito bites which disagree with the report of NARHS report (2003) that showed that 32% and 27% of respondents misconcepted that mosquito bites and kissing could transmit HIV/AIDS. While study by Folorunsho (2002) gave 10.1%. Almost 50% of inmates said kissing is not a route of HIV/AIDS transmission and 44% responded it is however, studies by Odujinrin (2003), Folorunsho (2002) and Odujinrin and Adegoke (1991) gave responses of 726%, 18.2% and 37.9% that kissing could lead to transmission of the virus. The low level of misconception among the students and civil servants

in the studies by Folorunsho and Odujinrin may be due to high level of education among these studied populations.

5.3 ATTITUDES OF THE INMATES ASSOCIATED WITH HIV/AIDS TRANSMISSION/PREVENTION

Majority of the inmates (95%) believe of the existence of HIV/AIDS in Nigeria, of which 93% are aware that the disease is of public health importance in Nigeria. Also a good number (83.1%) believe of the existence of the disease in the prison and 73.2% 14.2% of the respondents were also aware of the possibility that their colleagues might be carrying the virus. However, whether these helps the inmates in taking steps to protecting themselves is another thing. The small proportion of the naïve inmates constitutes a vulnerable group in an environment prevalent with high risk sexual behaviour and proven reservoir of HIV/AIDS infection.

Over 90% of the respondents both through questionnaire and focus group discussion were in support of the provision of antiretroviral agents to the affected inmates like other members of the society. The expressed their displeasure with prison authorities and the federal government because of non-inclusion of the prisons in the federal government policy of provision of AVR drugs as a measure to the control of the deadly disease. Also, often prison conditions undermine the consistent dosing schedules essential to long term effectiveness of ARV therapy. Gaps in treatment occurs due to frequent

transfer of inmates among correctional institutions. Confiscation of medications from inmates as a common practice of prison staff. It is also disheartening to know that there is no proper arrangement between a prison and state TB control program thereby making treatment of TB cases very difficult. TB, skin infections such as scabies are very common diseases among inmates and if not properly treated may result in death from complications such as anaemia, respiratory failure, glumeronephritis etc. the focus group discussion revealed a pathetic case where by an inmate died of TB because he could not be commenced on anti TB therapy because X-ray could not be carried out for lack of money. The TB centre which is sharing fence with the prison insisted on getting all the necessary positive results including chest x-ray (CXR) before provision of the drugs. There should consideration for these disadvantaged people. On what to be done to HIV positive inmates, majority (76.8%) supported the treatment of such inmates while 5.6% of the respondents suggested compassionate release and isolation for such prisoners after thorough education. However, 8.5% said they should be shown love and counseled because they are human and anybody can be affected too. A small proportion of 1.4% responded that they should be killed! It is important to know that these respondents don't know their HIV status! (Figure 8).

A good number of the inmates responded positively that they will share room, (78.7%), shake hands (82.2%) with inmates that are infected because these

casual, contact do not lead to HIV transmission. However, only 43.3% accepted sharing toilet with such victims.

About 2/3 of the inmates (64.2%) were against distribution of condoms to the inmates that it could promote promiscuity. Only 27% support its distribution (figure 12). This is similar to the study by Jinadu and Odesanmi (1993). However, despite the intensive social marketing of condoms (male and female) for the control of AIDS and STIs in Nigeria, its acceptance is low. Prison authorities have to acknowledge the fact that the absence of harm reduction devices behind bars may erect a greater risk of transmission of HIV there than the general community. The authorities of prison should seriously and urgently consider the distribution of such risk reduction devices to prisoners. It will interest us to know that Philadelphia jail inmates receive condoms on arrival and in Mississippi condoms are sold from vending machines at institutional canteens (65).

5.4 PRACTICES ASSOCIATED WITH HIV/AIDS TRANSMISSION/ PREVENTION

366 (85.1%) of the respondents denied having at least one sexual practice since incarceration. However, 64 (14.9%) accepted of which 56.2% had it with male and 43.8% with female. 43.8% claimed to have used condom during the sexual acts. One wonders how these inmates get the condoms since sexual practices in

the prison is offence and condom distribution is prohibited. The prison authorities have a lot to do in finding out how some contraband get to the inmates such as condoms, razor blades, drugs, needles and syringes etc. 34 (83.3%) denied having any sexual partner in the prison, 48 (11.6%) claimed to have one, 15 (3.6%) two and 6 (1.4%) have three and above. Similar study by O.M.T Odujinrin (2003) showed that 53.2% of the studied population claimed to have multiple sexual partners while 94.8% denied any sexual practice.

Other similar studies were those by Ezeoke et al (2003) which revealed that almost100% of the study population have multiple sexual partners, Odeyemi and Osibogun (2003) showed the almost half of the respondents have multiple sexual partners and less than half use condom consistently and Folorunsho (2002) revealed that 26.5% of the study population claimed to have no sexual partner, 39.6% one partner, 11.1% two partners (which is the same in this study). Of all respondents of NARHS (2003) report who have ever had sex, only 3% of the females reported having multiple sexual partners, while 26% of the males reported same. There have been cases of sex between males and females in the prison, one wonders if actually it is inside or outside the prison and how it happens. Both the prison authorities and the inmates accepted that the have been cases of STIs among inmates. This study showed that 130 (30.5%) have been treated for STIs. This facts goes to further buttress that sexual practices occur in the prison. Figure 6 revealed such practices: homosexualism (6.6%), oral sex (3.4%), masturbation (3.7%) and lesbianism

(3.4%). Study by Odujirin (2001) gave prevalence of homosexualism, and masturbation as 1.6% and 2.0% respectively.

There are other nonsexual practices by the inmates which are important for the transmission HIV/AIDS using unsterilized objects. These include barbing, shaving, manicure/pedicure, tattooing, ear piercing and scarification. (Figure 5). The inmates appealed to the prison authorities to provide each inmate with a barbing instrument or at worse sterilize the available ones before use to prevent the transmission of HIV/AIDS.

5.5 APPRAISAL OF HIV/AIDS CONTROL STATEGY OF KADUNA CONVICT PRISON

It was surprising to know that none of the seven departments had any organized programme on ground that has to do with the prevention and control of HIV/AIDS in the Kaduna convict prison. However, despite the lack of any organised programme, 2 departments occasionally give health talks whereby they advise the inmates against the sharing of razor blades and others piercing objects, drug abuse especially intravenous use, use of unscreened blood, risky sexual practices such as homosexualism, heterosexualism, lesbianism etc. Usually, such health talks are informal and very irregular. The other departments had no methods of information, education and communication to increase awareness and change risky behaviours among both the staff and the inmates that has to do with the disease. The assessment also revealed that there

is no any form of collaboration with either Governmental organisations (not even SACA, Kaduna chapter) or Non-governmental organisations.

Majority of the departmental Heads accepted seeing cases of STIs among the inmates. However, all did not support the distribution of condoms to the inmates as a control strategy because this may encourage sexual practices among the inmates.

5.6 FOCUS GROUP DISCUSSIONS

Most inmates (males and females) described AIDS as a killer diseases and some in Focus Group said the causative agent is a virus. A good number were able to give the correct meaning of AIDS (i.e Acquired Immune Deficiency Syndrome) while others could not arrange it correctly. Their source of information about HIV/AIDS included health talk, reading, mosques/churches, fellow inmates, mass media, etc.

A significant number of them heard a fair to average knowledge of the mode of transmission, but majority of them kept emphasizing on sexual intercourse as the major mode of transmission. However, other modes mentioned were from infected mother to her unborn baby, use of infected objects and blood transfusion. A good number confused between the causative agent and the mode of transmission.

Averagely they knew the symptoms and signs of HIV/AIDS, which included diarrhea, cough, persistent fever, progressive weight loss, catarrh falling sick always etc. However, there were few that had no idea. On the methods of diagnosis of the disease the inmates said it is by testing of blood samples. They were also aware that there is no permanent cure, however there are drugs, which could prolong the life span of infected persons.

The prevention methods listed by the inmates included abstinence, being faithful to one's partner, use of condom, receiving only screened blood, avoiding sharing of nailcutters, razors, chippers for barbing, shaving etc.

The inmates described the attitudes of both fellow inmates and staff to HIV positive victims as unfortunate. They are usually discriminated against which is not good. They need to be shown love/counseled, treated with drugs, fed well. Other options included release or isolation. A good number of them responded that uninfected inmates can not contract HIV/AIDS through causal contacts such as shaking of hands, sharing of rooms, sharing of toilets, kissing, and mosquito bites. On the distribution of condoms, most of the groups were not in support of that because it could promote sexual practices, which is prohibited in the prison and it is religiously not advisable.

The Risky Practices in the prison that predisposes to HIV infection mentioned included homosexualism, sharing of barbing clippers, nail cutters, tooth brushes, tattooing, scarification, ear piercing. Others were sharing of sharp objects or razors for shaving, manicure/pedicure. Most inmates described the incidence of homosexualism and lesbianism as very common but those caught are usually severely punished. They also claimed that the prison authority is not helping matters because they usually use one clipper to barb the inmates without sterilization.

Occasionally the prison authorities organize health talks, however, these are very irregular and almost nonexistent. There are posters in the clinic to improve awareness about HIV AIDS.

The general advice by the inmates to the prison authorities on how to reduce HIV/AIDS in the prison were:

i. Provision of barbing instruments to every inmate or sterilizations of such instruments before use. Others include provision of new razors for shaving and manicure/pedicure

ii. Fighting of homosexualism/lebianism and other non-sexual practices in the prison.

iii. Provision of adequate treatment to the inmates (ARV and other essential drugs). There is need to equip the hospital.

iv. Provision of adequate feeding and other essential items to the inmates because some poor inmates exchange soap, foodstuff etc for sex. They claimed that they are usually given one tablet of soap in a month, not well fed, no bed, blankets etc.

v. Reducing overcrowding.

vi. Provision of mosquito next to reduced the prevalence of malaria fever.

On general comment: some members of groups don't mind if they are usually given time to see their husband/wives in privacy, while most said it's not good because the prison is not their home.

The group accepted the existence of HIV/AIDS in the prison because in year 2002 some inmates were diagnosed HIV positive but they have died because of lack of provision of ARV.

NB: On the day of FGD there was an awaiting trail inmate that died of HIV/AIDS in the prison.

The focus Group Confirmed that about 75-80% of the inmates were awaiting trial!

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 CONCLUSION

from the findings of this study it can be concluded that the majority of the inmates were males (87.4%) those between 20 – 39% constituted 75.9%. a very good proportion of the inmates have hared about HIV/AIDS. However, they have poor knowledge of the correct corrective agent and method of prevention of the disease 90% of the respondent supported the provisions of ARV to infected inmates and only 1/3 supported condom distribution. Sexual and non-sexual practice associated with HIV/AIDS transmission were seen and practiced in the prison.

The results of the FGDs were similar to the findings elicited using questionnaires and there were no organized programmes by the prison authorities for the prevention and control of AIDS in the prison.

6.2 RECOMMENDATIONS

The recommendations based on the findings of this study are:

1. The need for well designed IEC program by the relevant ministries and parastatals and organisations (FMOH, Internal Affairs Ministry, NACA, SACA, NGOs etc.) to modify the social behaviour of both the inmates and the staff. This approach should be multidisciplinary.
2. Increasing the staff to prisoners ratio by the federal Government (ministry of Internal Affairs) through employment of more staff that will improve supervision of the inmates there by ensuring the reduction of risky practices by the inmates.
3. Proper classification of cells and housing of inmates by the prison authorities to prevent hardening of younger inmates through mixing with hardened criminals.
4. Provision of social amenities in the prison and drugs (such as ARV and anti TB etc) by the federal government through the ministry of health to the affected inmates in order to enable them live a meaningful life as other members of the society.
5. Provision of harm reduction devices such as barbing clippiers, condoms by the ministry of health and Internal Affairs in order to

reduce the risk of HIV/AIDS transmission, since it's a known fact that both sexual and non-sexual risky practices occurs in the prison.

Provision of soft loan or employment by the federal government to reformed inmates on completion of prison sentence since good number of the inmates find themselves back into the prison because of idleness or lack of something doing.

Appendix iii

APPRAISAL OF HIV/AIDS CONTROL STRATEGY OF CONVICT PRISON KADUNA

Department or unit	**Do you have any organised programme on ground to do with HIV/AIDS control in the Prison?**	**Any method of information, Education & Communication to increase awareness & change risky behaviour among inmates that has to do with HIV/AIDS? If yes, how regular?**	**Any collaboration with Governmental or NGOs?**	**Do you see cases of STIs among inmates?**	**What do you think of condom distribution to inmates?**
1.	No	Yes, through health talk, Advise against the sharing of razors and avoiding homosexualism, but these are very irregular and not coordinated	No	Yes	Not Advisable
2	No	Yes, through health talk, screening of blood before transfusion and single use of needles and syringes but these are very irregular and not coordinated	No	Yes	Impossible
3	No	No, Nil	No	Don't know	Not Advisable
4	No	Yes, through advise against sharing of needles and syringes and sharing instruments but very irregular and not coordinated	No	Yes	Not Advisable
5	No	No, Nil	No	Yes	Not Advisable
6	No	No, Nil	Nos	Yes	Not Advisable
7	No	No, Nil	No	Don't know	Not Advisable

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