

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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*THE IMPACT OF HEALTH EDUCATION ON  
KNOWLEDGE, ATTITUDES, AND PRACTICES  
OF PRISONERS TOWARDS HIV/AIDS.*

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Dedication

To my baby Osama

With my love



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Grate and special thanks to my mother and father for their support and encouragement throughout the research process.

Sara

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## *Abstract*

*This study was conducted in the Federal prison for men (kober) and Omdurman prison for women, in the period of January 2002 to June 2003, to study the impact of health education on raising knowledge, improve attitudes and in promoting behaviour of the inmates towards HIV/AIDS.*

*The selections of the prison as an area of this study because the inmates are high-risk group towards HIV/AIDS and because there was no known health education programme targeting this group.*

*Sample size statistically determined from those who have had long-term imprisonment (more than one year). A 120 and 68 inmate of males and females respectively were selected randomly to represent inmates population in both prisons.*

*The collection of the data passed through three phases - based on a standard questionnaire of WHO on behavioural survey on HIV/AIDS, 2000. The questionnaire includes data on the background of the respondents, knowledge, attitudes and their practices towards HIV/AIDS.*

*Firstly the pretest questionnaire was distributed and filled by the intended inmates. Secondly introduced comprehensive health education programme that included lectures, posters, booklets, film, group discussion and peer education. Thirdly, the posttest questionnaire (same pretest questionnaire) was distributed for the sample selected.*

*SPSS Statistical Package for Social Science was used for the analysis of the data; McNemar test was used to label the significance of the parameters.*

*The result showed the positive impact of health education raising knowledge, improve attitudes and in promoting practices of the respondents towards HIV/AIDS. Before health education it was found that 69 males (70%) and 31 females (55%) did not know much about the cause, 48 of males (47%) and 30 of females (53%) did not know the way of transmission, and 37 males (37%) and 17 females (30%) did not know the way of prevention of HIV/AIDS before health education, their awareness changed after the health education programme.*

*78 males (80%) and 47 females (84%) did not eat with patient, 82 males (83%) and 34 females (60%) prefer that concealing of an AIDS patient, 74% males and 55% females prefer the prohibition of an AIDS patient to practice their job or go to schools and university.*

*35% of male and female respondents practicing sex in the prison.*

The result confirmed the important and vital significance of health education in raising knowledge, improve attitudes and in promote practices. So 89% of the respondents know the actual cause of disease, 100% said the AIDS transmitted through practicing sex with infected person, and using of their equipment. 100% mentioned the uses of condom is away of prevention against infection.

## Chapter one

### ***Introduction***

AIDS is an acronym of Acquired Immune Deficiency Syndrome.

It is a serious condition in which the body defences against illness are impaired. The disease is caused by a virus called Human immune Deficiency virus (HIV)(Whiteside , Sunter, 2002).

The HIV is the agent, which damages the human immune system. It is part of a family or group of viruses called Lentiviruses. Lentiviruses other than HIV have been found in a wide range of non-human primates, these are known collectively as Simian (monkey) viruses (Souhami and Moxham, 1998).

HIV has been found in many body fluids such as blood, Semen, vaginal discharge, breast milk, nervous system, and rarely in saliva, tears and sweat, but to become infected with HIV one must have sufficient HIV to get into the blood stream (Whiteside, Sunter, 2000;CDC sheet 2001,).

The virus lives for short time outside the body, and does not reproduce in the insects or survive well in the open air, this makes the possibility of any type of environmental transmission remote

(<http://ww//cdc/hiv/graphic/haslink.htm>, 2002).

A positive HIV test does not mean that a person has AIDS although half of the people with HIV develop AIDS within 3 to 10 years after becoming infected, this time varies from one person to another and depends on many factors including a person health status and health related behavior (WHO, 1994;<http://www//cdc.gov.htm>, 2001).



The first time AIDS was described in early 1980 in young homosexual in USSR and was termed that time as Gay Related Immune Deficiency (GRID) (Whiteside, Sunter, <http://ww//cdc/hiv/graphic/haslink.htm>, 2002).

### **Worldwide HIV/AIDS epidemic**

No place on earth is untouched by AIDS, although the epidemic is not the same. The incidence of AIDS is increasing rapidly around the world. There are many factors that have contributed the sudden spread of the disease including international travel, blood industry, and wide spread drug abuse in addition to the unprotected sex practices (<http://www//Un.org.htm>, 2000, <http://www//avert.org,htm>, 2003).

According to estimate from the joint United Nation Programme on HIV/AIDS (UNAIDS) and the World Health Organization (WHO), a total of 34.3 million adult and 1.3 million children were living with HIV at end of 1999 (UNAIDS, 1999). 36.1 million adult and 1.4 million children were living with HIV at the end of 2000 (<http://www//Un.org.htm>UNAIDS, 2000). 40 million adult and 2.7 million children were living with HIV at the end of 2001 (UNAIDS, 2001). And 42 million adult and 3.2 million children were living with HIV at the end of 2002 (UNAIDS,2002).

The number of children less than 15 years living with HIV/AIDS increase from 1.3 million in 1999 to 3.2 million in the year 2002, this led to increase of deaths due to HIV/AIDS among children to 600.000 in the year 2002 (UNAIDS, 2002) compared to 500.000 in 1999 (UNAIDS, 1999). (Refer to appendix 1)

AIDS has a destructive social impact, gains in life expectancy have been reversed in many countries, infant and adult mortality have increased

by more than 50% in severely affected countries (<http://www//avert.org.htm> 2003).

African countries dwarf the rest of the world in how the region has been infected by AIDS. Africa is the home of 70% of adult and 80% of children living with HIV in world. It was estimated that 3.4 million adults and children become infected with HIV during the year 2001 in this region bringing the total number of people living with HIV/AIDS to 28.1 million by the end of the year and 29.4 million in 2002 (<http://www//avert.org.htm>, 2003).

National HIV prevalence rates vary widely between countries. It ranges from under 2% of the adult population in some western Countries in Africa to around 20% or more in Southern part of the continent, with countries in Central and East Africa having rates midway between these (<http://www//UN.org.htm>, 2003).

The prevalence rates among adult in Ethiopia and Kenya, which borders Sudan, have reached double digit figures and continues to rise, 10.6% and 13.9% of adult population of them respectively are living with HIV/AIDS (<http://www//UN.htm>, 2000).

### **Historical background of health education**

Health education has an ancient and complex history. Its beginning can be located in the very foundation of civilization. Much of the early history of the profession closely parallels that of medicine and its associated sciences. In latter time, particularly since 1800, the history of health education has taken on richness and characters uniquely its own (Laurina.1984).

Health education started in Sudan when Graphic Museum near Khartoum teaching hospital was established in the early 1940. The museum mainly composed of some diagrams representing disease cycles and sample of vectors, it was used for teaching

medical student and run by the school of medicine. In 1950 a future development of the Graphic Museum with more emphasis on behavioural factors that effect disease and this was known as health Museum (Abdelwahab. et al, 2002).

In early 1980<sup>2</sup>S the department of health education was established within the Ministry of health under the supervision of prevention and social medicine directorate, it was supported by UNICEF in terms of equipment and by WHO inform of training activities. In 1971 the health education department received mobile health museums as a grant from East Germany, these were distributed equally to the nine regions of the country. During that period, the department concentrated on certain activities such as training the health personnel, training persons from other related sectors to health and development of health education materials. Between 1971 and 2001 no major changes occurred apart from changing the position of the department from the directorate general of primary health care. In late 2001, the directorate of health education has been renamed the health promotion directorate (Abdelwahab. et al, 2002).

The European regional office of WHO (1986) defined health promotion as “a process of enabling people to increase control over and improve their health”. In addition, Nutbean (1986) expanded this definition as “the process of enabling individual and community to increase control over determinants of health and there by improve their health” The last definition include both individual and community (Abdelwahab, et al , 2002).

### **The impact of health education programmes**

The implementation of health education programmes, which is the critical phase of any intervention activity, involves very careful and intense social preparation and message strategies that are based on consumer attitudes and practices and the families’ hopes and aspirations.

Maybe the most important step in a long series of activities aiming to resolve public health problems, however, is programme evaluation.

The technology to provide validated data to document changes in outcome over times e.g. awareness, knowledge, skills, beliefs, health behaviours and health-status indicators, in principle, is well known today.

The health education programmes, properly planned and implemented, may have a substantial impact on the health status of effected communities and population groups (Ramakishna, 1992).



## **Rationale of the study**

Prisoners are members of the general population; they come from and usually return to the community. The prison population after all, is a fluid one, with people regularly moving in and out. Most prisoners are released into the community at some point, and some are imprisoned and released a number of times.

The prison environment is not normally conducive to good health, it acts as breeding grounds for communicable disease, can introduce prisoners to new unhealthy practices such as drug use and un safe sex.... etc. those entering prison have often had less healthy life style than the general population, having been more likely to abuse alcohol, tobacco and illegal drugs. In terms of communicable disease the relation ship between prisoners health, their families and wider community is acute concern. Limiting the spread of these disease in prison benefits both the prisoner and the wider community (WHO, 2000).

The prevalence of HIV is much higher in many prisons around the world than it is outside society (UNAIDS, 2002). In US the AIDS cases in the prisons were 5 times the rates that of US population. They also found that incarcerated women are at greater risk. HIV positive rate was 3.4% among male inmates (USA today, 2002). In Europe the incidence of AIDS in prison is lower than that of U.S but the rate o f increase of the disease is similar (Elizabeth,1998).

Internationally no comprehensive study have been performed, but place that stand out for high degree of sero-prevalence identified among prisoners tested in 1992 were Brazil 20% males, 28% females, Argentina 11-14% (1995) and Spain 28% (1997) (Elizabeth, 1998).

In the Sudan the rate of the HIV/AIDS among prisoners is far less than those recorded in U.S and Europe. According to the report of Sudanese

National AIDS Control programme (SNAP), reported that the incidence of the disease in the Sudanese prisons is 1% the percentage increase to 2%, as mentioned earlier the environment of prison is conducive to unhealthy practice that may lead to acceleration of the rate of increase of the HIV/AIDS among inmates (SNAP, 2000).

Prisoners are engaged in these practices and putting themselves at risk for infection because either they do not know these activities are un safe or they do not know how to engage in them safely.

Comprehensive health education is the first step towards improving knowledge and attitudes of prisoners that maybe reflected in their practices.

A population behind bars in Sudan has been forgetting when AIDS education programme were created. Yet prisoners are an identified high-risk group for HIV/AIDS. Inmates, therefore, require HIV/AIDS education and prevention programme designed specially for their needs and delivered while they are still in institutions.

## **Objectives of the study**

### **General objective:**

To study the impact of health education in promoting knowledge, attitudes and practices of prisoners towards HIV/AIDS.

### **Specific objectives:**

1. To determine the impact of health education on raising the knowledge of prisoners about HIV/AIDS infections.
2. To identify the role of health education in improving the attitudes of prisoners towards HIV/AIDS.
3. To investigate the effect of health education in promoting prisoner's behaviour.

## **Chapter three**

### **Literature Review**

**Knowledge:** Often comes from learning experiences gained through formal and/or informal exposure to learning, people also gain knowledge through information provided by teacher, parents, friends, books...etc (Green.L et al,1980).

**Attitudes:** A relatively constant feeling, predisposition, or set of beliefs directed towards an object, person or institution (Green.L et al, 1980).

**Behaviour:** An action that has a specific frequency, duration and purpose whether conscious or unconscious (Green et al, 1980).

**Health education:** There are almost many definitions of health education. The national conference on prevention medicine in USA defined it as “a process that inform, motivates and help people to adopt and maintain healthy practices and life styles, advocates environmental changes as needed to facilitate this goal and professional training and research to the same end (WHO,1988).

Liesbeth W, 1990 defined health education as the process of enabling people to increase control over and improve their health by empowering them to make options and as such, it is as fundamental as literacy. Health education is the accumulated knowledge of all aspects of human behaviour, the effects and the interrelation of environmental, social, behavioural, cultural, and nutritional factors on the health status of populations and individuals (Liesbeth, 1990).

The definition offered by the president’s committee on health education is representative “ health education is a process which bridge the gab between health information and health practices. Health education



motivates the person to take the information and something within to keep himself healthier by avoiding actions that are harmful and by forming habits that are beneficial.

Green et al in 1980 define health education as any combination of learning experience design to facilitate voluntary adaptations of behaviour conducive to health. This definition emphasizes the scope as well as the purpose of health education. It enables us to delineate more sharply than the earlier definition from president's Committee on health education which programmes, activities, and methods maybe characterized as educational. Most health education activities are not autonomous, freestanding programmes in themselves (Green, 1980).

**Health promotion:** is any combination of educational, organizational, economic, and environmental supports for behavioural and conditions of living conducive to health. Health promotion is a component of public health and preventive medicine. It goes beyond health education ( last.M, Wallace.R,1992).

## **HIV/AIDS**

AIDS stands for acquired Immuno Deficiency Syndrome; it is caused by the Human Immunodeficiency Viruses (HIV), the final and most serious stage of HIV disease. It's characterized by signs and symptoms of severe Immune deficiency (<http://www//cdc.gov>, 2002).

## **Mechanism of HIV/AIDS**

The virus passes from person to another through sex, sharing needle or syringe, using contaminated blood products, and from mother to baby. It attacks a particular set of cells in the human immune system known as CD4

cell which organize the body's over all immune response, these CD4 cell (known also as T.helper cells) are the prime target of HIV. The virus is attached to the cells surface, and penetrates it outer wall. There after, it is safe from the body's immune system and cannot be destroyed by the body's defense mechanism inside the cell, it copies its RNA into DNA in order for the door into the cell nucleus to be opened. There, the copied DNA integrates easily into a company of the host genes and by manipulating the proceedings of the nucleus, it causes the cell to churn out new HIV viral protein. They are re-assembled into viruses, which break out of the cell.

In the process, the cell is destroyed and the viraemia (the virus particles in the blood stream) go on infecting more CD cells. Thus the Immune System fall prey to the hosts of the disease, which they would normally fight (WHO, 1994; <http://www//yahoo.com>, 2002).

During the early stages of infection the anti-bodies of the virus may not be identifiable this is known as window period, which means the people have no symptoms for the first years they look healthy and feel well (<http://www//cdc.gov/hiv/graphic/haslink.htm>, 2002).

Window period vary from 3 to 10 years or more this variation could be due to different HIV strains, individual's genetic makeup, immune response, and presence of other disease that might accelerate the infections process (WHO, 1994).

The main ways of transmission are by having sexual intercourse with infected partners either oral, vaginal, and /or anal intercourse. In addition to sharing needle or syringe to inject drugs. Other modes of transmission are blood transfusion, blood products, mother to baby and infection in the health –care setting.

HIV is found in the body fluid in both males and females, so if a man or a woman has a vaginal intercourse with infected partner without condom the virus could pass into the blood stream through a tiny cut or sore inside the body. The risk of infection is greater to the anal intercourse because the lining of the anus is more delicate than the lining of the vagina, so it's more likely to be damaged during the intercourse. Also oral sex does carry some risk of infection but is very rare ([http://www//yahoo.com](http://www.yahoo.com), 2002).

Injecting drug by the use of needles or syringe is a major cause of AIDS because exposure is repeated so often in some cases several times a day, also when people drunk or inject drugs might have sex with some one infected by HIV/AIDS and find it difficult to use a condom. Contaminated blood is highly infectious when introduced in large quantities directly into the blood stream; HIV also may pass from infected women to her fetus or her infant during delivery or breast milk. Some health – care worker have become infected with HIV by being stuck with needle containing HIV infected blood getting into the health – care worker's blood stream through an open cut (<http://www//avrt.org>, 2002).

## **Symptoms and tests**

The symptoms of the disease are prolonged – unexplained fatigue, swollen gland, fever lasting to more than 10 days, chills, excessive sweating especially night sweats, mouth lesions, sore throat, cough, diarrhea, tumor (Kaposi sarcoma), skin rashes or lesion of various types, unintentional weight loss, general discomfort or uneasiness (malaise), headache, symptoms of specific opportunistic infections. Additional symptoms that maybe associated with this disease are speech impairment, muscle atrophy, memory loss, decreasing intellectual function, joint swelling, joint pain, cold intolerance, genital sore, unusual or strange behaviour slow movement, blurred vision, double vision, height sensitivity, blind spots in the vision, chest pain, back pain, abdominal pain, loss appetite, muscle pain, numbness and tingling (<http://www//yahoo.htm>, 2001).

After a person is infected with HIV, the immune system produce antibodies to HIV are far easier to detect than the virus itself, their presence or absence in the blood stream is the basis for the most widely used test of HIV infection, a person whose blood contain HIV antibodies is said to be HIV positive or seropositive. HIV antibody test was called ELISA (Enzyme Linked Immuno absorbent Assay) (Whiteside, 2000).

## HIV/AIDS in Sudan

Sudan is the largest country in Africa, it border eight countries and shrouded with political instability and economic difficulty. It possesses an AIDS danger zone. The first 2 cases of AIDS in Sudan were diagnosed in 1986. Now the number of people infected with HIV and people living with AIDS increase from 2 cases in 1986 to 652 in the year 2000 (UNAIDS, 2000; Sudan HIV/AIDS strategies, 2001) (refer to appendix 2)

The high-risk group is those of 15-39 years of age and proportion between male to female is 6:1 in the year1998, 3:1 in the year 1999 and 2:1 in the year2000 (SNAP, 2000).

In 1999 a study revealed that 5%of pregnant women in Juba and Gedaref were HIV positive, compared to 0.5% in the Sudan capital Khartoum, A 1998 survey found that 94% of Gedaref patients seeking treatment for sexually transmitted diseases were infected with HIV, and UN official reported that 75% Gedaref tuberculosis patients have HIV (Sudan could face epidemic explosion, UN warns, 2000)

A situation analysis identified the high-risk groups to be as pregnant women1%, prisoners2%, refuges 4%, TB patients1%, STDs patients1.1%, prostitution4.4%, university students 1.1%, teaseller2.5%, and child streets 2.3%(SNAP, 2003).

The factors that facilitate the spread of HIV/AIDS are the poverty, ignorance about HIV/AIDS, war and in security result to displacement, ingrained traditions and cultural practice particularly that encourage multiple sexual partners (world vision Sudan .HIV/AIDS strategy, 2001).

The administration of AIDS and STDs prevention, Ministry of health, Khartoum State had made a survey to determine the total number of people

infected with HIV and people living with AIDS in Khartoum State, they found that the people infected with HIV and living with AIDS in 2002 and 2003 were 936, 317 and 584,477 respectively (Ministry of health, 2003).

The first time that Sudanese National AIDS control Programme (SNAP) worked on the subject of AIDS in prison was in April 2003 in joint programme with Ministry of Interior, they carried out their study in Khartoum, Gedaref, Kassala, Portsudan, North Kordofan, and the White Nile state. They used the peer education method as an intervention tool for AIDS control. This study was still underway (personal contact, 2004).

## Prison health

The prison health care system is a big problem for correctional officials whose primary responsibility is security and not the provision of health care. Prisoners carry a much greater burden of illness than other member of society; they harbor diseases that are determined both by the environment out of which they come and by the prison in which they live.

The problems faced by the prison practitioner are legion. Desmotologists must be familiar with the latest medical information on many diseases that are infrequently seen in community practice: problem of severe substance abuse, tuberculosis, trauma and violence, unusual neuropsychiatric disease, epilepsy, the manifestations of stress, and of course AIDS and HIV infection.

Prison medicine often involves a balancing act between the conflicting priorities that are inherent to a prison environment: security, social rehabilitation, and medical services.

In 1977 Weisbuch urged public health professionals to participate in the development and improvement of prison health care. Prison health managers have had to work on their own to define standards and develop methods to assure quality (Last and Wallace, 1992).

## **Promotion of health in prison**

Imprisoned individuals can be forgotten, especially when education programmes are being created. As was mentioned before prisoners are identified as high risk group for HIV/AIDS due to unsafe sexual contact and sharing Intravenous needle (Toepell, 1999).

Ignorance about the virus has resulted both in effective response in prisons and wide spread of AIDS cases between prisoners, so the health education can lead to limit the spread of communicable disease (e.g. AIDS, TB....etc)in prison and promote the benefit to the prisoner and the wider community (Elizaeth,1998).

Health promotion also benefit the prisoners and staff by for example a reducing smoking, better diet, more exercise so lessening the burdens on health system in the country as whole (<http://www/HIPP>, 2002).

## **AIDS in Prisons**

Prisoners are group marginalized by society because of their violation of the rights of others. Nevertheless, they have a right o health care and humanitarian treatment as high –risk behaviour is over represented in prisons, testing for HIV should be made available. However, prisoners should not be forced to undertake an HIV test and their consent is required. In case of a positive test result they have the right to confidentiality regarding their sero-status. They also have the right to information about HIV/AIDS. Prisoners living with HIV/AIDS should be allowed to mix with others inmates, but if segregation in a separate wing is required (<http://www/emro.who.int/asd>, 2002).

The prevalence of HIV is higher among inmates around the world more than it is outside society. Some inmates with infections come to



prisons already infected but the majority infected during imprisonment (Elizabeth,1998;<http://www//human right watch prison project.htm>,2000).

The prevalence rate of HIV/AIDS among prisoners tested internationally in 1992 were Brazil (20% male,29% female), Berlin (10%), Scotland (7-15%), Santafe province in Argentina (1-14%), Rome (13%) and Spain (28%) (Elizabeth, 1998).

The HIV/AIDS Surveillance in Sudan reported that there are 8 cases of AIDS out of 719 prisoners tested (1.1%) and in 2002 there were 2 cases out of 847. This confirmed that there was a considerable number of HIV/AIDS in Sudan prisons (Ministry of health, 2003).

### **Transmission of AIDS in the prisons**

Numerous activities known to occur among inmates pose a risk for HIV infection. Molecular analysis of 14 HIV- positive inmates in Glenochil prison, Scotland in 1993 found sequencing similarities and clinical histories in 13 of the 14 indicating that transmission had occurred at the prison.

Sexual activity between male inmates is not uncommon in prison. A Federal Bureau of prison study in 1982 reported that 30% of federal prison inmates engaged in homosexual activity while imprisoned. In a 1984 study of Tennessee inmates, 17% reported homosexual activity in prison (Elithabth, 1998). A1999 Penal Reform international study of Zambia prison in Malawi reported respondents as estimating that between 10% to 60% of prisoners had participated in homosexual activity at least once (<http://www//irin.news.org>, 2000).

The frequency of homosexual rape in prisons is extremely difficult to estimate. The victim who reports rape in prison faces a probability of further suffering and worse injury. The Federal Bureau of prison study reported that

9 to 20 of federal inmates, especially new or homosexual inmates were, were victims of rape. Other incidents of violence (including fight involving lacerations, bites, and bleeding in to or more participants) present some risk for HIV transmission (Elizabeth, 1998).

Sharing of syringes increased during imprisonment, as did less efficient methods of syringe cleaning. Another report from United Kingdom described a high prevalence among IDUs who were former prisoners of self-reported injection and sexual risk behaviour while in prison; 33 of 50 had injected drugs, and 5 of 50 had had sex with 2 to 16 men. Tattooing is widely practiced in prisons and is usually performed without fresh or sterile instrument. It involve multiple skin puncture with recycled, sharpened, and altered implements such as staples and paper clips (Elizabeth, 1998).

Idris et al in 1998 had made a survey to study the use of drugs among prisoners in three main prisons Kober, Omdurman, and Algerif prison. The result showed variation in the use of drugs with regard to age, occupation, education, marital and social status of inmates they found that drugs uses is very common among prisoners 60.1% from 943 inmates were drugs users, 64.6% at Kober, 63.1 at Omdurman and 50.1 at Algerif prison.

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 (Idris et al, 1998).

## **HIV/AIDS and Tuberculosis in the prison**

The interaction between the HIV virus epidemic and the tuberculosis (TB) epidemic is lethal. TB adds to the burden of illness of people with HIV and shortness their life expectancy, while HIV epidemic spurs the spread of TB (WHO, 2000; <http://www//health in prison project,htm>, 2002).

WHO/UNAIDS reported that the high levels of HIV/AIDS/STDs and TB in the European prison population, and their rapid increase in many countries,

pose a serious threat to public health and mentioned that the factor which enhanced the spread of HIV and TB in prison included overcrowding, malnutrition, and poor hygienic conditions. Prisoners mainly come from poor, deprived and marginalized population groups which are particularly vulnerable to HIV and TB infection. Illegal risk behaviour such as injecting drug and sex among prisoner and the lack of access of the prison population to prevention means and medical care at standards less than to what is available in the community (<http://www//health in prison.htm>, 2002).

### **Effect of health education on alleviating risk behaviour in prisons:**

In 1991 the John Howard of Metropolitan of Toronto conducted a study to determine prisoners level of knowledge and awareness concerning HIV/AIDS, they also examined their opinion about education, condom distribution, needle exchange in the prison. A total of 100 adult male from two provincial correctional facilities in Toronto were randomly selected and interviewed. The result of the study revealed that only 6% gave the full term for acronym AIDS, 3% for acronym HIV, 85% of prisoners did not know the relation between HIV and AIDS. The knowledge of prisoners about the transmission of HIV/AIDS were 56% believed that it could be transmitted by donating blood, 46% by tongue kissing, 28% sharing food or a cup, 28% sneezing or cough and 34% by mosquito bite. A large proportion of prisoners identified the media as their only source of information from T.V, 22% printed media, 4% radio, 80% from pamphlets during incarceration. All inmates agreed that education on HIV/AIDS prevention was important for all community members. The John Howard society's study has demonstrated that prisoners are in direct need of accurate and effective programming concerning HIV/AIDS education and prevention (Toepell, 2000).

Another study which was carried out by the national institute of health, Ministry of Health, Mozambique. A 6-month follow-up study was carried out in 1993 among 300 prisoners. A knowledge, attitudes and practices questionnaire regarding HIV/AIDS was administered. A large proportion of prisoners had high risk behaviour 65% had 2 or more sexual partner per month and 39% had a history of STDs and low AIDS knowledge incarceration. Statistically significant increase in knowledge occurred after the intervention. Prisoner with less formal education had a poorer performance on the initial questionnaire (43% Vs 69%  $p < 0.00001$ ) improve after the intervention (41% Vs 24%  $p < 0.000010$ ). The result demonstrates that educational interventional involving health educators contribute positively to the acquisition of knowledge, attitudes and practices among prisoners (Vaz.R.G, 1999).

Another study designed by Ali et al (1996) to determine the knowledge and attitudes of women in Alexandria prison about HIV/AIDS they noted that 21% of women were illiterate, only 34% of them had heard about HIV/AIDS. Majority of this percentage 34% of women had clear and correct information about causes and transmission of AIDS but 35% of them did not know that using of condom could prevent AIDS transmission (Ali et al 1996).

Grinslead OA, et al, 1999, have developed and evaluated a series of HIV prevention intervention for male prison inmates and for women who visit prison inmates. Results of the study supported the feasibility and effectiveness of HIV prevention programme for inmates and their partners both in prison and in the community (Grinslead, 1999).

The effectiveness of peer HIV education for male inmates entering prison, a study designed by Zack, B, et al (1997) to reduce post release HIV

risk behaviour. A total of 414 male prison inmates (mean age 35 years) were randomly assigned. The result supported the effectiveness of pre-release intervention subjects. Who received the intervention were significantly more likely to use a condom the first time they had sex after release from prison and also they were less likely to have used injected drugs or share needles (Zack, 1997).

Katie et al (2002) had made behavioural interventions study aimed at reducing risky behaviour have yet to be shown to be effective in the developing world stepping stones in a participatory STDs/HIV prevention workshop programme based on empowerment techniques, which has been adopted to an infertility prevention framework for the Gambia. The paper describes the evaluation in 2 prisons where the intervention was carried out compared to 2 control prisons using focus group discussion and knowledge, attitudes and practices questionnaire administered randomly. The knowledge of the mode of transmission of HIV and STDs, and level of risk awareness increased. The value of condom in particular situation was recognized. For sex before marriage, and with non-marital partners, women reported that they would insist on condom use outside marriage and even ask their husband to use condoms for non-marital sex. The evaluation can now be refined in order to generate further evidence on large scale and over a large period (Katie, 2002).

Liviana and Ann Burchell (1999), designed study to understand the prevalence and determinant of HIV risk behaviours and to identify the effectiveness of institutions. The questionnaire collected information on socio-demographic characteristics, knowledge and attitudes of HIV transmission, opinions on education techniques, HIV related behaviours during incarceration and medical history. They found that the majority of the

inmates were at risk for HIV through sexual behaviour and injecting drug use outside prison. 32% had ever injected drug, 17% had injected drug and among sexually active, 56% had 2 or more sex partners outside prison and only 14% always use condom, 6% were paid to have sex in this period. Although condoms were available by request from health care personnel, they were not used by inmates who had sex because the perception that protection was not necessary, and not liking barrier methods. The study recommended to improve existing interventions and efforts to provide education and counseling to reduce risk upon release should be increased (Liviana, 1999).

UNAIDS, 1999 reported that there a review of 49 studies covering 18 countries to identify empirical outcome or evaluate the impact of HIV related mass media campaigns in 1996 that most campaigns aiming at individual level goals of knowledge, attitudes, and behaviour changes were generally successful at achieving these goals (UNAIDS, 1999).

Roffman,1997 reported that in an evaluation of the study in Uganda among gay men. The researcher found a significant effect of education and counseling including a decrease in unprotected intercourse from 47% to 26% of the men who completed the education programme (Roffman, 1997)

An updated review of study conducted by Wolitski et al, 1997 found substantial risk reduction among heterosexual couple. Health education proved to be beneficial in reducing dangerous sexual practices. In other groups homosexual men, injecting drug user risk reduction was not a significant associated with education and counseling (UNAIDS, 1999).

UNAIDS, 1998 report that among a sample of HIV infected homosexual men in Norway the number of sex partners decreased from an

average of 4.3 a year before to 1.6 after health education and counseling (UNAIDS, 1998).

More recently a randomized studies in 3 developing countries (Kenya, Tanzania, and Trinidad) focused on showed homosexual men, it showed that couples intercourse among their spouses especially among sero-positive couple. Result found that education and counseling produce significant change in reducing high risk sexual practices with non primary partners (Coates, 1998).

The M power project implemented using peer education focused on young gay men in a midsize urban community in the USA and included in the intervention package a publicity campaign and small group sessions concentrated on individual behaviour change. In the test city, there was a 26% reduction in unprotected and intercourse (UNAIDS, 1999).

One randomized controlled HIV prevention study in the USA using the small group approach used a 12 weeks intervention with 3-booster session among 104 gay men selected to receive HIV risk reduction intervention. The four main areas covered in the intervention were HIV risk education, behavioural skills, training, sexual assertiveness training and lifestyle changes for relapse prevention. The intervention group showed significant reduction in rates of unprotected anal intercourse and increased rates of condom use immediately after the intervention (Choi, 1996).

## **Chapter two**

### **Materials and methods**

The experimental study was carried out in Khartoum state, the capital of the Sudan, in Khartoum North Federal prison (Kober) for men and Omdurman prison for women, during the period January to July 2003.

#### **3.1 Study area**

Prisons are penal institutions (place of punishment), supervised by the Ministry of Interior. Khartoum province has 7 prisons in Khartoum North, Khartoum and Omdurman, one of them for women and for diligent juvenile. The prisoners were divided in the prison according to their crimes either murder, drugs, robbery, rape...and duration of imprisonment.

In all prisons there was an office of social services which help prisoners to solve social related problems, in which social specialists and psychologist are working to prepare facilitate the new inmates with prison environment and change their delinquency and violent behaviour. Also the social services office organizes the sexual meeting of inmates to her/his husband and wife base on the legal marriage.

The programmes in the prisons are divided into religious, cultural programme (magazine, T.V, ...etc), educational programme (illiteracy, basic education), sport (football, volley...etc), occupational training (farming, carpentering). These programmes keep the inmates busy and had little time to think of sex or drugs use.

Nutrition is the same in both prisons they depend mainly on Gorasa (baked sorghum flour) with groundnut and lentils in breakfast and dinner



and with kind of cooked meals in lunch, there were special diet for patients according to their dietary regime prescribed for the sick by physicians.

Diseases which spread are similar in both prisons e.g. skin infection, diarrhea, psychological disorder, and TB (Saeed, 1997).

### **3.1.1 Khartoum North Federal prison (Kober) for men**

Established in 1902 and started to receive the prisoner at 1907. It is situated in Khartoum North governorate in kober locality on the eastern bank of the Blue Nile.

It was built in an area of 2 feddans with total capacity of 900 inmates though in practice the number is more than this and usually it is overcrowded.

The total budget for this prison is covered by the Federal government.

The prison has a clinic and various specialized physician in different specialties.

### **3.1.2 Omdurman prison for women**

Was built in Omdurman governorate during the Mahadia era, it is also named Elsayer prison according to first officer who was in charge for it that time.

Fund and support is from Khartoum state government. Number of prisoner when the study was conducted was 120 inmates about 71 of them have had long term imprisonment (more than 1 year).

Most of the inmates were accompanied by their recently born babies. The clinic in which a general practitioner doctor work 2hour's a day and many

midwives because some inmates give birth to their children in the prison.(Saeed,1997; Norelhuda, 2003; Ministry of Interior, 2003 in Arabic)

## 3.2 Sampling

### 3.2.1 Sample unit

From the total population of inmates, men and women (914 inmates) with long-term of imprisonment (more than 1 year) from both Kober and Omdurman prison were targeted to this study.

### 3.2.2 Sample procedure

Samples from both prisons were selected randomly (simple random) from long-term imprisonment population.

### 3.2.3 Sample size

The following formula was used to determine the sample size

$$n = \frac{t^2 pq}{e^2}$$

Where  $t$  = value of the normal curve at 5% = 1.96

$p$  = proportion

$q$  = 1-p

$e$  = permissible error

Total male population of the inmates in Federal prison (in the period of the study) with long-term imprisonment were 840 and using the above-mentioned formula the resultant sample size was 120 prisoners.

In Omdurman prison the women inmates with long-term imprisonment were only 68 so all of them were included in this study for a better accuracy.



### **3.3 Study instrument**

Data were collected from the respondents through a questionnaire. The questionnaire designed based on WHO's – family health international (FHI) HIV/AIDS/STDs Behavioural Surveillance Survey (BSS), 2000) refer to appendix.

The questionnaire included the following questions

Section 1	background characteristics	8 questions
Section 2	knowledge of respondents towards HIV/AIDS	10questions
Section 3	attitudes of respondents towards HIVAIDS	6 questions
Section 4	behaviour of respondents towards HIVAIDS	12 questions

The questionnaire is made of a total of 36 questions. A pilot test was done in two prisons among 10 inmates to test whether it is suitable to introduce the questionnaire in the presence of the researcher, to let the respondents do it themselves (educated respondents), the result showed the advantage of the second choice. For the illiterate respondents they filled their questionnaire with the help of another educated inmate.

The questionnaire was written in Arabic language to facilitate the full and proper understanding of the questions.

### **3.4 Data collection**

The data were collected in 3 phases

Phase 1 pre interventional phase  
pretest questionnaire was distributed and filled by the inmates

Phase 2 interventional phase

Comprehensive health education programme had been carried out using lectures, group discussions, peer education, project and booklets.

Phase 3 post-interventional phase

After 6 months the posttest was distributed for the sample selected (same pretest questionnaire) to compare between knowledge, attitudes, and practices before and after health education in-order to judge the effectiveness of health education programme already executed.

### **3.5 Data analysis**

Data were by the computer using statistical Package for Social Sciences (SPSS- V 11.5) programme; McNemar test was used to label the significance differences, and result was presented in form of tables and graphs.

## Chapter four

### Results

Figure 4.1

#### Sex of the respondents

N = 188

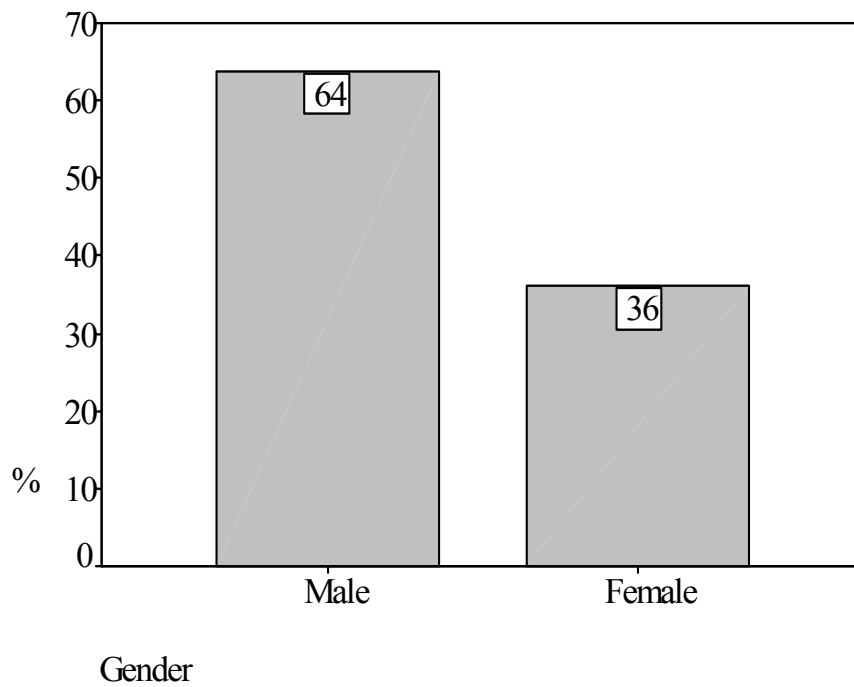


Figure 4.1 showed that the majority of the respondents were males 120 (64%), and the rest were females 68 (36%). Because the number of males had long-term imprisonment more than females.

**Table 4.2****Age of the respondents by gender**

N = 188

Response	Gender			
	Male 120		Female 68	
	Number	%	Number	%
No response	5	.0	3	4.4
18-23	12	10.0	15	22.1
24-29	36	30.0	22	32.4
30-35	29	24.2	8	11.8
36-41	16	13.3	7	10.3
42-47	11	9.2	11	16.2
>47	16	13.3	2	2.9
Total	120	100.0%	68	100.0%

Gender wise 30% and 32% of males and female respondents respectively were at age 24-29 years. Over 47 years of age were only 2.9 % in females compared to 13%in males. Percentage of 44% of females did not respond when asked about their age. The age of the majority of the respondents was between 18-24 years which represents 77.5%in males and 81% in females (table 4.2).



**Table 4.3****Educational level of the respondents by gender**

N = 188

Response	Gender			
	Male 120		Female 68	
	Number	%	Number	%
Illiterate	13	10.8%	23	33.8%
Khalwa	12	10.0%	3	4.4%
Primary	27	22.5%	5	7.4%
Intermediate	21	17.5%	9	13.2%
Secondary	31	25.8%	13	19.1%
Graduated	14	11.7%	11	16.2%
Post graduated	1	.8%	4	5.9%
No response	1	.8%	0	.0%
Total	120	100.0%	68	100.0%

Gender wise most of the females respondents were illiterate (33.8%), 4.4% learned in Khalwa, 7.4% primary school, 13.2% intermediate, 19.1% secondary, 16.2% university graduate and 5.9% were post graduate. compared to males respondents only 10.8% illiterate, 10.0% learned khalwa, 22.5% primary school, 17.5% intermediate, 25.8% secondary, 11.7% university graduate , 0.8% post graduate, and only 0.8% had no response. (table 4.3 ).



**Table 4.4****Income of the respondents by gender**

N =188

	Gender		Statistic	Std. Error	
Monthly income (in SP1000)	Male 120	Mean	301.05	11.50	
		95% Confidence Interval for Mean	Lower Bound	278.28	
			Upper Bound	323.82	
		Std. Deviation		125.45	
		Minimum		50	
		Maximum		750	
		Range		700	
		Female 68	Mean	141.97	10.86
	95% Confidence Interval for Mean		Lower Bound	120.29	
			Upper Bound	163.65	
	Std. Deviation		88.20		
	Minimum		50		
	Maximum		400		
	Range		350		

P&lt; .0005

A very significant difference between the income of males respondents compared with females respondents (P< .0005). There was clear in the study that the mean income of males was 30.108 SD (std. Error 11.50) and 14.197 SD for females.

The minimum income was 50.000 and maximum income 75.000 SD of males compared to 5.000 SD and 40.000 SD of females respectively. The respondents had monthly income 30.000 SD or less was 69% and 23% more than 30.000 SD. The clear relation between low income and high proportion of imprisonment (table 4.4).

**Table 4.5**

**Religion of the respondents by gender**

N = 188

Response	Gender			
	Male 120		Female 68	
	Number	%	Number	%
Muslim	104	86.7%	44	64.2%
Christian	16	13.3%	24	35.8%
Total	120	100.0	68	100.0

Where 86.7% of Muslim were males (104) compared with 64.2% females (44), and 13.3% males (16) and 35.8% females (24) were Christian (table 4.5).

**Table 4.6**

**Marital status of respondents by gender**

**N = 188**

Response	Gender			
	Male 120		Female 68	
	Number	%	Number	%
Single	35	29.2%	15	22.4%
Married	79	65.8%	39	56.7%
Divorced /widowed	6	5.0%	14	20.9%
Total	120	100.0	68	100.0

P= .003

Table 4.6 presented the number and percentage, 79 of male (65.8%) were married compared to 39 of female (56.7%), 35 and 15 of male and female respectively were single, and 6 of male compared to 14 female were divorced or widowed

**Table 4.7****Age of the respondents at marriage**

N = 137

Response	Gender			
	Male 85		Female 53	
	Number	%	Number	%
<20	13	15.3	30	56.6
20-25	26	30.6	18	33.9
26-31	8	9.4	3	5.7
32-37	34	40.0	1	1.9
>37	4	4.7	1	1.9
Total	85	100.0	53	100.0

The majority of the male respondent (34) married at age 32-37 years 40.0%, 30.6% at age 20-25 years (26), 15.3% married less than 20 years (13), 9.4% married at age 26-31 years (8), and 4.7% married at age more than 37 years (4).

A significance different between males and females respondent in the age of marriage ( $P < .0005$ ). So the majority of females (30) married less than 20 years 56.6%, 18 of them married at age 20-25 (33.9%), 3 of them married at age 26-31 years, 1 married at age 32-37 and more than 37 years (table 4.7).



**Table 4.8**

**Term of imprisonment by gender**

**N = 188**

Response	Gender			
	Male 120		Female 68	
	Number	%	Number	%
1- 3	18	15.0%	22	32.4%
4 – 6	39	32.5%	15	22.1%
7 – 9	23	19.2%	18	26.5%
>9	37	30.8%	12	17.6%
Not defined	3	2.5%	1	1.5%
Total	120	100.0%	68	100.0%

P= .018

Significant difference in the term of imprisonment between males and females respondents especially those who had more than 9 years 31% males compared with 18% females and those who had 1-3 years were 32% females compared with 15% males (P= .018).



### Tables 4. 9

#### Knowledge of the respondents about the term AIDS by gender

N = 188

Response	Gender			
	Male 120		Female 68	
	Number	%	Number	%
Pre-test p= .742	98	81.7%	56	83.6%
Post-test	120	100.0%	68	100.0%

Table 4.9 showed that the awareness and knowledge of female respondents before health education programme was than the male respondents, because 83.6% (56 out of 68) of the female respondent heard about AIDS compared to 81.7% (98 out of 120) of males. Health education programme made significance different so 100.0% of males and females heard about it.

**Table 4.10.**

**External appearance of AIDS patients by gender**

**N= 188**

Response	Gender							
	Pre-test p= .003				Post-test p= .816			
	Male 98		Female 56		Male 120		Female 68	
	Number	%	Number	%	Number	%	Number	%
AIDS patient look fit	10	10.2	15	26.8	120	100.0	68	100.0
Don't know	88	89.8	41	73.2	0	0	0	
Total	98	100.0	56	100.0	120	100.0	68	100.0

Table 4.10 showed that the awareness of female respondents better than male respondents, 26.8% of the female respondents (15) mentioned that people infected with HIV might look healthy and fit (incubation period) compared to 10.2% of male respondents (10). Health education change the knowledge of the respondents so 100.0% of female and male respondents said that an AIDS might look healthy and fit.

**Table 4.11****Determinant of AIDS patients by gender**

N= 188

Response	Pre- test				P
	Male 98		Female 56		
	Number	%	Number	%	
External appearance	27	27.6	15	26.8	<. 0005
Symptoms only	9	9.2	2	3.6	=. 27
Could not know with out test	12	12.2	10	17.8	= .179
Don't know	50	51.0	29	51.8	< .0005
Total	98	100.0	56	100.0	

Table 4.11 showed that the majority of the male (50) don't know the determinant of an AIDS patient 51.0%, compared to 29 of female (51.8%), 27.6% of male respondents mentioned that an AIDS patient determined by external appearance (27) while female represented 26.8% (15), 9.2% of male mentioned symptoms only (9) compared to 3.6% of female respondents (2), and 12.2% of male mentioned it couldn't without test (12) compared to 17.8% of female respondents (10).

Response	Post- test				P
	Male 120		Female 68		
	Number	%	Number	%	
External appearance	0	0	0	0	
Symptoms only	0	0	0	0	
Could not detected with out test	120	100.0	68	100.0	< .0005
Don't know	0	0	0	0	
Total	120	100.0	68	100.0	

After health education the knowledge of the respondents change, all male and female respondent mentioned that AIDS could not detected without test.

**Table 4.12**

**Symptoms of AIDS**

N= 188

Response	Pre- test				Post-test			
	Male 98		Female 56		Male		Female	
	Number	%	Number	%	Number	%	Number	%
Fever & headache	15	15.3	12	21.4	118	98.3	66	97.1
Lack of immunity	40	40.8	16	28.6	120	100	68	100.0
Generalized weakness	20	20.4	10	17.9	120	100	65	95.6
Weigh loss	35	35.7	15	26.8	120	100	68	100.0
Ulcer in the genitalia	9	9.1	5	8.9	109	90.8	60	88.2
Ulcer in the skin	7	7.1	3	5.4	11	92.5	61	89.7
Diarrhea	26	26.5	10	17.9	120	100	68	100.0
Other	2	2.0	3	5.4	0	0	0	0
Don't know	54	55.1	40	71.4	0	0	0	0

Table 4.12 presented the number and percentage of the respondents, who know the symptoms of AIDS, 40 of male (40.8%) and 16 of female (28.6%) mentioned lack of immunity, 35 of male (35.7%) and 15 of female (26.8%) mentioned weigh loss, 54 of male (55.1%) and 40 of female (71.4%)

didn't know, 26 male (26.5%) and 10 female (17.9%) mentioned diarrhea, 20 male (20.4%) and 10 female (17.9%) mentioned general weakness, 15 male (15.3%) and 12 female (15.3%) mentioned fever, 9 male (9.1%) and 5 female (8.9%) mentioned ulcer in genitalia, 7 male (7.1%) and 3 female (5.4%) mentioned ulcer in the skin and 2 of male (2.0%) and 3 female (5.4%) mentioned vomiting. Health education carried out made a significant difference in the knowledge of the respondents about the symptoms of AIDS ( $p < .0005$ ), so no one of male and female respondents didn't know the symptoms of the disease, 120 of male and 68 of female mentioned lack of immunity, weight loss, general weakness, and diarrhea (100.0%), 118 of male and 66 of female respondents mentioned fever, 111 male and 61 of female mentioned ulcer in the skin and 109 male compared with 60 female mentioned ulcer in genitalia

**Table 4.13****Causes of AIDS**

N= 188

Response	Pre- test				Post-test			
	Male 98		Female 56		Male		Female	
	Number	%	Number	%	Number	%	Number	%
Insects & mosquito	1	1	6	10.7	0	0	0	0
Virus in blood	29	26.6	26	46.4	120	100.0	68	100.0
Contaminated food or drink	2	2.10	2	3.6	0	0	0	0
No cause	1	1.0	4	7.1	0	0	0	0
Others	5	5.1	1	1.8	0	0	0	0
Don't know	60	61.2	18	32.1	0	0	0	0

The result showed that 29 of male and 26 of female respondents know the actual causes of AIDS, 61.2% and 32.1% of male and female respondents don't know the cause of AIDS ( $p = .107$ ), 1% and 10.7% of male and female mentioned insects or mosquito bites ( $p = .003$ ), 7.1% of female and 1.0% of male mentioned contaminated food or drink ( $p = .023$ ), 5.1% and 1.8% of male and female respectively mentioned AIDS cause accidentally ( $p = 1$ ).

Health education made a significant change in knowledge of the respondents so the percentage of those mentioned AIDS cause by virus increased to 100.0% male and female respondents ( $p < .0005$ ). (Table 4.13)

**Table 4.14****Ways of transmission of AIDS by gender**

N= 188

Response	Pre- test				P
	Male 98		Female 56		
	Number	%	Number	%	
Mosquito bite	2	2.5	9	16.0	=. 001
Sexual intercourse with an infected partners	51	52.0	21	5	=. 046
Using equipment of an infected person	10	10.2	12	21.4	= .06
Using infected syringes	12	12.2	6	10.7	< .676
Normal handling with infected of person	4	4.1	3	5.4	=1
Others	1	1.0	0	0	0
Don't know	39	39.8	18	32.1	=. 266

Table 4.14 showed that 51 of male respondents mentioned that AIDS transmitted through sexual intercourse with infected partner (52.0%), compared to 21 of female respondents (5%) ( $p = .046$ ), 39.8% and 32.1% of male and female respondents don't know the ways of transmission ( $p = .266$ ), 10.2% and 31.4% of female and male respondents mentioned using equipment of infected person ( $p = .6$ ), 12.2% of male and 10.7% of female respondents mentioned using syringes of infected person ( $p = .676$ ), 2.5% and 16% of male and female respondents mentioned mosquito bite ( $p = .001$ ), and 4.1% and 5.4% of male and female respondents respectively mentioned handling with infected person ( $p = 1$ ).

Response	Post- test				
	Male 120		Female 68		P
	Number	%	Number	%	
Mosquito bite	0	0	0	0	
Sexual intercourse with an infected partners	120	100.0	68	100.0	
Using equipment of an infected person	120	100.0	68	100.0	< .0005
Using infected syringes	120	100.0	68	100.0	
Normal handling with infected of person	0	0	0	0	
Others	0	0	0	0	
Don't know	0	0	0	0	

Health education that carried out made a significant difference, so 120 male and 66668 female (100%) mentioned that AIDS transmitted through sexual intercourse with an infected partner. Using equipment of an infected person. And using infected syringes.



**Table 4.15****Possibility of Prevention of AIDS**

N= 188

Response	Pre-test				Post-test			
	Male		Female		Male		Female	
	Number	%	Number	%	Number	%	Number	%
Yes	50	51.0	30	53.6	120	100.0	68	100.0
No	7	7.1	6	10.7	0	0	0	0
Don't know	41	41.8	20	35.7	0	0	0	0

The result showed that 50 of male respondents said that people can protect them selves from HIV infection (51.0%), compared to 30 of female (53.6%), 7 of male (7.1%) and 6 of female (10.7%) said it impossible (4.8%), and 41 of male and 20 of female didn't know either it's possible or not 33.7%. Health education programme carried out made a significant different in the knowledge of the respondents about ability of prevention, so 120 and 68 of male and female respectively said that people can protect them selves from HIV infection (100.0%) (Table 4.15).

**Table 4.16****Ways of prevention of AIDS****N= 188**

Response	Pre- test				P
	Male 98		Female 56		
	Number	%	Number	%	
Using condom	24	24.3	4	7.1	<. 0005
Avoid practices illegal sex	45	45.9	20	35.7	=. 27
Using of mosquito net &killer	1	1.0	6	10.7	= .179
Avoid using others equipment	7	7.1	8	14.3	
Avoid dealing with HIV/AIDS patients	9	9.2	5	8.9	< .0005
Don't know	37	37.8	17	30.4	

Response	Post- test				P
	Male 120		Female 68		
	Number	%	Number	%	
Using condom	120	100	68	100	
Avoid practices illegal sex	120	100	68	100	
Using of mosquito net &killer	0	0	0	0	
Avoid using others equipment	0	0	0	0	
Avoid dealing with HIV/AIDS patients	0	0	0	0	

Don't know	0	0	0	0	
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P< .0005

The result showed that 45.9% of male (45) and 35.7% of female (20) respondents mentioned avoid the practicing sex with infected partners is away of prevention against HIV/AIDS. 24.5% (24) and 7.1% (4) of male and female respectively mentioned by using of condom, 7.1% (7) of male and 14.3% (8) of female mentioned avoid the using of others bladders, 9.2% (9) and 8.9% (5) of male and female respectively mentioned avoid the dealing with AIDS patients, 1.0% (1) of male and 10.7 (6) of female respondents mentioned using of mosquito nets and killer, and only 1.0% of male mentioned use of traditional medicine.

After health education programme the awareness of the respondents change (P<. 0005), all male and female respondents said that using condom and avoid the practicing of illegal sex were main ways of prevention. (Table 4.16).

**Table 4.17****Heard of condom by gender**

N = 188

Response	Pre-test				Post-test			
	Male 120		Female 68		Male 120		Female 68	
	Number	%	Number	%	Number	%	Number	%
Yes p= .001	96	80.0	39	56.7	120	100.0	68	100.0
No p = 1	24	20.0	29	42.7	0	0.0	0	0.0

Table 4.17 showed that male respondents heard about condom rather than females, 80.0% of male respondent compared to 56.7%. After health education awareness of male and female increased so all respondents heard about condom (100.0%).

**Table 4.18**

**Had you ever seen condoms by gender**

N= 188

Response	Pre- test				Post-test			
	Male 96		Female 39		Male 120		Female 68	
	Number	%	Number	%	Number	%	Number	%
Yes	60	62.5	16	41.0	120	100	68	100

The result showed that 60 of male saw condom were male (62.5%) compared to 16 of female (41.8%). Health education change the result so all respondents saw the condom (100%).

**Table 4.19****Source of getting condoms by gender**

N = 188

Response	Pre- test				Post-test			
	Male 96		Female 39		Male 120		Female 68	
	Number	%	Number	%	Number	%	Number	%
Family planning center	44	45.8	9	23.1	120	100	68	100
Hospital/clinic	8	8.3	6	15.4	109	90.8	64	94.1
Market/shops	1	1.0	1	2.6	0	0	0	0
Pharmacy/health center	31	32.3	12	30.8	112	93.3	67	98.5
Don't know	31	32.3	19	48.7	0	0	0	0

Table 4.19 showed that 45.8% of male (44) and 23.1 % female mentioned family planning center, 8.3% (8), and 15.4% (6) of male and female respectively mentioned hospital, 1.0% (1) of male and 2.6% (1) of female mentioned market/shops, 32.3% of male (31) and 30.8% of female (12) mentioned pharmacy, and 32.3% of male (31) and 48.7% of female (19) didn't know.

Health education made a significant change so 100% of male and female mentioned family planning center, 90.8% of male (109) and 94.1% of female (64) mentioned hospital, 93.3% of male (112) and 89.4% of female (67) mentioned pharmacy, no one mentioned other place.

**Table 4.20****Dealing with infected person by gender**

N= 188

Response	Pre- test				Post-test			
	Male 98		Female 56		Male 120		Female 68	
	Number	%	Number	%	Number	%	Number	%
Yes	12	12.2	8	14.3	120	100.0	68	100
No	73	74.5	35	62.5	0	0	0	0
Don't know	13	13.3	13	23.2	0	0	0	0
Total	98	100.0	56	100.0	120	100.0	68	100.0

Table 4.20 showed that 73 of the male respondents said they could not deal with person infected by HIV normally (74.5%), 12 of them said they could deal with them (12.2%), and 13 did not know either they could deal with them or not (13.3%), while 35 female respondent said they could not deal with them (62.5%), and 8 of them said they could deal with them 14.3, while 13 of them (23.2%) did not know

After health education programme the awareness of the respondent change so only 120 and 68 of male and females respondents respectively answered positively.

**Table 4.21****Eating with an AIDS patients by gender**

N= 188

Response	Pre-test				Post -test			
	Male 98		Female 56		Male 120		Female 68	
	Number	%	Number	%	Number	%	Number	%
Yes	20	20.4	9	16.1	99	82.5	36	52.9
No	78	79.7%	47	83.9%	21	17.5%	32	47.1%
Total	98	100.0	56	100.0	120	100.0	68	100.0

The attitudes of the male respondents better than female, 20 of the respondents had ability to eat with an AIDS patients (20.4%), compared to 9 of females (16.1%)  $P= .518$ . Health education made a significant different so 110 of the male respondent had ability to eat with patient (91.7%), compared to 50 of female (73.5%)  $P< .0005$ .



**Table 4.22****Rank of health care compared with other serious diseases**

N=188

Response	Pre-test				Post -test			
	Male 98		Female 56		Male 120		Female 68	
	Number	%	Number	%	Number	%	Number	%
Less health care	3	3.1	2	3.6	0	0	0	0
Same health care	11	11.2	11	19.6	0	0	0	0
More health care	29	29.6	4	7.1	120	100.0	68	100.0
Don't know	55	56.1	39	69.6	0	0	0	0
Total	98	100.0	56	100.0	120	100.0	68	100.0

P&lt; .0005

Table 4.22 showed that the 55 of male respondent (56.1%), 3 of them believed that an AIDS patient should have had less health care compared with those who had other serious diseases, 11 of them said same health care (11.2%), and 29 mentioned more health care (29.6%), while 39 of female didn't know (69.6%), 2 of them mentioned less health care (3.6%), 11 mentioned same health care (19.6%), 4 mentioned more health care (7.1%).

Health education made a significant difference so 120 of male and 68 female respondents mentioned more health care (100.0%).



**Table 4.23****Ability to nurse an AIDS patient by gender**

N=188

Response	Pre-test				Post -test			
	Male 98		Female 56		Male 120		Female 68	
	Number	%	Number	%	Number	%	Number	%
Yes	22	22.4	12	22.4	120	100	68	100
	p= .944				p= .011			

Table 4.23 presented the number and percentage of those had ability to nurse an AIDS patient, only 22 of the male and 12 of female respondents had ability to nurse an AIDS patient (22.4%). After health education the attitude change so 120 of male and 68 of female mentioned they had ability to nurse an AIDS patient (100%).

**Table 4.24****Concealing an AIDS patients by gender**

N= 188

Response	Pre-test				Post -test			
	Male 98		Female 56		Male 120		Female 68	
	Number	%	Number	%	Number	%	Number	%
Yes	82	83.3%	34	60.3%	36	30.0%	24	35.3%
	p< .0005				p= .454			

The result showed that 82 of male respondent (83.3%) and 34 of female (60.3%) prefer to conceal an AIDS patient from the community. Health education change the attitudes of the respondents so only 36 and 24 of male and female respectively prefer to conceal an AIDS patient from the community (table 4.24).

**Table 4.25**

**Prohibition of an AIDS patient to practice their jobs or go to schools and university by gender**

N= 188

Response	Pre-test				Post -test			
	Male 98		Female 56		Male 120		Female 68	
	Number	%	Number	%	Number	%	Number	%
Yes	73	74.4%	31	55.4%	3	2.5%	3	4.4%
	p< .01				p= .669			

Table 4.25 showed that 73 of male respondents and 31 of female 74.4% and 55.4% respectively prefer the Prohibitions of an AIDS patient to practice their jobs or go to schools and university. Health education carried out made a significant change so 3 of male and female prefer the Prohibitions of an AIDS patient to practice their jobs or go to schools and university 2.5% and 4.4% respectively.

**Table 4.26****Practices of sex in the prison by gender**

N= 188

Response	Pre-test				Post -test			
	Male 120		Female 68		Male120		Female 68	
	Number	%	Number	%	Number	%	Number	%
Yes	42	35.0%	24	35.3%	33	27.5%	23	33.8%
	p< .01				p= .669			

Table 4.26 presented the number and percentage of male and female respondents who practicing sex in the prison. 42 (35.0%) of male and 24 (35.5%) of female were practicing sex in prison. Health education change the practices of them so the number of prisoners practiced sex in prison decrease to 33 (27.5%) of male and 23 (33.8%) of female were practicing sex in prison

**Table 4.27****Use of condoms****N= 66**

Response	Pre-test				Post-test			
	Male 42		Female 24		Male 33		Female 23	
	Number	%	Number	%	Number	%	Number	%
Yes	12	28.6	6	25	0	0	0	0
No	30	71.4	18	75	33	100	23	100
Total	42	100	24	100	33	100	23	100

The result showed that 30 of male (71.4%) and 18 of female (75%) respondents didn't use condom in the last sexual intercourse. After health education all male and female respondents had not used condom due to absences of condom in the prison (table 4.27).

**Table 4.28**

**Source of instruction for using condoms**

N= 18

Response	Male 12		Female 6	
	Number	%	Number	%
Non	8	66.7	1	16.7
My partner	3	25.0	3	50.0
My friend	1	8.3	2	33.3
Total	12	100.0	6	100.0

P= .005

Table 4.28 showed that 8 of male respondents (66.7%) and 1 female (16.7%) mentioned no one advice them to use condom, 3 of male (25.0%) and female (50.0%) mentioned partner, 1 of male (8.3%) and 2 of female (33.3%) mentioned friend.



**Table 4.29**

**Age at first sexual intercourse by gender**

N= 66

Response	Gender			
	Male 42		Female 24	
	Number	%	Number	%
No response	2	4.8	1	4.2
14-20	32	76.2	17	70.8
21-35	8	19.0	6	25.0
Total	42	100.0	24	100.0

P= .346

The result showed that 32 of the male respondents mentioned they practiced sex in age 14-20 years (76.2%), 8 of them mentioned age 21-35 years (19.0%) and 2 had no response (4.8%), compared to female respondents, 17 of them mentioned age 14-20 years (70.8%), 6 mentioned age 21-35 years (25.0%), and 1 had no response (4.2%). Table 4.29

**Table 4.30****Reasons for not using condom**

N= 56

Response	Pre-test				Post-test			
	Male		Female		Male		Female	
	Number	%	Number	%	Number	%	Number	%
<b>Not available</b>	6	20	13	72.2	16	48.5	20	87.0
Expensive	0	0	0	0	2	6.0	2	8.7
Refusal of partner	0	0	3	16.7	0	0	1	4.3
I don't like it	14	46.7	0	0	15	45.5	0	0
It's not important	10	33.3	2	11.1	0	0	0	0
Total	30	100.0	18	100.0	33	100.0	23	100.0

Table 4.30 showed that 14 of male respondents didn't use condom because they didn't like it (46.7%), 6 male (20.0%) and 13 female (72.2%) mentioned because it's not available, 10 male (33.3%) and 2 female (11.1%) mentioned it's not important, 3 female mentioned refusal of partner (16.7%).

After health education 16 male (48.5%) and 20 female (87.0%) of the respondents mentioned condoms not available in prison, 15 male (45.5%) mentioned they didn't like it, and only 1 female mentioned didn't use condom because it's, refusal of her partner, and no one said it's not important.

**Table 4.31****Control of sexual desire**

N= 188

<b>Response</b>	<b>Pre-test</b>				<b>Post-test</b>			
	<b>Male 78</b>		<b>Female 44</b>		<b>Male 87</b>		<b>Female 45</b>	
	<b>Number</b>	<b>%</b>	<b>Number</b>	<b>%</b>	<b>Number</b>	<b>%</b>	<b>Number</b>	<b>%</b>
<b>Fasting</b>	15	19.2	20	45.5	15	17.2	20	44.4
Reading books	20	25.6	6	13.6	25	28.7	8	17.8
Sports	25	32.1	0	0	30	34.5	0	0
Others	5	6.4	5	11.4	7	8.0	7	15.6
Don't know	13	16.7	13	29.5	10	11.5	10	22.2
<b>Total</b>	<b>78</b>	<b>100.0</b>	<b>44</b>	<b>100.0</b>	<b>87</b>	<b>100.0</b>	<b>45</b>	<b>100.0</b>

Table 4.31 showed that 15 of male (19.2) and 20 of female (45.5%) control their sexual desire through fasting, 20 of male (25.6%) and 6 of female (13.6%) mentioned reading books, 25 of male (32.1%) mentioned sports, 5 of male (6.4%) and female (11.4%) mentioned other means (forget, the sex) (5.7%), and 13 of male (16.7%) and female (29.5%) did not know.

After health education 15 and 25 of male and female respectively mentioned fasting, 25 male and 8 female mentioned reading books ( $p = .001$ ), 30 of male mentioned sports ( $p = .688$ ), 7 of male and female mentioned others means, and 10% of male and female did not know ( $p = .688$ ).

**Table 4.32****Kind of sexual practices by gender**

N= 188

Response	Pre-test				Post-test			
	Male 42		Female 24		Male 33		Female 23	
	Number	%	Number	%	Number	%	Number	%
Hetero-sex	0	0	12	50	0	.0	10	43.5
Homo-sex	41	97.6	6	25	32	96.9	6	26.1
Masturbation	1	2.4	6	25	1	3.0	7	30.4
Total	42	100.0	24	100	33	99.9	23	100.0

The result showed that 41 of male respondent were (97.6%)homosexual compared to 6 of female (25%), 12 of female were hetro-sexual (50%), and 1 (2.4%) of male and 6 (25%) of female were practiced the masturbation. After Health education the practices of the respondent so 32 of male and 6 of female were homosexual, 10 of female were hetro-sexual, and 1 of male and 7 of female were practiced the masturbation.

**Table 4.33****The sexual invitation****N=188**

Response	Pre-test				Post-test			
	Male 42		Female 24		Male 33		Female 23	
	Number	%	Number	%	Number	%	Number	%
Agree if using condom	0	0	2	8.3	18	54.5	10	43.5
Just agree	11	26.2	2	8.3	0	0	0	0
Think about that	1	2.4	4	16.7	15	45.5	13	59.5
No response	30	71.4	16	66.7	0	0	0	0
Total	42	100.0	24	100	33	99.9	23	100.0

The result showed that 11 male respondents (26.2%) and 2 female (8.3%) accept any sexual invitation, 1 male (2.4%) and 4 female (16.7%) take time to think before acceptance, 2 female (88.3%) accept if the partner use condom, and 30 male (71.4%) and 16 female (66.7%) had no response.

Health education made a significant different, so 18 males (54.5%) and 10 females (43.5%) refuse any sexual invitation without using condom, 15 males (45.5%) and 13 females (56.5%) mentioned that they think about it before acceptance (table 4.33).

**Table 4.34****Multiple partners by gender**

N= 188

Response	Pre-test				Post-test			
	Male 42		Female 24		Male 33		Female 23	
	Number	%	Number	%	Number	%	Number	%
Yes	35	83.3	11	45.8	13	39.4	11	47.8
	P= .001				P= .539			

The result showed that 35 of male (83.3%) compared to 11 of female (45.8%) had multiple partners. Health education changes the practices of male respondent so 13 of hem had multiple partners (39.4%). Table 4.34.

**Table 4.35****Sharing of equipment by gender**

N=188

Response	Pre-test				Post-test			
	Male		Female		Male		Female	
	Number	%	Number	%	Number	%	Number	%
Yes	31	16.5	80	42.6	2	1.1	0	0
	P< .0005				P= 1			

The result showed that the mutual use blades decreased in female than male after health education though it was more than them before health education. so 80 of female (42.6%) compared to 31 of male (16.5%). After health education change the practices of the respondents so only 2 of male shared with other blades (1.1%), and no one of females (table 4.35).

## **Chapter five**

### **Discussion**

This study indicated that although the term AIDS is known by most of respondents but information regarding symptoms of the disease, ways of transmission and prevention measures were not fully understood. This may be due to the lack of information regarding HIV/AIDS in different media in our country and especially to prison inmates. After the intervention the inmates were very aware and their knowledge, attitudes and practices towards HIV/AIDS changed. The theory that has predominated in health education for many years is simple; an increase in knowledge plus a more favorable attitude will lead to behaviour change. The health – generating. Knowledge being the main goal of health education. They suggest health education's concentration on merely providing information has resulted in consistent liabilities throughout its history (Green et al, 1980)

Green and associates believed that health education is a process related to health decisions and practices, knowledge, values, perceptions, and motivation are of course cause of behaviour but the linkages between them is a matter of probability (Green et al, 1980).

Examination of health education programme revealed that the knowledge, attitudes, and behaviour consistency model is widely used in the field. As Wallck has observed common sense tell us that if we want to a change in behaviour, a model that focus on an increasing knowledge or changing of attitudes will ultimately lead to change in behaviour. Hence, an assumption that is widely used by programme developers conducting health education through the mass communication media holds that an increase in



knowledge will lead to a change in attitudes and will result in a change in behaviour (Laurina et al, 1984).

The result coincide with the finding of National Institute of Health (1993), which was designed to evaluate the impact of HIV/AIDS on knowledge, attitudes, and practices among prisoners in Mozambique. A significant increase in knowledge occurred after the intervention. Prisoner with less formal education have had a poorer performance on initial questionnaire (43%Vs 69%  $p < 0.00001$ ) improved after the intervention (41% Vs 24%  $p < 0.00001$ ). Result demonstrated that educational intervention involving health education contributes positively to acquisition of knowledge, attitudes and practices (Vaz.R, 1999).

The result agrees also with the study of John Howard of Metropolitan conducted to determine the level of knowledge and awareness concerning HIV/AIDS, uses of condom and it's distribution, needle exchange in the prison. The result found that only 6% gave the full term of AIDS, 65% of prisoners did not know the relationship between HIV/AIDS. All inmates agreed that education on HIV/AIDS prevention is important for all community members.

The result also coincides with the finding of the study designed by Ali. et al (1996) to determine knowledge and attitudes of women prisoners about HIV/AIDS, they noted that 21% of women were illiterate, 36% did not know that using of condom can prevent HIV transmission.

Also the study coincided with the study designed by Katie et al, (2002), aimed at reducing risky behaviour and stepping stone of STDs/HIV prevention based on empowerment techniques. After the health education The level of awareness increased and the value of condom was recognized.

Another study agrees with this study was designed by Liviana and Ann Burchell to understand the prevalence and determinant of HIV risk behaviours. They found that the majority of the inmates were at risk to HIV through sexual practices and injecting drug use. Where 17% were injecting drugs and they were sexually active, 56% had 2 or more sex partners outside prison and only 14% of them use condom, 6% were paid to have sex in this period. The study recommended the improve of the existing interventions and counseling to reduce risk behaviour (Liviana & Ann, 1999).

UNAIDS (2002), reported that people living with HIV/AIDS face stigma and discrimination in the family, at school, in work place, and in health care settings. Stigma and discrimination had caused people living with HIV/AIDS to feel guilty and shamed, leading in some cases to depression, lack of self worth and despair. The shame and stigma extend to affect the families of people living with AIDS forcing them to withdraw from participation in more positive and constructive social activities.

HIV/AIDS related stigma and discrimination is triggered by a lack of understanding of the disease and myths about how it is transmitted. Despite intensive educational efforts, different sectors and general public still are ignorant of how HIV/AIDS is transmitted and hold misconceptions about the virus. This was clear from the viewpoints of the majority of prisoners of both Kober & Omdurman prisons. Which changed after the intervention.

The result coincide with the study made by Fargeles et al,( 1998) which designed to decrease sexual and drugs-related risk behaviour and to increase use of community resource after release. The results supported the effectiveness of the programme in reducing sexual and drugs related behaviour and increasing use of community resources after release. They

recommended dissemination and continued evaluation of this risk reduction intervention.

UNAIDS report 1999, that there a review of 49 studies covering 18 countries to identify empirical outcome or evaluate the impact of HIV related mass media campaigns in 1996 that most campaigns aiming at individual level goals of knowledge, attitudes, and behaviour changes were generally successful at achieving these goals (UNAIDS, 1999).

The study also agrees with the finding of Roffman, 1997 who reported that in an evaluation of a study in Uganda among gay men, a significant effect of education and counseling including a decrease in unprotected intercourse from 47% to 26% of the men who completed the education programme (Roffman, 1997)

An updated review of study conducted by Wolitski et al, (1997) found substantial risk reduction among heterosexual couple. Health education proved to be beneficial in reducing dangerous sexual practices. Which coincides with the finding of this study, although the outcome of his study in other groups of homosexual men, injecting drug user the result was not online with the present study.

UNAIDS report indicated that among a sample of HIV infected homosexual men in Norway the number of sex partners decreased from an average of 4.3 a year before to 1.6 after health education and counseling (UNAIDS, 1998). This clearly shows the role of H.E in changing the attitudes and behaviour which agrees with the finding of this study and that of Coates (1998) and Choi (1996) .

## Conclusion

- **The prison environment was conducive to HIV/AIDS transmission due to practices of unsafe sex, sharing of equipment and drugs use.**
- **This study revealed that the general level of knowledge about HIV/AIDS among the inmates was inadequate. This may probably be behind mal-behaviour regarding this disease.**
- **Due to absence of HIV/AIDS test infected inmates may pose a serious situation for the transmission of HIV.**
- **Health education made a significance difference in the knowledge, attitudes, and practices of prisoners towards HIV/AIDS (refer to table from 4.2.1 to 4.2.10 and from 4.3.1 to 4.3.6).**
- **From the study there were a need of the health education to raise the knowledge, improve attitudes and promote the practices of the inmates, studies and research to benefit the inmates by the results, voluntary test to determine an AIDS patient.**

## **Recommendations**

- Inmates should receive comprehensive HIV/AIDS education when entry and during their prison term, it should be complementary based on risk behaviour actually occurring in prison notably needle sharing among injecting drug users and unprotected sexual intercourse.
- Clear information should be available to inmates about the way of transmission of HIV and the role of condoms in preventing HIV transmission.
- Encouragement of studies and research in the field of HIV/AIDS in prisons to shed light on successful interventions in prisons.
- Voluntary testing for HIV infection should be available in prisons with and adequate counseling should be available to HIV positive.

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***World HIV/AIDS epidemics***

		1999	2000	2001	2002
People infected with AIDS	Total	5.4 million	5.3 million	5 million	5 million
	Adult	4.7 million	4.7 million	4.3 million	4.2 million
	Women	2.3 million	2.2 million	1.8 million	2 million
	Children less than 15 years	600.000	600.000	800.000	800.000
Number of people living with AIDS	Total	34.3 million	36.1 million	40 million	42 million
	Adult	33 million	34.8 million	37.2 million	38.6 million
	Women	15.7 million	16.4 million	17.6 million	19.2 million
	Children less than 15 years	1.3 million	1.4 million	2.7 million	3.2 million
AIDS deaths	Total	2.8 million	3 million	3 million	3.1 million
	Adult	2.5 million	2,5 million	2.4 million	2.5 million
	Women	1.3 million	1.3 million	1.1 million	1.2 million
	Children less than 15 years	500.000	500.000	580.000	610.000
Total number of AIDS deaths	Total	21.8 million	21.8 million	21.8 million	21.8 million
	Adult	17.5 million	17.5 million	17.5 million	17.5 million
	Women	9 million	9 million	9 million	9 million
	Children less than 15 years	4.3 million	4.3 million	4.3 million	4.3 million

**Source:** World HIV/AIDS statistics (2003): <http://www//avert.org.htm>.  
Worldwide HIV/AIDS (2003): <http://www//UN.org.htm>

*HIV /AIDS surveillance report, 14 January, 2000*

<b>Year</b>	<b>Number of cases</b>
1986	2
1987	2
1988	64
1989	122
1990	130
1991	188
1992	184
1993	198
1994	201
1995	250
1996	221
1997	270
1998	511
1999	517
2000	652
Total	3512

Source: Ministry of health (2000): AIDS/HIV surveillance report, 14 January.

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جامعة الخرطوم - كلية الصحة العامة و صحة البيئة  
استبيان طالبة لنيل دجة الماجستير

دور التثقيف الصحى فى المعرفة الاتجاة و السلوك تجاة مرض الايدز :الموضوع  
فى كل من السجن الاتحادى (كوبير) وسجن امدرمان

- معلوماتك و ارائك فى هذا الاستبيان فى غاية السرية، لاداعى لذكر  
الاسماء ، صدقك فى ملء الاستبيان يقود الى دراسة ناجحة و مفيدة للمجتمع  
ولكم منى جزيل الشكر لتعاونكم معى ..

1/ معلومات عامة

1- الجنس

(1) ذكر (2) انثى

2- العمر

(1) 18 - 23 سنة (2) 24- 29 سنة (3) 30-

35 سنة

(4) 36 - 41 سنة (5) 42 - 47 سنة (6) اكثر

من 47 سنة

3-المستوى التعليمى

(1) امى (2) خلوة (3) ابتدائى

(4) متوسطة (5) ثانوى (6) جامعى

(7) فوق الجامعى

4- دخل الاسرة

5- الديانة

(1) مسلم (2) مسيحي (3) اخر

6- الحالة الاجتماعية

(1) عازب (2) متزوج (3) مطلق

(4) ارمل

7- كم كان عمرك عندما تزوجت

(1) اقل من 20 سنة (2) 20 - 35 (3) 26 - 31

(4) 32 - 37 (5) اكثر من 38 سنة

8- ماهى عددالسنواتك المحكوم بها فى السجن

(1) 1 - 3 (2) 4 - 6

(3) 7 - 9 (4) 10 واكثر

## 2 / المعرفة

- 1- هل سمعت بمرض الايدز من قبل ؟  
(1) نعم (2) لا
- 2- هل تعتقد ان مريض الايدز يمكن ان يكون ظاهرياً صحيحاً ؟  
(1) نعم (2) لا (3) لا اعرف
- 3- هل يمكنك ان تتعرف على مريض الايدز؟  
(1) نعم (2) لا  
اذا كانت اجابتك بنعم كيف ؟  
(1) من الشكل العام (2) من الاعراض فقط (3) لا يمكن التعرف عليه دون فحص
- 4- ماهى معلوماتك عن اعراض هذا المرض ؟  
(1) حمى و صداع (2) نقصان المناعة (3) الضعف العام و الفتور المستمر
- (4) نقصان الوزن (5) قرح فى الاعضاء التناسلية (6) تقرحات فى الجلد  
(7) اسهال (8) اخرى (9) لا اعرف
- 5- ماهى معلوماتك عن مسببات المرض ؟  
(1) الحشرات و الباعوض (2) فيروس فى الدم (3) تلوث الاكل و الشراب  
(5) لا يوجد لة سبب (6) اخرى (حدد) (7) لا اعرف
- 6- ماهى معلوما تك عن طرق انتقال المرض  
(1) من لسعة الباعوض او الحشرات (2) ممارسة الجنس مع شخص مريض  
(3) استعمال ادوات شخص مريض (موس.ضفارة.فرشة اسنان) (4) الحقن بحقنة شخص مريض
- (5) التعايش الطبيعى مع المرضى (6) اخرى (حدد) (7) لا اعرف
- 7- هل يمكن للشخص ان يحمى نفسه من هذا المرض ؟  
(1) نعم (2) لا (3) لا اعرف
- 8- اذا كانت اجابتك بنعم كيف يمكن ذلك ؟  
(1) باستعمال العوازل (2) بالحذر فى الممارسة الجنسية(اختيار الشخص الاخر)

(3) باستعمال الناموسيات و استعمال المبيدات (4) عدم استعمال ادوات الاخرين

(هـ) عدم التعامل مع المرضى اطلاقاً (6) اخرى (حدد)  
(7) لا اعرف

9- هل سمعت بالعازل الذكري من قبل (اقصد الجوانتى اوذلك الكيس الذى يضة الرجل على  
عضوة التناسلى قبل القيام بعملية الاتصال الجنسى) ؟

(أ) نعم (2) لا

10- اذا كانت الاجابة بنعم هل رايتة ؟

(1) نعم (2) لا

11 - من اى مكان يمكن ان تحصل على العازل الذكري؟

(1) مركز تنظيم الاسرة (2) المستشفى / العيادة  
(3) البقالة / الدكان (4) الصيدلية / مركز صحى  
(هـ) مكان اخر (حدد) (6) لا اعرف

### 3/ الاتجاهة

1- هل تختلف معاملتك لشخص مصاب من اخر غير مصاب؟  
(1) نعم (2) لا (3) لا اعرف

اذا كانت اجابتك بنعم لماذا (1) لانى اخاف انتقال المرض (2) لا احب التعامل مع المرضى (3) اخرى

2- هل يمكن ان تشارك شخص مريض بالايذ الطعام؟  
(1) نعم (2) لا (3) لا اعرف

اذا كانت اجابتك بلا لماذا (1) الخوف من انتقال المرض (2) لا احب الاكل مع المرضى (3) اخرى (حدد) (4) لا اعرف

3- هل تعتقد ان الاشخاص المصابين بمرض الايدز يجب ان يتلقوا نفس المستوى من الرعاية الصحية التى يتلقاها غيرهم من المرضى المصابين بامراض خطيرة ام ان مستوى الرعاية يكون اقل او اكثر؟

(1) نفس المستوى من الرعاية (2) اقل (3) اكثر (4) لا اعرف

4- اذا اصيب احد من اقاربك او اصدقائك بمرض الايدز هل تقوم برعايته فى منزلك؟  
(1) نعم (2) لا (3) لا اعرف (4) لا اجابة

(1) لانى اخاف انتقال المرض (3) اذا قمت برعايته فى البيت لن ياتينى احد (3) اخرى (حدد)

5- اذا اصيب احد من عائلتك بهذا المرض هل تفضل ان يكون الخبر سراً؟  
(1) نعم (2) لا (3) لا اعرف (4) لا اجابة  
اذا كانت اجابتك بنعم لماذا (1) حتى لايبعد عننا الناس (2) للمحافظة على وضع المريض النفسى (3) اخرى (حدد)

6- هل تعتقد انه يسمح للاشخاص المصابين بمرض الايدز من العاملين مع اشخاص اخرين كما هو الحال فى المصانع ، المكاتب ، المدارس المحلات التجارية من الاستمرار فى عملهم كالمعتاد ام لا؟

(1) لا يسمح لهم (2) يسمح لهم (3) لا اعرف

لماذا؟ (1) لا يسمح لهم خوفا من انتقال العدوى للآخرين

(2) يسمح لهم لان الاستمرار فى العمل يرفع من روحهم المعنوية

(3) يسمح لهم لان انتقال المرض لا يكون بالتعامل العادى

#### 4/ السلوك

1- هل تمارس الجنس فى السجن ؟

(1) نعم (2) لا

2- اذا كانت اجابتك بلا كيف تسيطر على غريزة الجنس وانت داخل السجن؟  
(1) بالصوم (2) بالقراءة و الاطلاع (3) بالرياضة (4) اخرى (حدد) (5) لا اعرف

3- اذا كان اجابتك بنعم مع من ؟

(1) ذكر (2) انثى (3) اخر

4- اذا طلب منك احد السجناء اشباع غريزة الجنس معه فانت تقوم بالاتي

(1) بالرفض (2) بالموافقة شريطة استعمال عازل ذكري

(3) موافقة من غير شروط (4) تطلب مهله للتفكير فى الموضوع

5- هل تمارس الجنس مع اكثر من شخص واحد ؟

(1) نعم (2) لا

6- كم كان عمرك عندما مارست الجنس اول مرة ؟

(1) 14-20 (2) 21-27 (3) 27-35 (4) اكبر من 35 -

7- هل مارست جنس فى الستة شهور الماضية ؟

(1) نعم (2) لا (3) لا اتذكر

8- هل استعملت العازل الذكري فى اخر ممارسة جنسية ؟

(1) نعم (2) لا (3) لا اتذكر (4) لا اجابة

9- اذا كانت اجابتك بنعم من ارشدك على استعماله ؟

(1) لم يرشدنى احد (2) الطرف الاخر (3) صديق / صديقة (4) اخرى (حدد)

10- اذا كانت اجابتك بلا لماذا لم تستعمله

(1) لم يكن موجودا فى تلك الاثناء (2) غالى الثمن (3) عارض الطرف الاخر على استعماله

(5) لم افكر فى استعماله (6) لا اعتقد انه مهم و يوفر

(4) لا احبة  
الحماية الكافية

11- كم عدد المرات التى استعملت فيها الواقى الذكرى ؟

(1) اغلب المرات (2) تقريبا اغلب الاحيان

(3) احيانا (4) لا استعماله

12- هل تشارك زملائك ادوات الحلاقة او الحقن او الامواس ..... الخ ؟

(1) نعم (2) لا

اذا كانت الاجابة بلا لماذا ؟

(1) لعدم انتقال اى مرض (2) لا احب استعمال ادوات الاخرين

(3) اخرى (حدد) (4) لا اعرف