

**A STUDY ON HIV/AIDS AWARENESS AND PREVENTION AMONGST TEENAGERS
IN ISHAKA MUNICIPALITY, NYAKABIRIZI WARD, CELL 3.**

BY

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DECLARATION

I, Arthur Rakula Onono declare that this is my original work and also affirm that, to the best of my knowledge, it has not been presented in this or any other University for examination or any other purpose.

Where work from other people has been included, acknowledgement to this has been made in accordance to the text and references quoted.

This work forms partial fulfillment of the requirements for the award of the MBChB degree of Kampala International University, Uganda.

Signed.....Researcher

Arthur Rakula Onono

Signed..... Supervisor

Michael Tirwomwe

DEDICATION

I dedicate this work first to the Almighty God who has helped me through thus far and also to my parents, Mr. and Mrs. Onono for their endless support.

ACKNOWLEDGEMENTS

I highly acknowledge the Almighty God whose strength and wisdom have helped me immeasurably towards completing this work. I would also like to acknowledge and appreciate the valuable contribution and support from my lecturer and supervisor Mr. Michael Tirwomwe who has tirelessly guided me through my research.

I am heavily indebted to my family who financially and psychologically have made my studies in medical school possible.

I would also like to thank all KIU-WC, more especially the faculty of clinical medicine and dentistry who equipped me with relevant knowledge and skills.

LIST OF ABBREVIATIONS

KIU-WC- Kampala International University , Western Campus

PEP- Post exposure prophylaxis,

HIV- Human Immuno-deficiency Virus

AIDS- Acquired Immuno-deficiency Syndrome

NGO'S- Non-governemtal organizations.

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND INFORMATION

Human immunodeficiency virus (HIV) is the retro-virus that causes the disease state known globally with the acronym AIDS. AIDS was first recognized in 1981 in Los Angeles when 5 cases of *Pneumocystis carinii* pneumonia in homosexual men were reported to the Centers for Disease Control and Prevention (CDC). HIV is believed to have originated in Central Africa in the 1950s and subsequently spread via the Caribbean to the United States, Europe, and the rest of the world.

HIV is a retrovirus member of the Lentivirinae family. Retroviruses are enveloped RNA viruses characteristically possessing an RNA-dependent DNA polymerase enzyme termed as reverse transcriptase. Two types of virus are known to affect humans; HIV-1 which has a more global prevalence and HIV-2 which has been isolated from some African cases of AIDS primarily those within West Africa.

In its extracellular form, the virus exists as a lipid-enclosed, cylindrical nucleocapsid having embedded on its cell surface glycoproteins gp 120 and gp 41 which form the binding region that attaches to the CD4 receptor on host cells (T-lymphocyte helper cells, activated monocytes and macrophages, and glial cells). Other than the aforementioned glycoproteins, there are some co-receptors which are also of importance to the fusion process, i.e., CCR5 and CXCR4. These co-receptors are of importance such that individuals who have mutations in the CCR5 chemokine receptors are resistant to HIV infection. After fusing with the cell membrane and entering the cytoplasm, the virus loses its envelope, and reverse transcription of RNA to DNA occurs.

Viral DNA integrates into host cell DNA as a latent provirus by a viral endonuclease. If the host cell is latently infected, no infection develops. If the host is actively infected, the proviral DNA is transcribed and translated, producing viral proteins and RNA. The viral proteins assemble and bud (by reverse endocytosis) through the host cell plasma membrane as new virions. The virus disseminates by budding or by cell-to-cell transfer. By appreciating the pathological process behind manifestation

Abnormalities in all components of the immune system can be seen as the severity of HIV disease progresses. The most profound consequence of HIV infection is impairment of cell-mediated (T cell) immunity. HIV binds directly to the CD4 receptor of the T helper cell, resulting in progressive depletion of this T-cell population. As a result, the immune system is less able to (1) mount cytotoxic T-cell responses to virally infected cells or cancers, (2) to form delayed-type

hypersensitivity reactions, and (3) to process new foreign substances presenting to the immune system. Significant impairment of the humoral immune system occurs in most persons infected with HIV. HIV also can infect monocytes and macrophages.

The HIV virus is spread primarily by exposure to contaminated fluids. It has been isolated from blood, semen, vaginal secretions, saliva, cerebrospinal fluid, breast milk, amniotic fluid, cervical cells, and bronchioalveolar lavage fluid. In a 1997 study, 70% of HIV cases were acquired from sexual intercourse, 27% from intravenous drug use, 3% from blood transfusions, and only 1% from perinatal transmission.

1:2 PROBLEM STATEMENT

The scourge that is HIV/AIDS is of global importance and in some areas of the world, an issue of national significance more so within developing nations where the ability to contain the spread and transmission of the disease is hampered by both lack of adequate awareness amongst the population on ways of minimising chances of disease spread and lack of both basic infrastructure and tools with which can be employed in minimizing its spread. The resulting effect of this is a strain on the health resources due to a large number of patients suffering from secondary illnesses associated with HIV/AIDS, increasing number of orphans , inability to maintain employment and the obvious burden of social stigma against those with the disease which is usually due to immense ignorance on the part of those stigmatizing on those with the illness.

As such, there is need to assess how such factors affect the long term control and management of HIV/AIDS and how the new found information can be employed in the management of HIV/AIDS.

1:3 STUDY JUSTIFICATION

The long term control and management of HIV/AIDS must take into account factors which lead to its spread. The age groups mainly associated with its spread includes both teenagers and the youth and as such, this research seeks to determine how informed the aforementioned age groups and in particular the teenagers of Ishaka municipality, Nyakabirizi ward , cell 3 are aware of the role they can play at controlling the spread of HIV/AIDS and as such its long term management.

1:4 STUDY OBJECTIVE

1:4:1 GENERAL

To determine how aware the teenagers of Ishaka municipality, Nyakabirizi ward, cell 3 are aware on methods of minimizing the spread of HIV/AIDS.

1:4:2 SPECIFIC

- To determine whether methods of minimizing HIV/AIDS spread amongst the sexually active are known.
- To determine what factors affect lead to failure of pursuing approaches which ultimately minimize spread of HIV/AIDS .
- To determine the degree of knowledge on the available methods of disease prevention

1:4:3 RESEARCH QUESTIONAARE

- i. Are you sexually active? (Yes) (No)
- ii. Do you regularly use condoms during your sexual relations ? (Yes) (No)
- iii. On initial though, after un-protected sex, most teenagers would worry about (a baby) (

HIV/AIDS transmission

- iv. Are you aware of what a HIV/AIDS test strip is ? (Yes) (No)
- v. Are you familiar with post exposure prophylaxis (PEP) ? (Yes) (No)
- vi. Do you know a place where you can easily access condoms ? (Yes) (No)

vii. Do you know a place where you can easily access PEP or a HIV test strip ? (Yes) (No) (

Still don't know what PEP or a test strip is)

viii. Do you have more than one sexual partner ? (Yes) (No)

CHAPTER TWO

2:0 LITERATURE REVIEW

HIV/AIDS is a clinical syndrome in which there is immune compromise secondary to the destruction of cell mediated immunity. The net effect of this is that the body becomes un-able to mount a significant fight against pathogens which attack it and as such, health becomes compromised as diseases which would have been easily fought off in one with strong immunity take chance and cripple the individual. The manifestations of the disease are broad , all organ systems standing at risk of being attacked by a disease process. Morbidity and mortality stand high more so in under resourced settings where disease spread is considerably higher and control and management considerably poor.

It is against such a background that as a people and not necessarily simply , health care professionals, that we must strive to play our little part in controlling the spread of HIV/AIDS by helping to eradicate ignorance on how easily the disease can be spread amongst population groups who are ill equipped in both knowledge and resources.

If we can be successful in controlling the disease spread process then ultimately , probably in the long term , we can at least be able to contain the disease itself and as such , minimize the disastrous effect it has had on this generation.

2:1 RISK FACTORS FOR HIV/AIDS

It would be inappropriate for the purpose of this research not to acknowledge that the greatest risk factor towards the spread of HIV/AIDS is being young and in particular being young with respect to sexual activity. Earlier on, it had been noted that it is the teenagers and the youth who are most affected by disease spread. We can blame it on peer pressure, on having impressionable minds , on hormone surges or even on the effect of Western culture in distorting African values with respect to sex, whatever cause we attribute this to ,there is no denying that our teenagers and our youth are sexually very active. Having multiple sexual partners is considered a standard , engaging in pre-marital sexual relations is considered a pre-requisite for marriage itself, condoms are used not really to minimize sexually transmitted

diseases but to minimize risk of pregnancy, methods of disease spread minimization such as testing HIV/AIDS status through test strips or the use of HIV/AIDS prophylaxis is left for is left majorly for the limited few who are considered to be in the know such as health professionals thus locking out a vast majority of the population who are in dire need of the same information but are just extremely ignorant .

We cannot talk about HIV/AIDS control and management without considering how to address such risk factors and better still, adopting measures which will ultimately address these risk factors.

2:2 APPROACH

A questionnaire was thought of as being most appropriate for the purpose of this study because it offered a subjective analysis to the questions being queried. It was thought that it would offer a better appreciation of how aware the general population and in particular the teenagers of the study area were aware on how possible it was to minimize HIV/AIDS spread and what approaches could be taken to minimize this spread. The questionnaire was handed out to 100 teenagers of the study population and the results obtained.

CHAPTER THREE

3.0 METHODOLOGY

3.1 STUDY DESIGN

The study will be questionnaire based, selecting a random population group of students of Ishaka Vocational High School from Senior 3 right through to Senior 6 taking a sample population of 25 students in each class to make a total of 100 questionnaires. The study date being the weekend of 22nd February 2014. It took one day to collect my data.

3.2 STUDY SETTING

The Study will be done in Ishaka Vocational High School, which is located in Ishaka town, Bushenyi District, in Uganda. Bushenyi District is approximately 337 kilometer by road, southwest of Kampala the capital city of Uganda. The district is estimated as per the 2010 to have a population size of 241,000 people.

3.2.1 Geographical location

Bushenyi District lies between 00° N and 00° 46' S of the equator and 29° 41' East and 30° 30' East of Greenwich. Bushenyi District headquarters are located 340 kms from Kampala in the South Western part of Uganda. Bushenyi District neighbors the districts of Rubirizi in the North, Buhweju and Sheema in the North East, Sheema in the East, Mitooma in the South West and Sheema in the South. The district has a land area of 3,949 square kilometers and lying between 910 – 2,500 meters above sea level. The main physical features within the district include natural tropical forests of Karinzu and Imaramagambo covering an area of 784 square kms. Arable land covers 2,215 square kms, open water bodies cover 372 square kms and wetlands covering 183 square kms.

3.2.2 Population Dynamics

Bushenyi District has a population as projected in 2010 of 117,000 and 124,000 male and female respectively totaling to 241,000 people. The population distribution in rural and urban is projected to stand at 89 per cent rural and 11 per cent urban. Importantly though, the urban

population is projected to be almost 1:1 male to female ratio. The population density stands at 282 people per square km with a household size of 6.

3.2.3 Health indicators

- Life expectancy 51.8 years (2007 estimate).
- Infant mortality rate 67 deaths per 1000 live births (2007 estimate).
- Maternal mortality rate 510 per 100,000
- Doctor - patient ratio 1: 23,000
- Distance from the nearest health center 4.8 km
- Fertility rate 6.9 children
- Average household size 4.7 persons
- Literacy rate 71.6% (2005 estimate).
- Access to latrine facilities 82.6%
- Safe water coverage 60.9%, urban areas 93% and rural areas 56%

(Uganda Population and Housing Census Report 2002)

3.3 STUDY POPULATION.

The target population will be teenage students in senior school and in particular those of Ishaka vocational High school with the study date being 22nd February 2014.

3.4 SAMPLE SIZE DETERMINATION

The sample population will be determined by a random process. The school allows its students to choose as to what they want to wear to class on Saturday for afternoon prep between their official school shirts or their physical exercise T-shirt uniforms . Each class had on average 45 students. The sample selection settled on selecting those who had worn their physical exercise T-shirts to class that particular afternoon. 100 questionnaires were distributed equally among the four classes taking on this approach. Students were asked to refrain from sharing answers and were given one minute to answer the simple questionnaire questions.

3.5 SELECTION CRITERIA

3.5.1 Inclusion criteria

- Being a student between senior three to senior six.
- Having worn a physical exercise T-shirt to class on that particular afternoon.

3.5.2 Exclusion criteria

- Being in the lower classes i.e, senior one or senior two.
- Having worn a school shirt to class that particular afternoon.
- Those who exceeded the one limit time frame to answer the questionnaire.

3.6 DATA COLLECTION

Data will be collected using a questionnaire. (Annex 1) on the afternoon of 22nd February 2014.

3.6.1 SAMPLING PROCEDURE

Random distribution of the questionnaire was done

3.6.2 STUDY INSTRUMENT

A data collection sheet will be employed.

3.7 DATA ANALYSIS AND PRESENTATION METHOD

Data will be analysed and presented still on Microsoft Word .Tables , charts and graphs where needed will be introduced and if deemed not will be thoroughly expounded upon in the literature.

3.8 ETHICAL CONSIDERATION

- The guidelines set out by KIU - IREC shall be adhered to.
- The study will be carried out only after consent from Ishaka Vocational High School, allowing me authority to interact with their students.
- Confidentiality of patient's information will be strictly adhered to.
- Permission will be sort where disclosure of patient's information is required.

3.9 STUDY LIMITATIONS

- Apprehension amongst the study population especially when they learnt it was all about HIV/AIDS .
- Insufficient funds to carry out the research
- Time limitation

3.10. TIME FRAME

- The activities will be done in one day, the afternoon of 22nd February 2014.

CHAPTER FOUR

SUMMARY

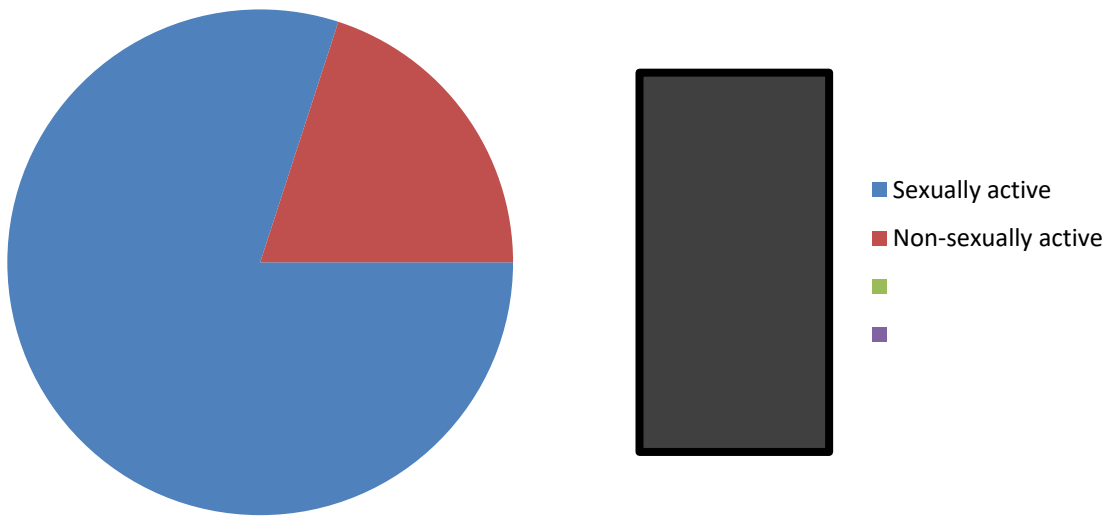
Of the hundred questionnaires given out 4 were ruled ineligible for use because the respondents took longer to answer their questionnaires beyond the one minute time frame. The time frame was important in minimizing sharing of information amongst the study population as well as eliciting rapid honest answers from the respondents without giving them time to think and alter their results thus giving 'politically correct' responses. A vast majority of the population was sexually active, 80%, of those who were active nearly 90% claimed to use condoms frequently however an alarming percentage, 85%, were un-aware of other methods of minimizing HIV/AIDS spread other than through condom usage.

With respect to condom use and its relationship to pregnancy or HIV/AIDS transmission, the verdict was half-hearted as 56% claimed that they would be immediately concerned about a baby while 44% claimed they would initially be concerned about HIV transmission.

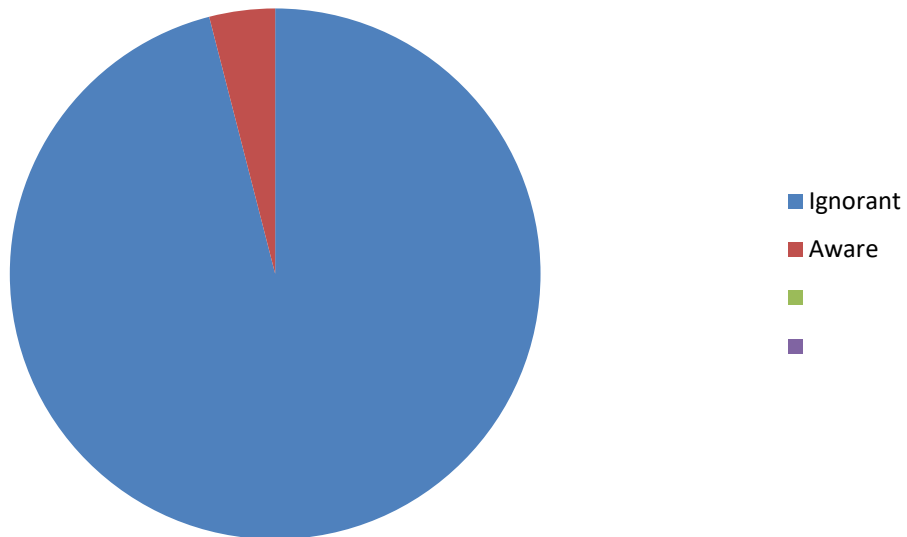
Awareness on prophylactic approaches through the use of HIV test strips and or of obtaining post exposure prophylaxis following un-protected sex was at an all time low as a vast majority of them did not know what a HIV test strip was, 96% nor had they heard of post exposure prophylaxis, 92%. As such, the results on where to obtain services for such things was remarkably low 98%. Incidentally, all admitted to at least knowing where to easily access condoms.

84% agreed to having multiple sexual partners.

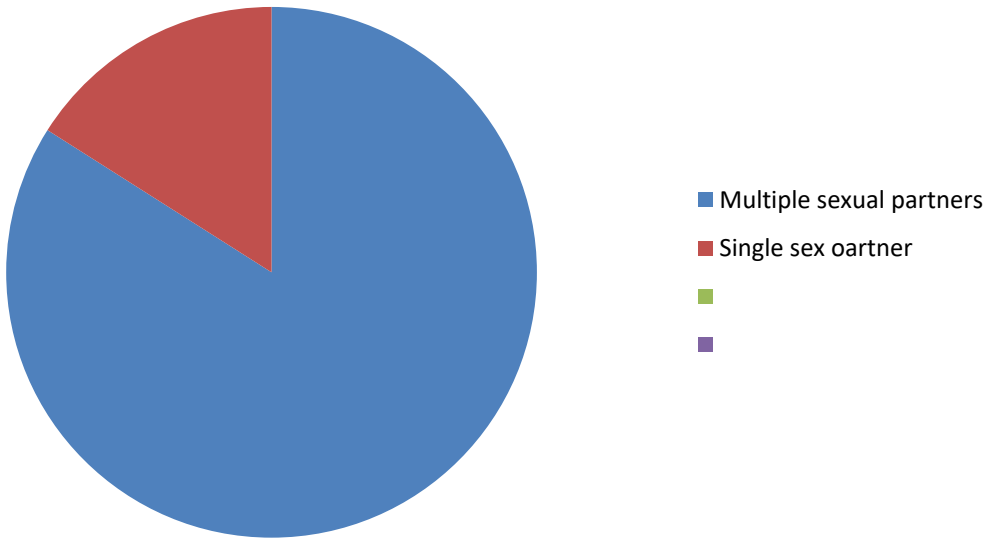
Sexual activity



AWARENESS ON WHAT A HIV TEST STRIP IS



NO. WITH MULTIPLE SEXUAL PARTNERS



CHAPTER 5

5:1 DISCUSSION

Compelled I am to boldly state that HIV/AIDS is still going to be with us for a long while. The study population was taken from a group of teens in high school and they showed a gross lack of adequate knowledge with which to arm themselves against HIV/AIDS spread which ultimately lead to the question, if the educated are lagging behind in the pursuit of relevant information which may help them on such a pertinent issue what chance do the other majority of poorly educated, poverty stricken group of the population out there stand in the same fight ?

The level of ignorance exhibited suggested more still needs to be done in heightening awareness in minimizing disease spread so that its control may take on a bi-pronged approach instead of the single prong approach it currently has . A lot is being done with respect to drug research to curb the disease and the disease process at the cellular level. If more can be done at targeting the disease process at its source through minimizing its spread to widespread campaign awareness camps then its toll on both the local economy and at the familial level and at the national and international level , then that will go a long way in curbing its negative effects.

Education should be not centrally designed to target academic growth, it should also look into ways of sustaining the human race. The results obtained show that 96% and 92% of the sample population had not heard about HIV test strips nor PEP respectively. Considering the sample population was a group of budding intellectuals it would then be proper to ascertain that if they stood so ignorant then we already fighting a lost battle.

5:2 CONCLUSION

In the last quarter of the last century, The Republic of Uganda was able to turn the tide against HIV/AIDS through massive awareness campaigns. It was able to slow down the spread of the virus which was eradicating its population, more so those in the rural areas through massive widespread campaigns educating the masses on what the disease was all about, how to recognize some of its overt symptoms , how to minimize acquiring it and how to manage it. The human race is a forgetful lot, they have become less worried of HIV/AIDS transmission and instead fear un-wanted pregnancies more.

To prevent it from turning into the national disaster it once was , the government, non-governmental organizations and individuals with the technical know-how must step up to the plate and help arrest this growing ignorance towards HIV/AIDS and its control and management so that it does not grow out of hand.

5:3 RECOMMENDATIONS

- The government in partnership with NGO's and persons within the health services must help heighten HIV/AIDS control and prevention through awareness campaigns.
- Educational institutions must look into ways of facilitating student knowledge on transmission of HIV/AIDS and how this can be minimised as ultimately if thi continued ignorance persists their students will fall victim to a disease which could have been avoided had they been informed.
- Facilities which trade in or offer items which play a role in prophylactically mininising HIV/AIDS spread such as HIV strips or PEP should be better known by the public.

ANNEX 1 (QUESTIONAREE)

- i. Are you sexually active? (Yes) (No)

- ii. Do you regularly use condoms during your sexual relations ? (Yes) (No)

- iii. On initial though, after un-protected sex, most teenagers would worry about (a baby) (

HIV/AIDS transmission

- iv. Are you aware of what a HIV/AIDS test strip is ? (Yes) (No)

- v. Are you familiar with post exposure prophylaxis (PEP) ? (Yes) (No)

- vi. Do you know a place where you can easily access condoms ? (Yes) (No)

- vii. Do you know a place where you can easily access PEP or a HIV test strip ? (Yes) (No) (

Still don't know what PEP or a test strip is)

viii. Do you have more than one sexual partner ? (Yes) (No)