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**Drivers that Influence Susceptibility to HIV Infection
among Students of Higher Institute of Agriculture and
Animal Husbandry (ISAE) - Rwanda**

**A Research project submitted to Larenstein University of Professional Education
in Partial Fulfilment of the Requirement for the Degree of Master of Management
of Development, specialization Rural Development and HIV/AIDS**

By

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Dedication

To GOD (Allah);

To my deceased parents;

To my brothers Hassan NSHIMIYIMANA and Ahmed NKURUNZIZA;

To children, Hussein MIVUMBI, Zuhla BAGIRINKA, Yaslah, Keïci, Bébé and

To Benita Elyse MUKABAZAMBANZA who loves me and whom I love.

This research is dedicated to them.

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Abbreviations

AAU	Association of African Universities
ABC	Abstinence, be faithful and Condoms use
APCM	Animal Production and Chain Management
ARVs	Antiretroviral drugs
CNLS	Commission National de lutter contre le Sida/National Commission against Aids
HIV and AIDS	Human immunodeficiency virus and Acquired immune deficiency syndrome
ISAE	Institut Supérieur d'Agriculture et d'Élevage (Higher Institute of Agriculture and Animal Husbandry)
KIE	Kigali Institute of Education
LAMS	Lycee Agricole Meidji o Sekou
MINECOFIN	Ministère de l'Économie et des Finances/ Ministry of Finance and
MINEDUC	Ministry of Education
MINISANTE	Ministère de la Santé/Ministry of health
MOD	Management of Development
NISR	National institute of Statistics of Rwanda
OP-NACC	Office of the President-National Aids Control Commission
PSI	Population Service International
RDA	Rural Development and HIV/AIDS
RDHS	Rwanda Demographic and Health survey
RWf	Rwandan francs
SFAR	Students Financing Agency of Rwanda
TRAC Plus	Treatment and Research AIDS Centre
UNFPA	United Nations Population Funds
UNGASS	United Nations General Assembly Special Session
VCT	Voluntary Counselling and testing
WB	World Bank
WUR	Wageningen University

Abstract

This research on drivers that influence susceptibility to HIV infection among students of Higher Institute of Agriculture and Animal Husbandry (ISAE)-Rwanda was conducted in August 2010 in two ISAE campuses. It had an aim of contributing towards effective academic performance of ISAE students and attainment of the Institute goal by assessing socio, economical, environmental and political drivers that influence students' susceptibility to HIV infection.

This research used different methods which are anonymous questionnaire distributed to students, interview with Director and responsible of students and nurses in both campuses. They have been selected basing on their responsibilities and professional relationship with students. In this research, observations in both campuses and desk study have been also used so as to collect more data from various sources. The data collected was analyzed basing on clusters formed on the basis of sex and age. However, four groups have been made. The first group is composed of male students aged 20-25 years old, the second by male students aged 26-31 years, third is female students aged 20-25 years and the last is made up of female students aged 26-31 years old.

After the analysis of the collected data, it was revealed that an average of 85% of respondents scored higher marks in answering questions related to the knowledge on HIV and AIDS while an average of 15% of respondents got low marks in the same questions. This indicates the gaps regarding HIV and AIDS related information especially on AIDS related diseases, HIV transmission and diagnosis through appearances. Looking at the analysis, young students aged 20-25 years old, both male and female have less knowledge considering to the ones aged 26-31 years old. This difference is not significant and it cannot be generalized to the whole ISAE students because the sample size is small.

In this research, respondents revealed that they know how HIV is transmitted and prevented. The commonly known main ways used and advocated in Rwanda are abstinence, condom use and faithfulness.

Respondents know that HIV testing is necessary and it can help to plan for future, but some of them are still scared of having HIV testing due to their previous sexual experiences, social stigma they can face once they know their HIV positive status and thinking that it is not necessary if they have never been involved in sexual relationships or because they trust their sexual partners.

Through analysis of this research, it was found that factors which influence HIV susceptibility to students have roots in different sources including economical needs. Almost 80% of respondents are from poor families and most of them get money from parents, SFAR, relatives and friends. They reported to spend more money than what they get from known sources.

The other factors that influence HIV susceptibility to ISAE students are based on environment. ISAE is located in remote area, near business centre and Congo and Rwanda boarder, everyone in surrounding areas wish to come and courtesy with students who look more civilized. ISAE students live in different conditions, an average of 11% of the respondents live inside campuses while an average of 89% live out of the campuses. They spend time with various people in different places such as canteens and pubs. Some students play sports and others prefer to go and visit their colleagues or people where they can get money while others visit their lecturers in order to negotiate marks.

Above all, this study revealed that socio-cultural aspects play a great role in increasing ISAE students' susceptibility to HIV infection. Students do not talk about HIV and AIDS anywhere with anyone as it looks as a taboo in Rwandan culture. Students are involved into sexual intercourses in favour of promises from students, older people commonly known as sugar

daddies/mammies. This involvement with multiple sexual partners increases respondents' susceptibility to HIV infection. Use of condoms is very limited as the access is not equal to everyone especially students who live out of campuses. Parties and other related ceremonies found to be one of the most times to increase sexual relations. Respondents said to receive more sexual proposals during parties of their colleagues, in birthdays, Christmas, New year and others national parties. Respondents also said that they got sexual proposals during funeral discos, where others are mourning, some profit this time of sorrow and get chances of socializing and then make sexual proposals.

It has been noticed that ISAE as an institute of higher learning has no any special program regarding HIV prevention to either students or staff. Opportunities which may be used in responding to HIV and AIDS are not explored. Policies and rules for students' protection especially female who are supposed to live in campuses hostels are not applied due to the economical limitations. E.g. According to the Ministry of Education (2003) all of new female students have to live in campus hostels.

After assessing all of those factors, it has been noticed that respondents and all ISAE students in general are exposed to the risk of getting HIV infection due to the fact that ISAE commitment to protect them from HIV infection is limited. In addition to this, students have their daily economical needs which are not satisfied such as their expenditure and income. Respondents also have their own determinants which may increase or decrease their susceptibility to HIV infection. Those determinants are their personal behaviour and their level of constantly judging and making decisions. The last finding was the social drivers which are rooted into culture beliefs and norms such as seeing sex as taboo and peer pressure, living far from families and gender imbalances between male and female students.

On the line of contributing to the effectiveness of academic performance for ISAE students and attainment of the Institute goal, this research suggested different recommendation to students, parents, ISAE and local authorities in order to combine efforts and reduce ISAE students' susceptibility to HIV infection and thus achievement ISAE goals.

Chapter 1: General Background

1.1 Introduction

HIV is a virus which attacks human being and causes AIDS. It affects all of sectors which make it to be a serious global issue. It is also a crisis to organization where staff can be infected with HIV or affected by AIDS impacts and this affect organization output. MINEDUC (2003) stated that 'HIV/AIDS is one among the biggest health problems in Rwanda. Responding to this epidemic by either preventing or control through different strategies and programs is one of the country's priorities and best funded area in Rwanda'.

According to Kelly (2000), HIV and AIDS affects education system on different ways.

It affects the demand for education: There are fewer children to educate, fewer wanting to be educated or fewer who can afford to be educated. It also affects the supply of education and the quality of educational process. It affects the management with the risk that the whole system may become disorganized, paralyzed by fear or lack of what is to be done. It also reduces the resources available for education'.

In this research, the aim is to find out how students in Higher Institute of Agriculture and Animal Husbandry are susceptible to HIV infection. The outcome from this research is to provide a clear picture on understanding various drivers that influence ISAE students to be involved in risk situation where they may be infected with HIV. This understanding however, contributed to suggest possible and applicable recommendation to the concerned parties.

This research is a product of combined information collected from ISAE website, annual reports, action plans, performance contracts, face to face interview with Directors of students and Institute nurses, responses from randomly selected students-respondents, observation, my own experience, and desk study on different internet information, notes and readers from lecturers of rural development and HIV/AIDS modules and books related to the topic of this research.

This research gives an overview on HIV and AIDS in Rwanda in general and on ISAE in particular regarding HIV susceptibility to students. It discusses involvement of students of ISAE in risk situation and compares the findings with other studies done by other authors in the line of the HIV susceptibility to students. This research put emphasize on data collection, analysis and interpretation of the findings. It ends with conclusion and recommendations which can be applied in the similar context or may contribute to the responses in line of reducing HIV susceptibility among students of ISAE. The next part is giving information on HIV and AIDS in Rwanda, education system and structure of the study.

1.2 HIV and AIDS in Rwanda

In RDHS (2006 cited in UNGASS 2007), In the Rwanda Demographic and health survey carried out in 2005-2006, they found that Rwanda is one among developing countries which have been affected by HIV and AIDS. 'The prevalence in general public aged between 15-49 years is 3%. In urban area is 7.3% while in rural areas is 2.2%. The HIV prevalence in women is 3.6% while in men it is 2.3%'.

HIV is not new in Rwanda; in the 2005 annually report from MINISANTE (2005) it is written that 'the 1st case of HIV positive has been found in Rwanda in the hospital of Kigali in 1983'. From that time, the policies for responding to HIV and AIDS in Rwanda have been based on teaching ABC theory. In this line, a multi sector approach to respond to HIV and AIDS in Rwanda has been used and it has also been applied in education sector in order to prevent HIV infection among students and staff.'

Universities in Rwanda should be involved in responding to HIV and AIDS because it is ravaging education sector in many African countries as it is said by Daniel (2008) that 'The educational sector in general is being hit several-fold by the HIV pandemic, but there are paramount, namely that the pandemic threatens the supply, demand and quality of education at the very moment Africa is striving to achieve education fall all by 2015'.

The severity of HIV and AIDS in universities depends on various factors such as their economical status, poor perception to the effects of HIV and level of remaining reluctant to join other institutions in programs of responding to HIV and AIDS. Responses to HIV and AIDS depend on the understanding of the HIV and AIDS effects to the institution by the administration which is responsible for the staff and students and the achievement of the university objective. According to the World Bank (2001) 'educational institutions remain in the dark concerning the HIV and AIDS on their campuses.' It is in this line that this research wants to assess drivers which influence ISAE students' susceptibility to HIV infection in both campuses so that findings can contribute to measures of reducing level of susceptibility to HIV infection among ISAE students.

1.3 Education system in Rwanda

Education system in Rwanda is divided in four levels which are primary (6 years), junior secondary (3 years) senior secondary (3) and university (4, 5 or 6 years depending on the program). Language of instruction is English in all schools. Some schools are boarding while others students study and daily go back into their families or some mix both alternatives. Curriculum is designed in the ministry and it can be adapted by teachers. In universities the system of evening programs has been established in many universities. Most of the students in these evening programs are employed and they attend universities in order to upgrade their academic qualifications. This implies economical and social status (marital status, age, income) imbalances among university students. Use of media such as internet, newspapers, radio, TV, are limited considering to the number of students in campuses which result in limiting the dissemination of any information including one on HIV and AIDS to students.

1.4 ISAE Background

According to ISAE (2007) The Institute of Agriculture and Animal Husbandry (ISAE for its French acronym - "Institut Supérieur d'Agriculture et d'Élevage") states that

ISAE has mission of teaching, research and technology transfer. It has a vision of becoming a centre of high standards and influence in education, research and technology transfer in agriculture, animal husbandry, veterinary medicine, agricultural products development and processing and to becoming a major player in rural economic transformation by 2010.

ISAE has two parallel hierarchies' structures: The first is characterized by autocracy in supporting staff with top down power and second by democratic, with bottom up power in academic staff. This structure makes ISAE to be in complex environment which requires the decentralization of decisions to the highly trained individuals especially in agricultural and in animal sciences related fields. ISAE as a governmental organization, competition, creativity and innovation is not part of daily administration life. Staff routinely work and get their regular salaries from the government. Clients are mostly students from the National examination council which selects students who successfully performed their national examination ending senior secondary school and who fulfil the conditions of admission in ISAE, and these selected students are sent to ISAE. Among them, some are supported by government (SFAR) and others support themselves. ISAE (2009) reported that 'in 2009 academic year, students supported by government were 70% of the total number of students while 30% were private

students'. The private students pay tuition and living fees by themselves. Students are dispatched into two campuses, one in Musanze and the second in Rubirizi (see figure 2 and Table 1) ISAE teach technicians who through their increase and participation in agricultural development and animal sciences related activities, will reduce agricultural challenges that Rwanda faces such as small farming operations, rudimentary techniques so as to contribute to the poverty alleviation towards sustainable development of Rwanda.

1.5 Problem statement

According to ISAE (2007) in the strategic plan 2010-2015, ISAE has vision of becoming a centre of high standard and influence in education, research and technology transfer in agriculture, animal husbandry, veterinary medicine, agricultural products development and processing and wants to become a major player in rural economic transformation and it is expected to contribute to the Rwandan vision 2020 especially on economic development and poverty reduction of the country. However, to achieve this objective, the institute admits mainly national students aged 20-25 years of age and this range is known to be more infected considering to other ranges of age as it is stated by UNFPA (2005) that 'of the 15-24 year old young people living with HIV, 63% live in Sub Sahara Africa.' ISAE students are in that range of years and this put them into the group of the most affected if we consider the UNFPA statement above. In addition, ISAE admits also mature students from different institutions. These students are well off compare to the normal students because they are paid by their organisations.

In ISAE, students live in or out of the campuses, some are financially supported by government (SFAR), others by their organisations while others are supporting themselves. This may lead the last to find other means to get any support which can help them to fulfil their financial needs and they may be engaged in sexual relations with rich people who can support them financially and at that time they are in risk situation of getting HIV infection due to weak position they in regarding negotiating safe sex. World Bank (2001) states that,

the university in Africa is a high-risk institution for the transmission of HIV " Sugar daddy" practices, sexual experimentation, prostitution on campus, unprotected casual sex, gender violence, multiple partners and similar high risk activities are manifested to a greater or lesser degree.

The factors listed above make ISAE students to be more susceptible to HIV infection. Depending on HIV prevalence rate in Rwanda which is 3% for the people who have been tested, and considering the 2465 students in ISAE, it is possible to assume a more or less number of 74 students who are HIV positive.

However, if nothing is done to prevent or to cut the chain of transmission, more students will be infected leading to illnesses which will increase the medical expenses on the account of ISAE. The illnesses also will lower the students' academic performance and as a result ISAE will not achieve its objective and vision stated above.

Research questions and sub questions

This research will be based on answering the research questions below:

Main question 1: What are socio-cultural, environmental and economic drivers in and outside campuses which put ISAE students into risk situation of getting HIV infection?

Sub questions

1.1 What are socio cultural drivers to ISAE students which put them into risk of getting HIV?

1.2 What are economical drivers to ISAE students which put them into risk of getting HIV?

1.3 In which situation university students are more engaged in risk behaviour in campus and outside the campus?

Main question 2: To what extent do ISAE authorities are committed to prevent HIV infection among students' community?

Sub questions

2.1 What knowledge exists among ISAE authorities regarding students' risk of getting HIV infection?

2.2 What are measures available in ISAE for preventing HIV in student's community?

1.7 Conceptual framework

For the better understanding the context of this research, I find it necessary to explain the framework in which the key words for this research are used in.

- **Drivers:** Relates to the structural, social, cultural and environmental factors which are not easily measured or to be stopped. These factors facilitate or increase likelihood of being infected with HIV.
- **Susceptibility to HIV infection:** According to Barnet and Whiteside (2006) it refers to any set of factors determining the rate at which the epidemic is propagated. In the context of this research, susceptibility is used to refer to any action or features that increase the likelihood of students to be infected with HIV.
- **Social drivers** In this study, refer to the cultural norms, values, beliefs, behaviour and attitudes which may influence HIV susceptibility to students. It also refers to their culture as individuals living in the same or different conditions and the way they interact each other.
- **Economical drivers** point out anything related to money earned through paying activities, donation or long and short credit from various sources. They go hand in hand with expenditure which is regarded here as money used to pay different basic needs such food, clothes and participating in social activities.
- **Environmental drivers** refer to the location settings and its surrounding people, personal or private infrastructure available to facilitate or to complicate living conditions.
- **Political drivers** in this study are related to authority commitment regarding application of policies, rules and regulation and level of exploring opportunities regarding HIV prevention.

- **Sexual temptations:** In this study, sexual temptation is used to describe any activity, gift, help, promise given to a person with intention behind of exciting, seducing and later have sexual relationship with him/her.

Interlink of those factors increases the level of HIV susceptibility to students and they can aggravate the living condition and institute operation in general as it is views on the figure 1.

This research has an aim of assessing various drivers that influence ISAE students into risk situation which increase their susceptibility to HIV infection. These drivers are categorised into two parts which are the specific drivers to the institute and drivers to students. The drivers to both ISAE and students are based on social, economical, and environmental factors. In addition to that, political factors are manly regarding institute on the side of implementation of HIV prevention measures. Those drivers on both sides have different influences which have effects on behaviour of students inside or/and outside the campuses as they have effects to the institutional operation regarding responses to the HIV infection among students.

1.8 Limitation and delimitation of the research

This research had not assessed HIV prevalence rate of students in ISAE because this is personal decision to declare HIV status and in addition to that, this research was focusing only on likelihood of students to be infected with HIV. It would be better to include all of the ISAE students in order to have a general conclusion which can be applied to all of the students but this could not be possible within the timeframe and budget constraints. The result however, is based only on randomly sampling which provides information from thirty-six (36) students and four (4) administrative staff from ISAE, selected basing on their professional responsibilities. ISAE has 12 departments divided into 3 faculties (see annex 1) and I decided to randomly take 3 students per each department so that I can have a survey for my research. The total number of students is 36. Almost 85% of the total sample has been taken from the main campus of ISAE located in Musanze (Northern Province) and 15% has been taken from campus located in Rubirizi because the both campuses do not accommodate the same number of students. (2115 students in Musanze and 350 students in Rubirizi (more detail in chapter 3)

1.9 Research implementation and outcome

This research was designed to identify various drivers that influence students of Higher Institute of Agriculture and Animal husbandry (ISAE) to be engaged in risk situation where they can get HIV infection. During this research, all administered anonymous questionnaires were filled and brought back to me. Interviews were conducted smoothly and the results are detailed in the chapter 4 of this research. The information collected was based on what students know about HIV and AIDS and what they do inside or outside campuses and why they do practices which can put them into risk of getting HIV infection. It also identified what ISAE authorities know on HIV infection among students and different measures that they put in place in order to prevent HIV in students' community. Lastly but not least, this research draws general conclusion and recommendations to students, parents, ISAE and local authorities on what can be done in order to reduce ISAE students' susceptibility to HIV infection.

Chapter 2: Literature review

2.1 Introduction

This chapter gives emphasize on different information related to HIV and AIDS in sub-Saharan Africa and in Rwanda in particular, it also looks at how education context and life in campuses can facilitate the spread of HIV among students community.

2.2 HIV and AIDS in Sub Sahara Africa

In the research carried out by UNAIDS (2004 cited in Barnet and Whiteside 2006) found that,

Sub-Sahara Africa region is importantly hit by HIV/AIDS considering other world regions. Of estimated 39.4 million people living with HIV/AIDS at the end of 2004, 25.4 million or 64.5% were in Sub-Sahara Africa; of 3.1 million [2.8-3.5 million] deaths in 2004, 2.3 million were Africans.

HIV and AIDS does not appear and kill people within one day or as an earthquake, it is a process where it starts and continues its development, whether infected person is aware or no. The fact that in Sub Sahara Africa people failed to respond effectively to the epidemic this has continuously effects to the next generations in all life sectors such as social, economical, environmental, education and political. People are not similarly affected at the same level, the gravity of HIV and AIDS related disease depends on a number of factors such living conditions which are not the same to all of the people. In Sub-Sahara Africa, know as poor part of the world, some people have access to ARVs while other cannot. This inequalities exacerbate impact on infected people, their households, communities, societies, public and private services and finally slow down the whole development of Sub Sahara Africa.

2.3 HIV and AIDS in Rwanda

Rwanda is a non-coastal country commonly known as a country of thousand hills. It is situated in central Africa and it has 26.338 square kilometres. It has five provinces namely Kigali city, Northern, Southern, Western and Eastern provinces (Annex V) Despite all of the efforts done, HIV and AIDS is still a problem to the in all of the different groups of Rwandans. HIV prevalence is higher among female than in men. Multiple sexual partners, number of STDs, are also on high level considering to men. Their knowledge, use of condoms and accepting attitudes regarding HIV and AIDS are low compared to men as it is detailed on the table 1.

Rwanda's economy is dominated by agriculture. According to Ministry of Finance and Economic Planning (2002) 'more than 8 out 10 people are employed in agriculture, including 81% of men and 93% of women.' Rwandan society has its uniqueness of having youth and adults who suffered from genocide consequences and related conflicts of 1996-2002. According to the NISR (2008b) many of the genocide survivors, 2.3% men and 3.5% female have been violated and raped during that genocide and have been infected with HIV. Among those survivors, a number of 22% is youth and are orphans of father and mother. The youth of Rwanda are mixed in higher education and they face various problems depending on their social and economical status as a legacy from the past history.

Table 1: National indicator on HIV/AIDS

NATIONAL (Unless otherwise specified all data are from RDHS 2005)
HIV Prevalence: <ul style="list-style-type: none">• ADULTS: Women (3.6%), Men (2.3%)• YOUTH: 15 – 19 Women (0.6%), Men (0.4%)• YOUTH: 20 - 24 Women (2.5%), Men (2.1%)• YOUTH: 15-24 Women (1.5%), Men (0.4%)
Co-factors: <ul style="list-style-type: none">• Self- Reported STDs: Women 2000 (2.7%), 2005 (5.0%), Men 2000 (2.1%), 2005 (2.7%)
Behaviour: <ul style="list-style-type: none">• 2+ partners in last 12 months: Women (0.6%), Men (5.1%)• Condom use at last high-risk intercourse: Women (19.7%), Men (40.9%)• Ever tested: Women 2000 (4.8%), 2005 (24.2%), Men 2000 (7.1%), 2005 (21.9%)• YOUTH: First Sex before age 18: Women (17.6%), Men (27.2%)
Knowledge: <ul style="list-style-type: none">• ADULTS: Comprehensive AIDS Knowledge: Women (53.6%), Men (57.5%)• YOUTH: Comprehensive Knowledge: Women (50.9%), Men (53.6%)• YOUTH: Knowing place to get condoms: Women (37%), Men (73%)
Attitude: <ul style="list-style-type: none">• Accepting attitudes (all 4 mention categories): Women (46.1%), Men (51.0%)

Source: TRAC Plus, 1st Triangulation final report: Rwanda HIV/AIDS Data Synthesis Project, 2008

According to the NISR (2006) ‘young people of 15-24 years of age represent more than 20% of the population of Rwanda and 70% of them live in rural areas. Considering knowledge related to HIV and AIDS which can be gained from parents, VCT, schools and other channels of communication, the NISR (2006) found that ‘Rwandans in general face challenges of low number of VCTs and services, lack of youth friendly services/approaches, cultural, norms and values constrains between adults/parents and children in order to communicate/talk about sexuality.’

Education strategies regarding sexualities issues should be based on country culture and level of learners. In Rwandan culture, talking about sexuality is a taboo and it is difficult to use local language during the time of discussing about sexuality issues and therefore, it is not easy for Rwandan youth to get information regarding sexualities from their parents or elders who play a role in informal education of youth. These young people get information most of the time wrongly from peers which handicaps their knowledge related to sexuality matters. NISR (2006), continues reporting that ‘Government of Rwanda, among its priorities for development cooperation, included strengthening information, education, and communication programs for changing risk behaviour, especially among young people.’

2.4 HIV/AIDS and Education system in Rwanda

Rwanda is one among the countries with youthful population. These youths, some are in schools while others has never been to school. MINEDUC (2005) states that 'half of the population above 15 years of age is illiterate (47.6).' The categories (illiterates and literate) of Rwandan youth are jeopardised by various social and economical constraints which put them into risk behaviour where they can be infected with HIV. In all universities of Rwanda, many students live outside and other inside the campuses. Canteens which provide alcoholic beer are almost open during the day and continue up to the midnight. Students are free of drinking as much as they can, many of them are far from their families and cultural set up control and then develop a sense of anonymity which gives them freedom of doing different activities and some of them increase their susceptibility to HIV infection.

Barnett and Whiteside (2006) stated that,

HIV/AIDS is predominately a sexually transmitted disease. It causes illness and death among mature adults. The group at greatest risk are those between 15 and 50 years of age, often described as the 'sexually active.' They are the most productive people in any society.

Responding to the HIV and AIDS is a task of everyone and a political issue. Rwanda developed programs such CNLS, TRAC plus and others in order to deal with HIV and AIDS epidemic. In this line, according to the CNLS (2003) 'Care and support to HIV and AIDS vulnerable people is an action that is based on a multi sector, multidimensional, multidisciplinary, community-based and decentralized approach.' The multidisciplinary approach to respond to HIV and AIDS triggered the development of Education Sector Policy which gives educational institutions freedom of strategizing the way of responding to HIV and AIDS. The implementation varies from one educational institution to another.

2.5 Sexual and gender based violence in universities

Rwanda is among other countries in which sexual and gender based violence persist. According to UNIFEM (2008) 'the phenomenon of sexual violence in Rwanda poses so many problems that many wonder about its magnitude.' The consequences of this phenomenon are sexual transmitted diseases (STDs) including HIV that leads to AIDS, unwanted pregnancies, physical and psychological trauma. The sexual and gender violence is defined according to UNIFEM (2008) as

Violent behaviour that is linked to sex, whose compelling forces are related to family, economic, social, and cultural precedents that encourage unequal power relationships between men and women, conferring an attitude of superiority and domination on the perpetrator and an attitude of subordination on the victim.

Universities are a place where different people of different sex (men and women) congregate and they have different responsibilities, roles and power. In many educational institutions, a number of male lecturer is higher than female's. According to ISAE (2009), for example, 'in the Higher Institute of Agriculture and Animal Husbandry, there is 14% of academic staff excluding temporally lecturers'.

The sexual and gender based violence can take place between male lecturers and female students, especially when some female students fail in their studies and request favours from the lecturers. It can also be done between male and female students inside the campus, in dormitories or around the campus in the students' residencies. The cases of sexual and gender violence are not reported or discussed openly due to the tough penalties from police,

relationship between victim and perpetrator, cultural norms and values. Once the victim is infected with STDs, it is difficult to seek for medical care because of fearing to be stigmatised by the society and as the result she/he will live with the disease and sometimes continue to spread it to others.

2.6 Impact of HIV/AIDS on Education sector and institutionalizing responsive education

HIV is continuing to create barriers to the development especially in Sub Sahara where a great number of HIV positive cases are reported. According to Roy et al (2002) 'A massive cases of HIV positive are among young people of between 15-25 years of age and women are more infected than men due to their biological and socio status.' Gender inequalities confer men and boys power over women and girls. This power relies on the facts that culturally men can have more sexual partners which put them into risk of getting HIV infection. On the side of women and girls, they are requested to respect men/husbands and to obey and to be submissive. This social status put them into weak position of refusing unwanted sex intercourses or negotiating safe sex. Martin (1999) reports that 'men usually decide whether women can protect themselves and men are more likely than women to transmit the virus to others including other men'

Martin (1999) continues saying that,

Apart from solitary masturbation, vaginal intercourse is probably the most widely practiced sexual act. In the absence of other factors, a man with HIV probably has a one in 500 chance of passing the virus to his partner in a single act of unprotected vaginal intercourses. The odds of woman-to-man transmission in the same circumstances are about one in 1000.

Martin (1999) also reports that there are other factors such as 'immaturity of genital tract with fewer layers of mucous membrane which are liable to infection when a female has sex at the age of less than 20 years'. He moreover said that 'women are also less likely to seek treatment for STDs because lesions are usually internal and discharge may be confused with period flow or vaginal fluid'.

Considering HIV prevalence in African countries, it is clear that some of the consequences of HIV and AIDS are the increase of labour demand which causes the social and economical constraints to the African society. HIV and AIDS does not strike people or countries equally, poorer you are more vulnerable you became. On the side of Rwanda as a developing and poor country, which has been affected by HIV and AIDS and later by genocide which increased HIV incidence through rape and other sexual violence will face labour shortage and this will happen in any sector including education. The effects of AIDS related diseases to education sector are manifested through absenteeism and death of qualified and experienced teachers and leads to defective productivity which results in a weak education system and thus unqualified graduates who will not participate effectively to the labour market.

On the side of students, according to Roy et al (2002), 'they can be affected physically and emotionally by thinking, seeing and living with colleagues, relatives, or parents who suffer or dying from AIDS related diseases'. And these affect students' academic performance.

On the fact that HIV and AIDS is ravaging education sector, the later has to build and create possibilities of responding to HIV and AIDS. MINEDUC (2003) basing on the fact that education sector play an important role for sustainable development of any country, has suggested HIV and AIDS education into school curriculum. The understanding of HIV and AIDS as threat to education sector, will play an important role in establishment of measures to respond to HIV and AIDS in education sector. According to Roy et al (2002) 'education sector is by its nature a unique tool for spreading HIV/AIDS information and awareness.' They continue saying that if 'education has been used effectively to respond to HIV/AIDS, it could

have reached various angles including staff, program, students, parents, extended families and managers’.

2.7 Conclusion

In African countries, HIV and AIDS is causing uncountable economical, health, educational, social and environmental nuisances. These effects are not the same in all countries. Each country has been stroked differently depending on various factors. Rwanda especially has been deeply hit by HIV and AIDS and the shock reached all sectors of life.

Education may face challenges of labour shortage, absenteeism, students’ physical and emotional effects which create obstacles to their effective performance and hence lower quality of education.

The education sector, as a channel to the development, can be used to respond effectively to the epidemic through adoption of the helpful measures by considering the realities and needs of the society. The next chapter explains various methods used in order to achieve the objective of this research.

Chapter 3: Methodology

3.1 Introduction

Every research needs a relevant methodology in order to arrive at relevant and valid results. In this line, various methods have been used because there is no appropriate method that can be applied to all situations as it is asserted by Petty (1998) that,

you might as well as ask a carpenter which is his best tool, he chooses his tool depending on whether he wants to make a hole, remove a screw or cut a piece of wood in two. Every tool has its uses, and good carpenters not only know how to use each tool but are able to assess which is the most appropriate in a given circumstance.

This is what pushed me to choose different methods in this research, and I choose the ones which I found appropriate to my work. The purpose of this chapter is to present the research strategies and techniques which have been used for data collection and the way they have been analyzed and details more clearly about the reach area. The collected data has been analysed through descriptive statistics, use of tables and figures in order to draw a conclusion and recommendations to the concerned stakeholders basing on findings from this research.

3.2 Background of the research area

The Higher Institute of Agriculture and Animal Husbandry (ISAE) was established in 1989 by the government of Rwanda and it was given a mission of teaching, research and technology transfer. It has two campuses. The main one is located in the Northern Province and the second is located in Kigali city. ISAE has three faculties which are faculty of Agriculture and Rural Development, Faculty of Agricultural engineering and environmental sciences, and faculty of veterinary medicine. In total ISAE has twelve departments dispatched in two campuses (Annex 1). According to the director of students, Damascene NDIKUMWAMI (during interview in this research) he said that 'ISAE has nowadays 2465 students (female 38% and male 62%).' Some are supported by government and others are privately supported themselves. The number of 216 students (female and male) is accommodated inside the campus while the remaining stays around the campuses in privately rented-houses.

The university has administrative and academic staff of around 215 in total. Some live in campus while others live around the campus or in Musanze city, 15 minutes driving from Musanze campus. There is a very clear gender imbalance among staff where in 2010, according to the Director of administration (personal communication); ISAE has only 20% of female in administration and 5% of female in academic staff. Most of them are single and a great number of the ones who are married, their family stay in Kigali and they join them during the weekends. This period of staying one or more weeks far from regular sexual partner may cause multiple sexual relations either with students or with staff among themselves.

3.3 Research methodology

This research used different methods for data collection and it took gender issues in consideration during the process of selecting sample group. 40% of female and 60% of male students have been selected from the total sample. Biologically women are twice more likely to become infected with HIV through unprotected heterosexual intercourse than men as it has been discussed by Martin (2003) in point 2.6 in this research.

In many countries women are less likely to be able to negotiate condom use which may reduce chances of getting HIV infection and any other STDs. They are more likely to be subjected to non-consensual sex especially when it happens between people who they are familiar with. This has been supported by Jeejeboy and Bott (2003) where they say that many of the forced sexual experiences of young women globally are by someone the girl was already acquainted with and in a familiar setting, such as the home or school.

This research is a survey where sampling among target group for qualitative data collection has been used. In summary the research implementation followed the figure below.

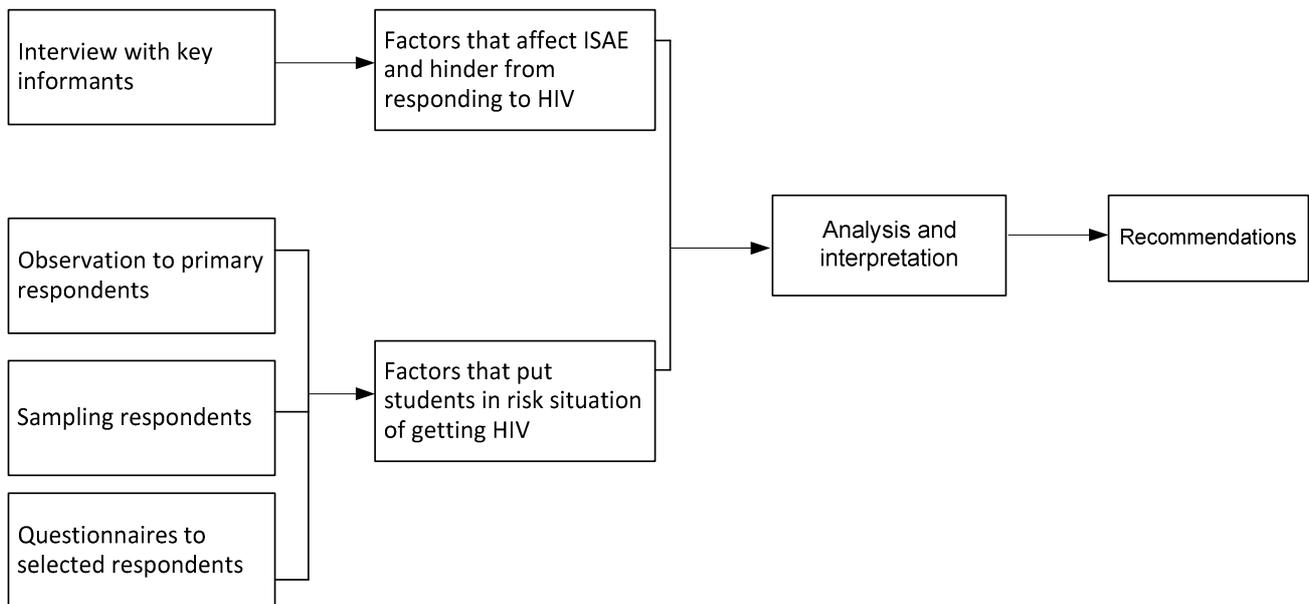


Figure 2: Research framework

3.4 Sampling strategy

This research has been undertaken as a survey which used a sample of 36 students basing on three faculties in ISAE. In 12 departments, three (3) students (1 female and 2male) have been randomly selected for representing others. The process of selecting has been done by taking a list of all of the students (containing only registration number and sex) from the respective departments and select students basing on their sex (Male or female) who took part into the sample group. This process of selection by using anonymous list was aimed at avoiding being biased by their names, or any relation between researcher and informants. It was also intended to give equal chances to all students of being selected and take part into the sample group. Their responses have been mainly used in answering main research question one and its sub questions in this study.

In addition to the sample from students, four (4) administrative staff namely one Director and responsible of students' services and two nurses in both campus have been interviewed by using a check list, (see annex 3). They have been selected basing on their direct responsibilities regarding daily welfare of ISAE student. Their answers have been contributed primarily to answer main question two and its sub questions of this research. In total the sample was forty (40) participants. The next table summarises how data has been collected.

Table 2: Sample selection

Informants	Campus	Total Number	Selected sample	sex			
				Male		Female	
				%	size	%	Size
Students	Musanze	2115	30	60%	18	40%	12
	Rubirizi	350	6	60%	4	40%	2
Administration	Musanze	A Director and a nurse of students	2	All (2)			
	Rubirizi	1Responsible for students and a Nurse	2	All (2)			

Total number of sample population is 40

Source: This research

3.5 Strategies for data collection

The data collection from the selected sample group helped to answer research questions which provide detailed information related to the drivers of ISAE students' susceptibility to HIV infection. The strategies used are: Desk study, anonymous questionnaire which has been given to respondents (students) and explain them that they should not include their names and that the questionnaire is for research only and no any consequences to them after and during the research. Interviews and observations have been also used in this research. I am aware that the sample taken from students and from staff is too small to draw a general conclusion about significance of the findings from this research, but they can contribute to any Rwandan institute of learning in general and to ISAE in particular in time of planning and implementing programs in line of responding to HIV and AIDS.

3.5.1 Desk study

The desk study has been used to read various scientific articles, thesis, in-class notes, reports, and books related to HIV/AIDS among youth in general and students in particular. I also visited and read books and reports from libraries of WUR, ISAE, KIE, CNLS, and TRAC Plus which facilitated to have more clear understanding of this research and to be able to compare results from collected data to other findings from similar researches done by different national and international researchers.

3.5.2 Anonymous Questionnaire

Anonymous questionnaire has been designed, produced and pre tested to some Van Hall Larenstein students and lastly to some students from other Kigali Institute of Science in order to anticipate inconveniences which may occur during the administration of the questionnaire to the target population. The data related to sub questions 1.1, 1.2, 1.3 have been collected through anonymous questionnaire distributed to the sample selected from students (male and female) in both campuses. These questionnaires have been distributed, collected and submitted to me by one of staff in Directorate of Continuing Education (Eric RWASAMANZI). This was to avoid any suspicious from students that I can know who gave certain answers.

3.5.3 Interview

Due to the fact that HIV and related issues such as sexuality are considered as taboo and sensitive issue in Rwandan culture, I opted to use in depth one on one interview to administration staff (Director and responsible of students and two nurses) in order to be able to go into the research deeply by probing, listening with attention to the informants personal feelings, opinions and experiences regarding HIV and AIDS among students. This technique helped me to understand how in administration they interpret ISAE situation and students life conditions in general regarding prevention and transmission of HIV. The results from these interviews are used to answer main question 2 and its sub questions 2.1 and 2.2.

3.5.3 Observation

Observation as a technique for data collection has been used in this research and applied in all two research field work namely Rubiri and Busogo. This observation took three days in Busogo as it is the main campus and two days in Rubirizi as the second campus. The observation was concentrated on analysing life in campuses in order to understand the nature, problems and activities in line with HIV susceptibility to students instead of trusting only documents and data collected from interviews. I got information which respondents were unaware that they exist or that they increase students' susceptibility to HIV infection.

3.6 Organization and data examination

Data collected for this research was organised and examined by myself. I also did data entry in order to minimise errors and inconstancies which may happen. Data collection was done basing on prepared methodological process such as pre-testing of anonymous questionnaire and face to face interview, observation and desk study. The analysis in this study is done basing on what other authors said in the line of the objective of this work. The information for this study was collected in the period of August 2010 basing on the current structure of the Institute. To analyse the data obtained from various respondents; clustering by age and sex was done and respondents have been grouped into four groups:

- Male students aged 20-25 years old,
- Male students aged 26-31 years old,
- Female students aged 20-25 years old
- Female students aged 26-31 years old.

The groups aged 20-25 years both male and female are mostly composed of students who are in three 1st years of university (A1) while the groups aged 26-31 (male and female) are in last 2 years of ISAE academic program (A0).

3.7 Ethical concerns

This research used anonymous questionnaire in order to avoid any personal identification. It was in the aim of collecting information by letting respondents write freely so that they can provide direct responses as it is justified by their testimonies where they explained their personal experience, feelings which is not is to declare in front of everyone in Rwandan culture. The questionnaire informed also respondents about the purpose of the research and it avoided to ask sensitive issues such as their HIV status and sexual orientation which are likely not openly discussed in Rwandan culture. Informed consent has been also used in order to assure interviewers importance of the research and guarantee them absence of any consequences during and after the research caused by their participation in the interview.

Summary

All these methods used in this research had the aim of collecting the relevant information as it had said above. The combination of those methods helped me in collecting data from various sources by different means such as desk study, questionnaire, interview and observation. The combined analysis of the collected data is detailed in the next chapter.

Chapter 4: Data collection and presentation of findings

4.1 Introduction

This chapter is concentrated on analysing the collected data in order to get useful information which can help for realising the objective of this research. During the analysis, the understanding, thinking and critical analysis of the collected information helped to understand various drivers that influence students of ISAE and put them into risk of being infected with HIV. This understanding facilitated me to draw a conclusion and to give recommendations to stakeholders involved in education of ISAE students. These recommendations can contribute to the reduction of HIV susceptibility among students of ISAE. This analysis took into consideration data collected from questionnaire, interview, observation and what other authors did in the same area of this research.

4.2 Overview of respondents

The distributed questionnaires were 36 in both campuses namely Busogo and Rubirizi as it was planned. All questionnaires were collected and analysed. Male students were 22 while female were 14 which makes a total of 36 (table 3), the same table shows that a great number of male and female students live outside campuses. This implies being exposed to the unsafe situation which can put them into risk of getting HIV. According to the Director of students in ISAE, Damascene NDIKUMWAMI, students who live out of the campuses have not equal access to the services and facilities offered by ISAE. E.g. condoms are distributed inside the campus only.

Table 3: Overview of respondents

Respondents	Age	Campus				Total number of students
		Busogo N=30		Rubirizi N=6		
		Living in Campus	Living in private house	Living in Campus	Living in private house	
Male students	20-25	10%	37%	0%	50%	17
	26-31	3%	10%	0%	17%	5
Female students	20-25	6%	20%	0%	33%	10
	25-31	3%	10%	0%	0%	4
Total%		22%	78%	0%	100%	36

Source: This study

4.3 Knowledge related to HIV and AIDS

In general the respondents have some knowledge about HIV and AIDS; this means HIV itself, HIV and other diseases and the ways HIV is transmitted as it is shown on table 4.

Table 4: Knowledge of ISAE students related to HIV and AIDS

Knowledge related to HIV/AIDS	Male students N = 22				Female students N = 14			
	20-25 years N= 17		26-31 years N = 5		20-25 years N= 10		26-31 years N= 4	
	Correct answer	Wrong answer	Correct answer	Wrong answer	Correct answer	Wrong answer	Correct answer	Wrong answer
HIV and AIDS are the same	100%	0%	100%	0%	100%	0%	100%	0%
There is cure for AIDS related diseases	59%	41%	40%	60%	39%	61%	75%	25%
HIV infects only gay people	100%	0%	100%	0%	100%	0%	100%	0%
You can get HIV from sharing a cup with someone who is HIV positive	100%	0%	80%	20%	90%	10%	75%	25%
Mosquitoes transmit HIV	100%	0%	80%	20%	100%	0%	100%	0%
HIV stands for Human Immunodeficiency Virus	100%	0%	100%	0%	100%	0%	100%	0%
HIV can be transmitted through kissing an HIV infected person	70%	30%	60%	40%	70%	30%	75%	25%
Unprotected vaginal put people at risk of being infected with HIV	94%	6%	100%	0%	80%	20%	100%	0%
Condoms can be used to prevent HIV infection through sexual intercourse	76%	24%	60%	40%	90%	10%	75%	25%
It is possible to recognise by appearance that someone has HIV virus	82%	18%	60%	40%	70%	30%	100%	0%
Total	88%	12%	78%	22%	84%	16%	90%	10%

Source: Questions adapted from Rwandan HIV and AIDS data syntheses project on youth and discordant couples' report of December 2009

The questions used in the table 4 are commonly used in many other researches regarding comprehensive knowledge on HIV and AIDS, its transmission and ways of prevention. In this research, they have been adapted from TRAC plus 2009 report. Basing on the table above in which statistical data on level of knowledge of ISAE students is presented, it is noticeable that student of ISAE have some knowledge about HIV and AIDS and its transmission. For example, a great number of students know that HIV can be transmitted through unprotected vaginal with HIV positive person.

On the other hand, some respondents have misinformation on HIV/AIDS; they consider AIDS as a disease on its own. They do not know the difference between HIV and AIDS, and related diseases. Some respondents think that HIV infection can be recognized by simple observation. For example, 30% of female and 18% of male students aged between 20-25 years think that an HIV positive person can be recognised through his/her external appearance, behaviour and attitudes (Table 4). The table 5 shows that students who did not answer correctly at least 5 questions are ranged in deep misinformation. The combination of both tables (4 and 5) shows that students in ISAE need more information on HIV and AIDS so as to reduce HIV and AIDS related consequences

Table 5: Correct answers from respondents

Correct answers (Number of questions = 10) <i>Scores equal number of questions correctly done</i>	Number respondents (N= 36)
2	1
4	4
6	7
7	8
8	6
9	6
10	4

Source: This research

Deep misinformation

4.4 Preventing the spread of HIV

According to OP-NACC (2008), 'preventing transmission through behavioural change and awareness of the whole community in general and those at high risk in particular remains the surest way to reverse the HIV/AIDS at lower cost'. The ways used in preventing HIV transmission in Rwanda are: Education, abstinence, fidelity and condom use. Male students compare to female ones, need more attention and trainings on HIV and AIDS as it is shown in the table 4 that male students have more wrong answers than females. If male are the one to start sexual proposals, and they dominate female students so that they cannot negotiate safe sex, it will be difficult to stop HIV transmission among students once male students still have some gaps on HIV and AIDS related knowledge. Students of ISAE think that HIV can be prevented in different ways as it is detailed in the next table.

Table 6: Mode of prevention according to ISAE students

Mode of prevention	Male students N = 22		Female students N = 14	
	20-25 years N= 17	26-31 years N= 5	20-25 years N= 10	26- 31 years N= 4
	Abstinence and use of condoms	47%	60%	60%
Abstinence, fidelity and use of condoms	29%	40%		
Avoiding use sharp material used by others, use of condoms	18%		20%	25%
use of condoms and HIV testing	6%			
Abstinence			10%	
Having unprotected sex intercourse with trusted person			10%	

Source: This research

On the question of knowing if respondents did HIV test, various responses were given. Students do HIV testing because they are scared of previous sexual intercourses; they want to know their status, and take measures for their future plans. According to the table below, many students among respondents did not do HIV testing due to various reasons such as thinking that it is not necessary because they are virgins, or because of religious beliefs which request them not to go to hospital and only trust God. The detail of the responses is in table 7.

Table 7: HIV testing among respondents

Characteristics	Male students N = 22		Female students N = 14	
	20-25 years N= 17	26-31 years N= 5	20-25 years N= 10	26- 31 years N= 4
HIV testing cases	18%	40%	50%	75%
Reasons for having HIV test	Prevention, To have life measures, To seek advice from doctors	To know HIV status, To be scared of previous sex intercourses,	To know HIV status and plan for the future	To change behaviour and have life precautions
No HIV test cases	82%	60%	50%	25%
Reasons for not having HIV test	It is not necessary, To have never done sexual intercourse.	To be scared of knowing HIV status, To trust sexual partners.	To be scared of knowing HIV status.	Religious beliefs, To be scared of previous sexual experiences (discouragement)

Source: This research

By analysing the data collected regarding knowledge of ISAE students towards HIV and AIDS, it is noticeable that male and female ISAE students have information on HIV and AIDS which can help them to prevent from being infected with HIV. However, 12% of ISAE male students aged between 20-25 years, 22% of male students aged between 26-31 years, 16% of female students aged between 20-25 years and 10% of female students aged between 26-31 years old have some misinformation related to HIV and AIDS. (Table 4).in addition to this, 5 students out of 36, failed to answer correctly at least 5 questions (Table 5). Knowledge alone is not guarantee enough to be far from being infected, it goes with other factors which support knowledge to use it and always glued on what you know to prevent from being infected. Economical factors are ones among the drivers that influence HIV susceptibility to ISAE students. Their role is discussed in the next paragraph basing on answers from the respondents.

4.5 Economical factors regarding HIV susceptibility among ISAE students

During collecting information related to the knowledge that ISAE students possess regarding HIV and AIDS, I also collected information regarding economical factors that put ISAE students into risk of getting HIV. The collected data are detailed in the following table.

Table 8: Sources of income and expenditure in ISAE students

Characteristics		Male students N = 22		Female students N = 14	
		20-25 years N = 17	26-31 years N = 5	20-25 year N = 10	26-31 years N = 4
Family status	poor	82%	60%	80%	50%
	Rich	18%	40%	20%	50%
(Rwf) Average Pocket money to students		23800			
(Rwf) Average of expenses		35000			
Source of money	Parents	23%		50%	50%
	SFAR	59%	40%		25%
	Relatives	12%	20%		25%
	Both parents and relatives	6%	40%	40%	
	Him/herself			10%	
	Others	Neighbours, friends of families, partial jobs			Boyfriends, neighbours, friends of families

Source: This research

Drivers of HIV among people vary from different perspectives. Living conditions can push people especially young people to be involved in the situations which put them into risk of being infected with HIV. Looking at the table 8, almost 80% of male and female students are from poor families. According to MINECOFIN (2007) 'poverty level is calculated basing on the

cost of the minimum basic needs of an adult. This cost is at 250 Rwf'. Many people in Rwanda are poor and it is difficult for them to satisfying economical needs of their children. MINECOFIN (2007) continues saying that 'In Rwanda 60% individuals live in endemic poverty and 42% live in absolute poverty.' This shows how 82% of male and 80% of female students in ISAE aged between 20-25 face poverty problems which can push them into risk activities where they can get HIV. Students get support from various sources as it is indicated in the table 8 and this support may be not enough depending on the needs of students. They get an average of 23800 Rwf and they spend an average of 35000, which means they can try to get the balance from various supporters including neighbours, friends, and partial jobs which most of the time is not easy to get it.

Being susceptible to HIV can also be fuelled by people's behaviour, attitudes and his or her economical status which is necessary for the fulfilment of the basic needs of human being. Environment, society, culture and norms in which an individual lives in, play a role in putting him/her in risk of being infected with HIV depending on what he/she does. The analysis of the factors influencing susceptibility to HIV infection from environment is given in more detail in the next paragraph.

4.6 Environmental factors influencing HIV susceptibility

Students in ISAE, have their academic environment in which life on campus is different from that of normal context. Students live in a sense of anonymity where they can do anything they want at any time.

The table 9 gives in detail various dimensions related to ISAE students inside and outside campuses. All students in Rubirizi campus live outside and they rent houses and pay for themselves. In Busogo, 10% of all Busogo students live inside campus and 90% live outside as it has been said by the Director of students, (Damascene NDIKUMWAMI). In the table 9, information such as living conditions of students is given. 94% of male and 80% of female students aged between 20-24 years old live with others which is very easy for them to socialize and create groups which result in peer pressure in various activities. This group is composed of new students who are in three first years of university and they are not familiar with life in campus. The situation is not different compared to their female counterparts aged between 26-31 years old. 75% of male and 75% of female live with others and they can be directed into risk activities in order to satisfy their financial needs as it is indicated in the table 8 where expenditure exceeds income.

On the question regarding where students go for sexual relationships, a mixture of responses is given. 29% of male and 40% female aged 20-25 years and 40% male and 50% female students aged 26-31 years old said that students do sexual intercourses in different places. The common known are: inside campus residencies, in their private houses outside campuses in Byangabo and Rubirizi centres, hotels, motels, lodges in town and outside in the houses possessed by their friends in Musanze and in Kigali. They also go in gardens, playgrounds where there are no lights and they can do it in campus toilets, and bathrooms. In the interview with Director of students and responsible of students in Rubirizi, and nurses of students, they revealed that problem of lights in the campuses and around them especially in roads from campuses to their private homes is one of the major challenges to the institute and students in particular.

Table 9: Environmental information regarding ISAE students

Students living characteristics		Male students N=22		Female students N= 14	
		20-25 years N= 17	26-31 years N= 5	20-25 years N= 10	26-31 years N= 4
Living in campus		18%	20%	20%	25%
Living out of campus		82%	80%	80%	75%
Living	Alone	6%	25%	20%	25%
	With others	94%	75%	80%	75%
Most places where students spend their free time	In campus	41%	60%	50%	50%
	In campus canteen	6%	0%	20%	0%
	In pubs out of campus	29%	40%	20%	25%
	In sport	24%	0%	10%	25%
Spending free time with	Lecturers	29%	0%	30%	0%
	Student colleagues	71%	100%	70%	100%
Reasons for spending time with them	Negotiating marks	12%	0%	30%	0%
	Discuss on academic issues	35%	20%	20%	25%
	others	53%	80%	50%	75%
Where students go for sexual relationships	a. Inside campus homes	12%	0%	10%	0%
	b. Private homes	23%	20%	30%	0%
	c. Hotels	12%	40%	0%	0%
	All a, b and c	29%	40%	40%	50%
	Others	23%	0%	20%	50%

Source: This research

All of what students do in and out of campus that put them in risk situation of getting HIV depend on different factors including social aspects which play an important role in their sexual behaviour and attitude. The change of behaviours can be used as a way of responding to HIV and AIDS as it has been emphasized by Japheth et al (1997) that 'Changing sexual behaviour is considered the key intervention in reducing HIV transmission.' The next paragraph, gives detail on social factors that ISAE students account in their academic life which can increase their level of susceptibility to HIV infection.

4.7 Social cultural factors and HIV among ISAE students

By analysing the table 4 and 5 in this study, one can say that respondents have some knowledge about HIV and AIDS in general and the way HIV is transmitted. In academic life where sexual active young people live together, the susceptibility to HIV infection can be measured by looking at their knowledge regarding HIV, the way they apply it, number of sexual partners, use of condoms, reasons why they are involved in those sexual relationships

and whom are they involved with. These socio cultural drivers are more explained in the next paragraphs.

4.7.1 Talking about HIV and AIDS publicly

Rwandan culture does not facilitate talking about sex and related issues publicly, it is considered as a taboo and this makes difficult to discuss sex topics among people of different sex. Some respondents in this study said that they discuss HIV and AIDS among students of the same sex, especially when they know that someone is HIV positive. Respondents have various views about talking about HIV and AIDS and the next figure gives more detail about those views.

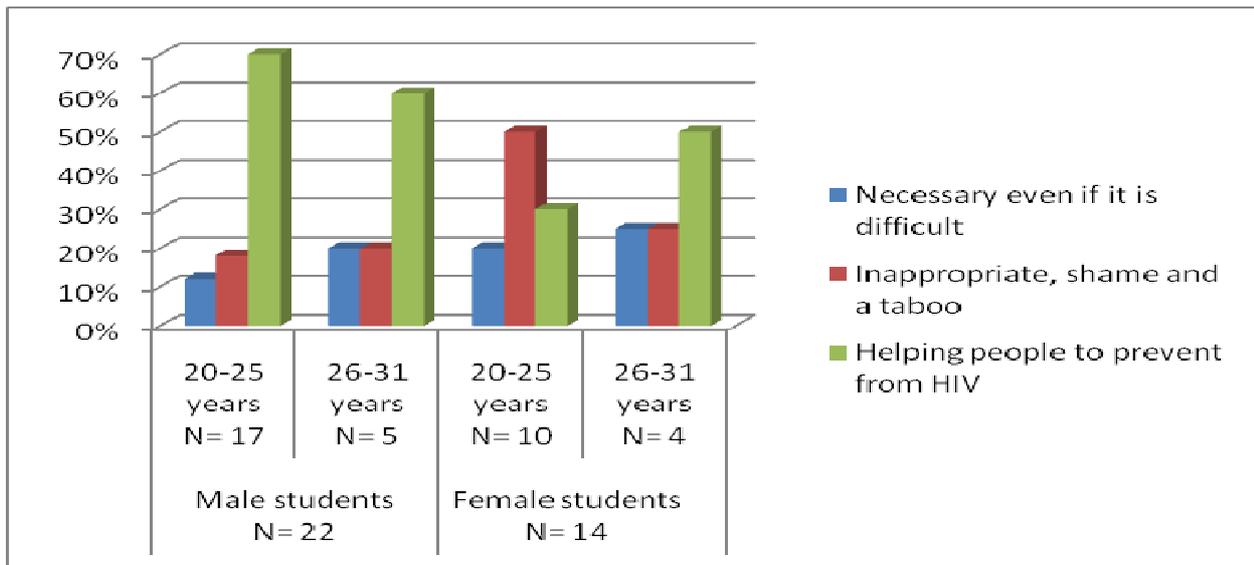


Figure 3: Views on discussing about HIV and AIDS publicly

Source: This research

On the figure 3 above, respondents have different views about discussing HIV and AIDS publicly, some find it as a taboo while others find it as a solution and a way of responding to HIV. Male students aged 20-25 years old, 70% find discussing HIV/AIDS as helping people to prevent from HIV infection, 18% of the same age and same sex think that discussing issues related to HIV and AIDS is inappropriate, shame and a taboo while only 12% of male students aged between 20-25 years find discussing HIV and AIDS publicly as necessary even if it is difficult.

Female students of the same age (20-25 years) have not the same level of consideration about the issue of discussing HIV and AIDS in public. For them, 20% think that it is necessary even if it is difficult. 50% of this category of respondents finds discussing HIV and AIDS publicly as inappropriate, shame and a taboo, while 30% of female aged 20-25 years old think that discussing about HIV and AIDS may help people to prevent from being infected with HIV.

Male students aged 26-31 years old, 60% of them find discussing about HIV and AIDS publicly as one way of helping people to prevent being infected with HIV. In this category, 20% of them think that discussing HIV and AIDS related issues publicly is necessary even it is difficult while other 20% looks at it as inappropriate, shameful and a taboo. Female students aged 26-31 years 25% of them believe that discussing VIH and AIDS related issues publicly is necessary but difficult, while the same number finds it as inappropriate, shame and a taboo. 50% of them consider such discussions as helping people to prevent them from being HIV infected.

4.7.2 Situation for discussing HIV and AIDS related issues

Discussing issues related to HIV and AIDS is not easy in Rwandan culture as it is related to sex. Respondents prefer to discuss issues related to sex and HIV and AIDS with different people depending on their relationships or linkages. They also talk about HIV and AIDS basing on a certain trigger which makes them awake and talk and sometimes gossip about someone who is HIV positive. The figure below gives situations in which respondents discuss issues related to HIV and AIDS.

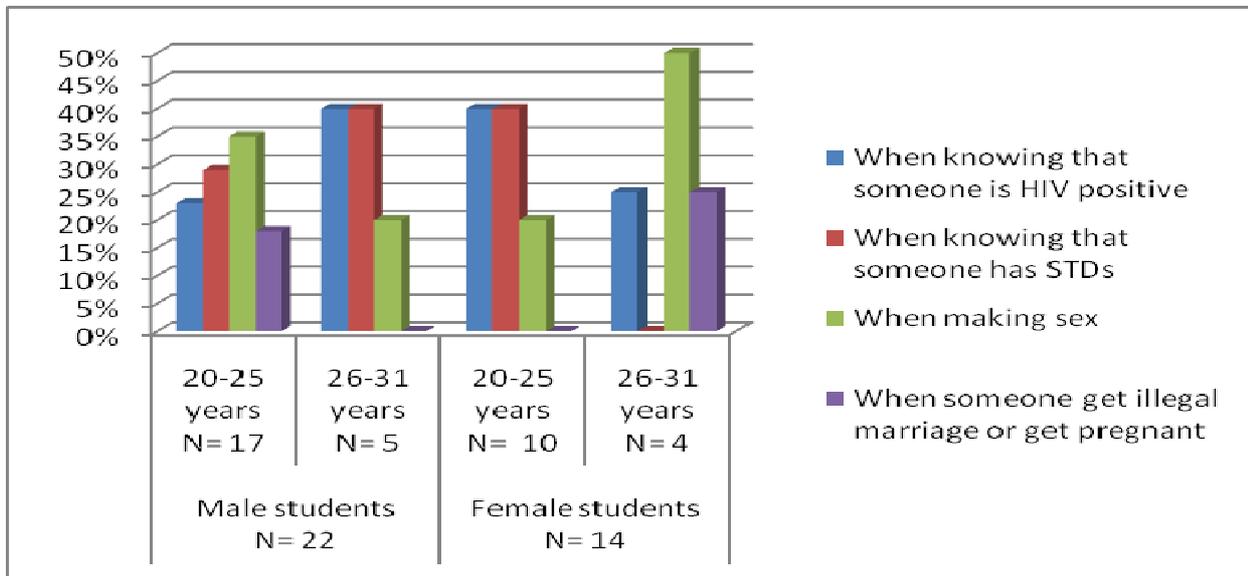


Figure 4: Situation for discussing HIV/AIDS related issues

Source: This research

Respondents revealed that talking about HIV and AIDS is prompted by something such as knowing that someone has an HIV, SDTs, and pregnancies and so on. Male students of 20-25 years, 23% discuss it when knowing that someone has HIV, 29% do it when they recognise that someone has STDs, 35% discuss it when making sex while only 18% talk about it when they identify that someone got or is going to get illegal marriage or get pregnancies without being married. 40% of Male of 26-31 years discusses HIV and AIDS issues when they know that someone has HIV, 40% do it when knowing that someone has contracted STDs while 20% discuss it with their partners when making sex. Group of male of 26-31 years old has similarities with group of female students of 20-25, where 40% of them discuss HIV and AIDS issues when it is triggered by knowing that someone is HIV positive or when someone has STDs while 20% prefer to talk about HIV and AIDS when making sex with their sexual partners.

On the side of female students of 26-31 years, the situation is different where 50% of them discuss HIV and AIDS issues when making sex, 25% discuss it when they recognise that someone is HIV positive or that he /she is going to have illegal marriage or once one of them got pregnant. In addition to cultural aspects of Rwandans, stigmatisation is one of the barriers for talking about HIV and AIDS due to the fact that HIV is linked with sexual intercourses considered as sin once it is done without being legally married. As a result, students talk about HIV and AIDS among themselves and sometimes with their parents when the later are ready to discuss such king of issues. The next paragraph, explains who and where students discuss the topics related to HIV and AIDS.

4.7.3 Discussions related to HIV and AIDS

The table 4 and 5 shows that students of ISAE have some information and miss information related to HIV and AIDS, they get information from various sources as it is indicated in the

figure 5. That information plays a vital role in the students' decisions regarding their involvement in situations that can put them into risk of getting HIV.

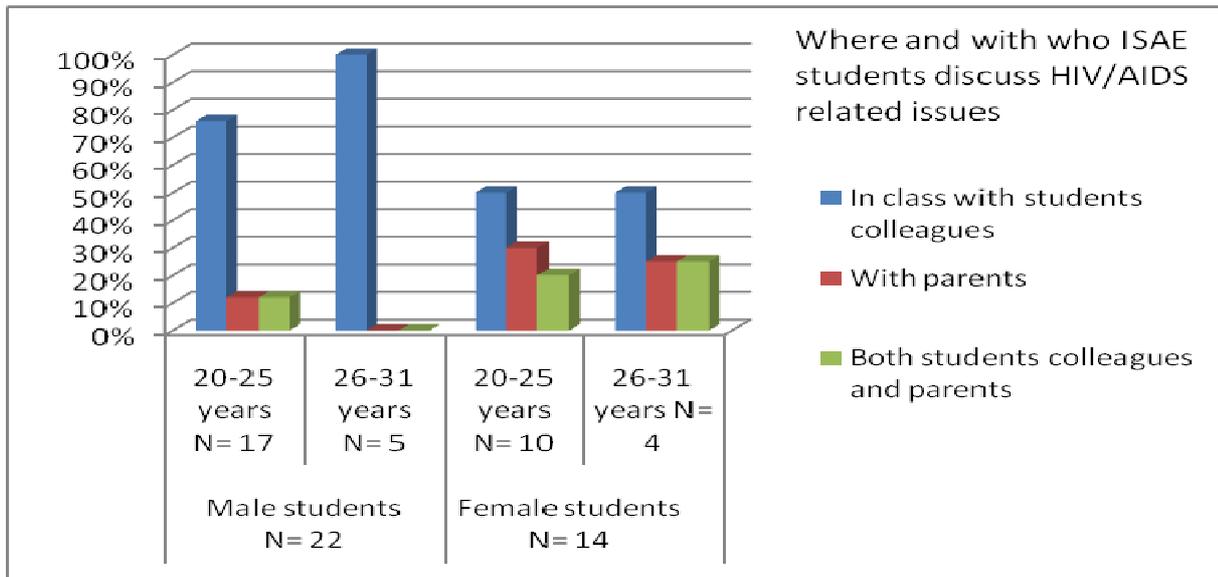


Figure 5: Place and person where ISAE students discuss HIV/AIDS issue.

Source: This research

Looking at the figure 5, it is very noticeable that students in all groups discuss mostly the issues related to HIV and AIDS with their colleagues. (76% of male students aged between 20-25 years, 100% of male students aged 26-31 years old and 50% of female students in both groups of 20-25 and 26-31 years old). This implies that much of information kept by students is from their colleagues. Only 12% of male students aged 20-25 years discuss HIV and AIDS with their parents, while female students in group aged 20-25 years, 30% of them discuss HIV and AIDS with their parents and the last group of 26-31 years, only 25% discuss it with their parents.

It was also noticed that female students in general and male of 20-25 years prefer to discuss such issues with their mothers who play important role in basic education of a child in Rwandan society and mostly spend time with children and they are not tough to them compared to Rwandan fathers. All of the respondents revealed that they predominantly discuss issues related to HIV transmission and prevention and its consequences.

4.7.4 Sexual intercourses situation among ISAE students

Among the prevention modes in use in Rwanda is abstinence. However, this study wanted to know the status of students regarding their involvement in sexual intercourse. The figure 6 on next page gives the findings from the respondents.

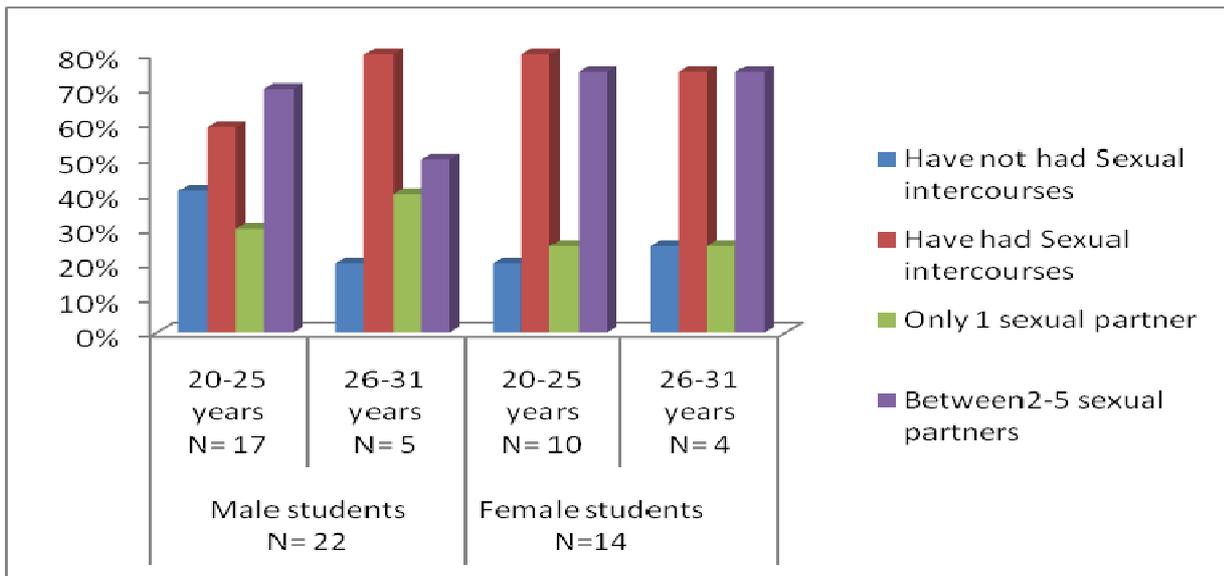


Figure 6: ISAE students' involvement into sexual intercourse. (Source: This research)

On the question of whether respondents have or have not had sexual intercourse, the responses are as follows: 41% of male students aged 20-25 years, 20% of the ones aged 26-31 years have not had sexual intercourses while 59% of male students aged 20-25 years and 80% of male students aged 26-31 years have had sex intercourses. Considering female students, a small number have not had sexual intercourses (20% of female students aged 20-25 years and 25% of female students aged 26-31 years old). A great number of them have had sexual intercourses (80% of female students aged 20-25 years and 75% of female students aged 26-31 years old).

4.7.5 Students and multiple sexual partners

The respondents who had sexual intercourse, many of them had it with more than one partners. Among male students of 20-25 years, 30% had sexual intercourses with one partner while 70% had it with 2 up to 5 partners. Male students aged 26-31 years old, 60% of them have had sexual intercourses with one partner while the same percentage have had it with more various partners (2-5 partners)

Female look more sexual active on the figure 4 where 75% of the respondents aged 20-25 and the ones aged 26-31 years, involved in sexual intercourses, have had them with many sexual partners between 2 and 5. On the other hand, both groups (female aged 20-25 and 26-31 years old) 25% have had sexual intercourses with one partner.

By analysing figure 6, it is comprehensible that respondents are sexual active who sometimes are involved in sexual intercourses with one or many partners. Respondents said that they mostly do sex in order to get money, to please their partners (boyfriends and girlfriends), and to emotionally satisfy themselves.

Testimony 1: Sex to please a partner, Quoted from one of respondents.

'I have been involved in sexual relations with my boyfriends because they were always saying that they will quit me if I refuse. They were also saying that they are excited and shown me their penis and I felt sorry for them'

Therefore, the involvement in sexual intercourses is to increases HIV susceptible especially when it is unsafe sex with an HIV positive person.

4.7.6 Involvement into sexual relations and use of condoms

In the perspective of HIV prevention, I wanted to know if respondents use condoms. The following table gives the responses.

Table 10: Frequency of using condoms by respondents

Prevention aspects		Male students		Female students	
		N= 14		N= 11	
		20-25 years N= 10	26-31 years N= 4	20-25 years N= 8	26-31 years N= 3
Frequency of using condoms by respondents	Always	10%	75%	12%	0%
	Usually	40%	25	37%	0%
	Often	10%	0%	12%	67%
	Sometimes	30%	0%	25%	33%
	Occasionally	10%	0%	12%	0%
	Never	0%	0%	0%	0%

Source: This research

The table 10 shows that respondents know the existence of condoms because none of them who has never used it. Irregularities of using condoms during respondents' sexual intercourses implies chances of getting HIV infection once the sex is made with an HIV positive partner. Few respondents have always used condoms (10% among male students aged 20-25 years, 75% of male students aged 26-31, 12% of female students aged 20-25). According to respondents, they seldom use condoms depending on their partners who can accept it or refuse it. They also said that they do not use condoms especially after a long lasting relationship where they create a certain kind of confidence towards their partners.

Testimony 2: Irregularity of using condoms due to long lasting relationship. Quoted from one of the respondents

'I have been with my girlfriend from secondary school. We used to sleep together from that time. When we are together we can make many sexual rounds and with condoms sometimes, when I wake up in morning, I sometimes find myself in her arms and pipi and nina discussing'.

Pipi is used to mean Penis

Nina to mean Vagina

They continued saying that it is difficult to use condoms when sleeping with boy/girlfriends during the whole night because they sometimes forget to use it especially when they are over drunk or when they do more sexual intercourses than what they planned before.

They also said that to use condom is not easy for students who live outside campus because there is no condom distribution in students' private housing out of the campuses. However,

doing sex is not a planned activity for them and they said that they cannot wake up/get out of bed in mid night or during the day and go to the campus to pick up condoms and coming back and find their partners waiting for them. Why students are involved in sexual intercourses?

4.7.7 Reasons for sexual relations in ISAE students

Respondents are involved in sexual intercourses due to multiple reasons such as money from wealthy people, gaining sexual experiences and others including making fun and enjoy life and seeking academic favours (explanations, teaching each other) from knowledgeable students and marks form lecturers. Looking at the figure 7, male students aged 20-25 years are involved in sexual intercourses in order to get money the same as 37% of their female counterparts aged 20-25 years and 67% of female aged 26-31 years old. Recently research carried out by UNAIDS (2008 cited in Edstrom & Khan 2009) reported that '45% of all new infections occur in the age of 15-24 years.' Respondents in this study, male and female in the first groups (20-25 years) many of them are positioned in this group that faces much new HIV infections according to the UNAIDS statement above.

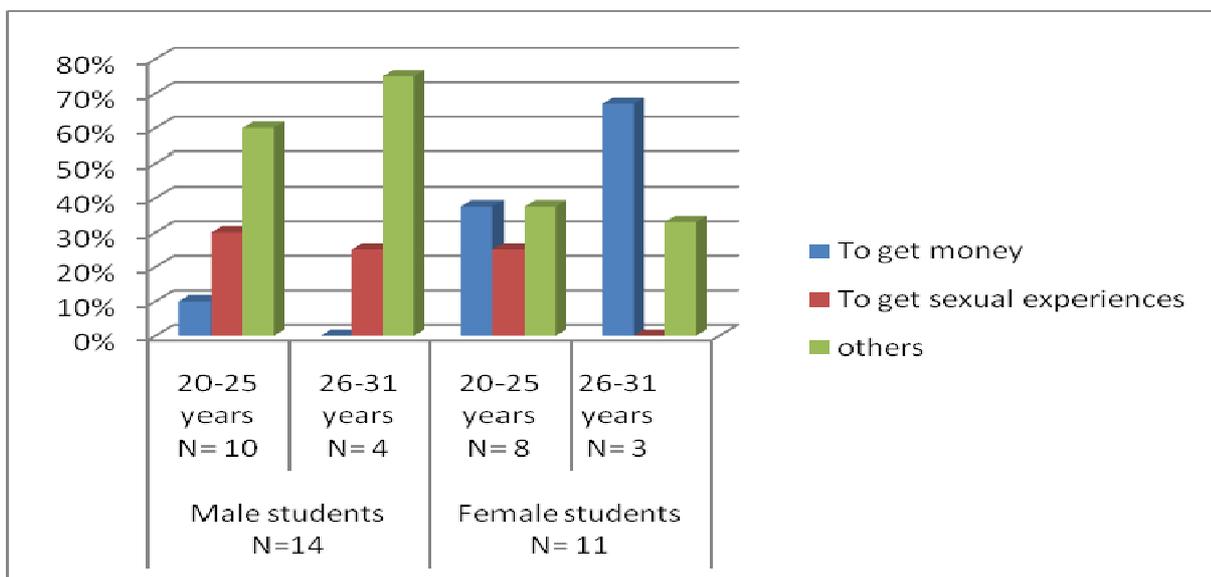


Figure 7: Reasons for students to be involved in sexual intercourses

Source: This research

Respondents have been involved into sexual activities whether with one partner or with more than one while other have never been involved into such activities (Figure 6). Living in university life and cohabite with different sexually active and experienced people may create temptations and pressure from student colleagues.

This study wanted to know a range of temptations and techniques used in order to attract students into the trap of sexual intercourses which increase chances of being infected with HIV. Respondents in this study made known that multiple sexual temptations exist in the campuses. They are done by different people inside and outside campuses. Teachers/lecturers who are supposed to teach students are also involved in those temptations. The next table, details how and with whom students are tempted to be involved in sexual relations.

Table 11: ISAE student temptations into sexual involvement

Socio cultural aspects		Male students N = 22		Female students N =14	
		20-25 years N =17	26-31 years N =5	20-25 years N = 10	26-31 years N = 4
Sexual proposals to students	Lecturer/teacher	0%	0%	30%	25%
	Administrative staff	0%	0%	20%	0%
	Students	47%	40%	30%	50%
	others	12%	40%	20%	25%
	No any	41%	20%	0%	0%
Promises to students for having sexual intercourses	Money	12%	0%	40%	50%
	Marks	0%	0%	30%	25%
	Love	47%	60%	20%	0%
	Marriage	0%	40%	10%	25%
Easy to refuse sexual intercourses proposals	no	35%	60%	70%	50%
	yes	65%	40%	30%	50%

Source: This study

On table 11, 30% of female students aged 20-25 and the 25% of the ones aged 26-31 years reported that they have been sexually tempted by teachers/lecturers while 20% of female students aged 20-25 years have been also sexually tempted by administration staff.

A large number of temptations (47% of male students aged 20-25, 40% of male aged 26-31 and 30% female aged 20-25 and 50% of female aged 26-31 years) is done among students themselves whether inside campus or outside them. On the other part, students are sexually tempted by businesspeople, motorists; hair dressers, soldiers, drivers, visiting staff of the institute and many others around the institute. 41% of young male students of 20-25 years said that they are not sexually tempted because they look poor and have no means to be connected with those tempters such as mobile phones, and money.

All of those various temptations are accompanied by various promises: Money, marks, love and marriage. According to 40% of female students aged 20-26 and 50% female students aged 26-31 years old; they are attracted by being promised money, while 30% of female aged 20-25 and 25% aged 26-31 years old got promises of getting higher marks.

Testimony 3: Sexual temptations from staff to student, Quoted from one of respondent.

'There is nothing bad as having young teachers, one of them took me as his sister, he requested me to come and eat at his house anytime I want because he was considering me as his sister. After three months, he started calling me in his room, I went there 3 times, and the 4th he was naked upper part and requested me to spend night with him. I refused and now he does not talk to me and am scared of failing in his course'.

Love is also one of the tools to attract students into sexual intercourses. According to this study, 47% of male students aged 20-25 and 60% of male students aged 26-31 and 20% of female students aged 20-25 years old reported that people who tried to sexually attempt them, were saying that they love them and after a certain time start requesting sexual relations.

Marriage which is a very respected ceremony in Rwanda is also used in order to attempt male and female students in ISAE, especially mature ones as it is in the table 11 where 40% of male students aged 26-31, 10% of female aged 20-25 and 25% of female aged 26-31 years old have been sexually tempted by different people who promised to marry them. Refusing sexual proposal for some respondents was not easy as they were scared of what can be the consequences such as physical violence, failing in class and dislocation of their friendship.

4.7.8 Sexual background information of ISAE students

Escaping sexual inducements is not easy to all groups whether male or female, due to the ways of temptations such as giving what is really needed like tuition fees, marriage and so on. Sometimes female students attempts their male colleagues by being naked in time they visit them, and according to male students, this is difficult to resist when they feel they also need it

Testimony 4: Sexual temptations among students. Quoted from one of the respondents.

We were coming from playing basket ball, one girl asked me to visit her. I accepted to come after bathing myself. When I came, her door was locked, I knocked, and she opened, my goodness, she was in a very short towel, she was beautiful and irresistible and she sat by me,... I stop here'.

In the line of assessing HIV drivers to students in ISAE, the identification of ISAE students sexual involvement background is important as it can help to understand if they are more sexually active before or after arriving in the institute. The responses from respondents are described in the figure 8

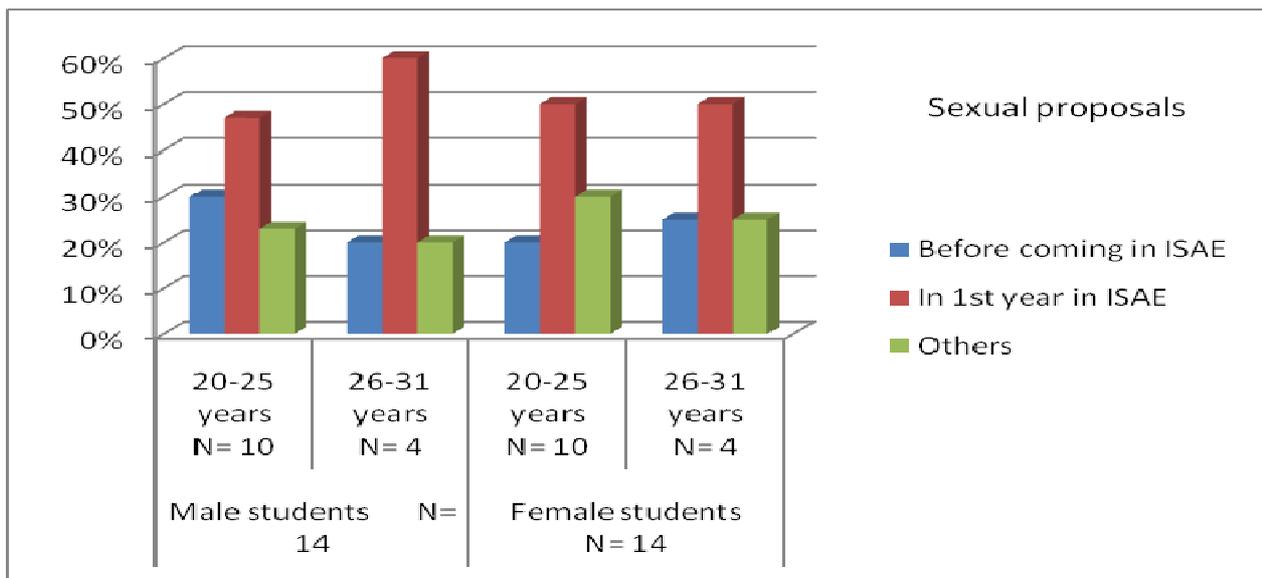


Figure 8: Sexual experiences of ISAE students

Source: This study

According to the figure 8, 30% of male students aged 20-25, 20% of male students aged 26-31, 20% of female students aged 20-25 and 25% of female students aged 26-31 years old reported that they have been involved into sexual proposals before arriving in the institute. After their arrival, things got worse and they get many more sexual proposals as it is indicated on the figure 9. This is also justified by the information from interview with a Director of students (Damascène NDIKUMWAMI) and an institute nurses (Emmanuel IYAMUREMYE and MUKAFEZA Rose) where many pregnancy cases in ISAE are reported, 9 female students were pregnant during 2009 academic years, and 6 of them have been reported among students of the 1st year. On the side of other experiences, there are cases of home based sexual proposals and temptations accompanied by violence especially for the ladies living with their brothers in law, their fathers and step brothers. On the side of male students, they reported to be involved in sexual temptations with house girls, and other home-based female members such as small sisters of their sisters-in law. Due to the fact that sexuality looks as a taboo and thus an adult secret in Rwandan culture, sexual temptations are favoured by some situations which incite people to make their sexual requests or proposals while discussing or gathered around a certain event as it is indicated in the figure 9.

4.7.9 Favourite situation for sexual temptations among ISAE students

Among all groups of students as it is indicated on the figure 9, parties of their colleagues such as birthdays, marriages, defending their final work and many others are seen as favourite time for sexual temptations. Respondents said that they got more sexual temptations especially when their partners were over alcohol drunken. Surprisingly, 10% of female students aged 20-25 years got sexual temptations during disco funerals. This is when people of deceased person are in deep sorrowful period which lasts mainly seven days.

The issue of disco funeral as a risk situation for HIV infection has been supported by Njue et al (2009) in their investigation where they say that 'disco funeral is an important place for young people to hang out, they increase opportunities to meet and they engage in (risky) sexual activities.'

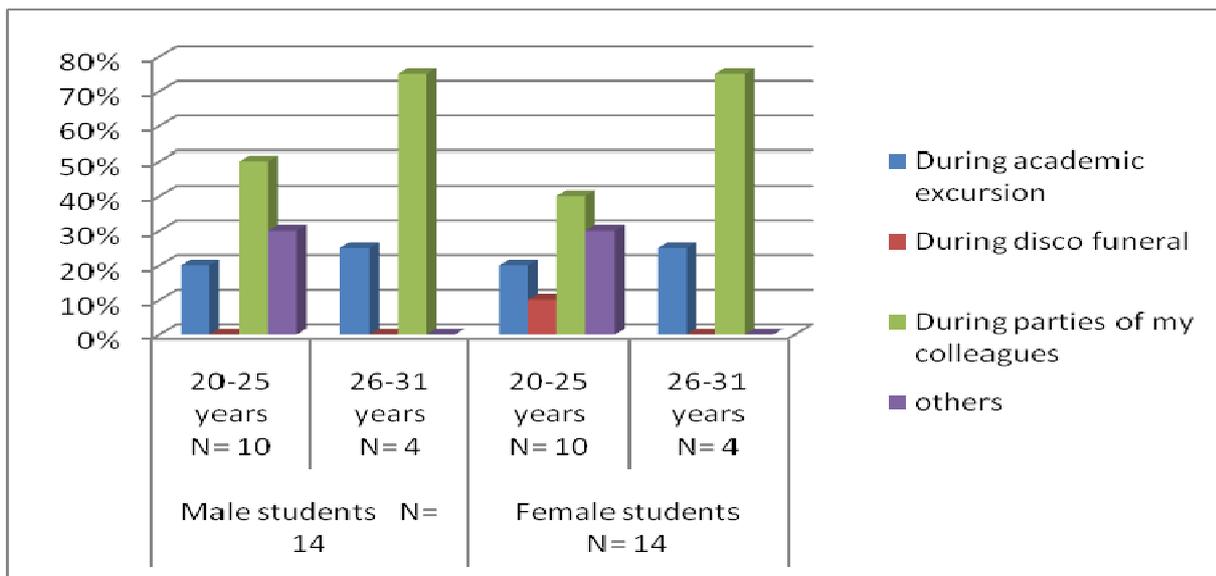


Figure 9: Situations that favour sexual temptations among ISAE students

Source: This study

30% male and female students aged 20-25 years reported other situations where they got sexual temptations in which common ceremonies such graduations ceremonies, New Year, Christmas, Easter and other national ceremonies. During party celebrations, after people being drunk, the sexual temptations start.

The factors influencing ISAE students are also shaped by the commitment from administration which plays a direct or indirect role in reducing or increasing students' susceptibility to HIV infection. The next paragraph gives summary of what have been collected from interview with Director of students' services, Responsible of students and nurses in both campuses.

4.8 Institutional influential factors to HIV susceptibility among students

In Rubirizi, the Responsible of students was new and he has not much information regarding the institute thus he did not reply to all questions. All other administrative staff interviewed reported to know some cases of HIV positive among ISAE students. E.g. Emmanuel IYAMUREMYE, a nurse in Busogo campus said that in 2009, PSI tested HIV infection to 30 volunteers among students, and 4 cases of HIV positive were reported. On percentage, this is more than 13%. Even if there is no any open voluntary declaration of HIV positive cases made from students, ISAE administration staff think that students are in risk of getting HIV due to their living conditions, and on the evidences such as (9 Pregnancies in both campuses, reported 4 cases of STDs, and 4 cases of HIV positive out of 30 tested people by PSI testing program)

In ISAE, priorities are given to the issues regarding agriculture and animal sciences, money is used specifically in activities falling in the goal of the institute, Damascene said. HIV and AIDS can be part of the programs but it is not among the priorities and it is not strongly taken into consideration.

On the question regarding sexual relationships between students and staff, they reported to know some unofficial relationships and some staff who have children with students. The rules regarding code of conduct between students and staff are not elaborated so that it can help to reduce or protect the victims. The activities done by ISAE to prevent students from HIV infection are distributing condoms and sometimes public lectures. Other activities are considered as expensive and there is no budget specified for HIV prevention and thus there is no HIV focal point to design action plan and execute HIV and AIDS related activities.

During my observation, I found that in Rubirizi there is no play grounds for students to relax and do sport, there is no dispensary for students, the nurse is for accompanying students to the main hospital once in need. There is also problem of lights in the campuses and in the roads from campuses to their respective residences. Some condoms were open and mixed with others while some condom-boxes (Box where they put condoms for students) were empty. The nurse told me that they supply them once per week (Friday).

The findings from this study are compared to other information from various authors who worked in the same line as this study in order to draw a conclusion and recommendations to ISAE students, parents, ISAE and local authorities regarding reducing HIV susceptibility to male and female students of ISAE. In addition to this, recommendations of further studies to prospect researchers in the same focus as this research are also drawn basing on the findings from this research. The next chapter gives analysis on the main findings in this study compared to other related findings from various authors.

Chapter 5: Comparative analysis of the main findings of this study

According to Whiteside & Barnett (2006)

The epidemics have their deepest foundations in normal social and economical life. This is because pathways of infections are mapped on to social, cultural and economical relations between groups of human beings in ways that are sometimes simple, but more often not simple’.

By analysing this study, an interlinked relation of HIV knowledge, socio-cultural, environmental, economical and political factors and personal determinants are the main findings which influence positively or negatively the susceptibility to HIV among ISAE students.

5.1 ISAE students’ knowledge, attitude and behaviour change

Looking at the table 4 in this study, students have some knowledge related to HIV and AIDS while others still have some gaps. Amount of what people know regarding HIV and AIDS may influence their ways of living in line of preventing HIV infection. Here, students can daily apply that knowledge in order to protect themselves from being into situation of getting HIV infection.

Contrary, some of students are involved into risk situations voluntarily or reluctantly. Barnett & Whiteside (2006) said that ‘knowledge is not enough. Most people are aware of HIV/AIDS. The problem is they do not see themselves as at risk’. The table 6 shows that ISAE students know the various common ways of HIV prevention (Abstinence, faithful and use of condoms). Looking at what they know and what they think and do related to HIV and sexual involvement, it is clear that knowledge related to HIV and AIDS is not enough to protect them. Many respondents in this research (Table 7) have not done voluntary HIV testing which is known as one of the component of HIV prevention by receiving pre and post-test counselling depending on HIV status. The fact that many of respondents did not have HIV testing means that they do not have that information which could help them to live depending on their HIV status. The gaps on knowledge and ways of appropriate living style basing on personal HIV status make respondents to be susceptible to HIV infection or re-infection.

In the line of comprehensive knowledge regarding HIV and AIDS, male students aged 20-25 years old are better informed (88%) than female of the same age (Table 4). These female students aged 20-25 years are in the first years of university where most of them experience their much sexual intercourse (figure 6) which may be unsafe. Basing on the findings in this study sexual temptations are made when people are over alcohol drunken, and the use of condoms is irregular and this put people in risky situation of getting HIV infection (Table 10) Life in campus with different students from a mixture of backgrounds involves living with others who may influence each other’s activities including learning new behaviour which may put students in risky of being infected with HIV. In this research, students of the first years are the most victims of the new situation and thus be the most to face challenges regarding sexual relations such as many pregnancies and STDs.

5.2 Economical factors

In the book written by Müller (2005) it is stated that

Sexual relations, be they within or outside marriage, become increasingly linked to the economic and social survival of women in different sub-Sahara African context. These dynamics find their expression in so called ‘sugar daddies’ older wealthy men, sometimes teachers, who help schoolgirls with paying their school fees and other expenses in return for sexual encounters; as permanent (often multiple boyfriends paying some money to women to feed their children.

In this study, during the interview, the respondent said that 9 pregnancy cases were reported among ISAE students. The question followed was to know the contribution of the institute to help those young mothers and their children. The response was that 'ISAE does not have a mission of taking care of students' babies. Mother and their children are not allowed to stay in campus hostels'. This means that those young mothers try to survive by any means or any support from anyone. In Rwanda many people have been affected by genocide so that it is difficult to find someone to take care of your child and help continuing studies. This is where unmarried young mothers got into relation with sugar daddies who can help them to continue studies and provide supports to the new born in favour of sex in exchange.

Being in this situation as a young mother, negotiating safe or refuse unwanted sex is not easy and it may provoke physical, physiological and sexual violence or losing everything from the supporter. Therefore, mostly the choice is to accept those unsafe/unwanted sexual intercourses and thus be in risk of being infected with HIV. Byron et al (2006 cited in Mireille 2008) said that 'empowering women economically can decrease the level of susceptibility'. And According to Müller (2005), 'most women are at risk because of their powerlessness relative to men in overall organisation of society and this subordinate position circumscribes their livelihood options'. Looking at the figure 7 in which 10% of male students aged 20-25 and 65% aged 20-25 and 35% aged 26-31 years old female students make sexual intercourses in order to get money either from neighbours, friends, family members, boyfriends and partial jobs (Table 8) and this is because they spend more than what they get (table 8) while others do it in order to get other favours such as marks and sexual experiences.

5.3 ISAE living conditions

Students in ISAE campuses have different life conditions where some live in and others out of campuses. Life in campus may be influenced by personal behaviour, peer and social norms, location, infrastructure, rules and regulations leading the campuses.

A large number of ISAE students live out of campuses (Table 9) and this had been supported by interview held with ISAE Director of Students (Damascene NDIKUMWAMI). He also said that infrastructure facilities to these students are not the same. There are some large places where there are no lights inside campus and out and however used as areas of sexual intercourses among students who live inside campus especially in mid night after watching movies from auditorium. Regulations are concerned some students especially the once who live inside campus. E.g. it is prohibited to bring prostitutes in campus hostels while outside there is no regulations on that issue, Damascene NDIKUMWAMI said. Students who live in campus, have much access to condoms while the one who live out of campuses have that access when they are in campus, which make difficult for them to constantly use condoms during their sexual intercourses.

Students spend time in various places such as canteens (both in and out of campuses) with different people including teachers, their colleagues, or people living near the campuses mostly who possess money which can be used as tool of having sexual intercourse with them. According to Director of students, ISAE has no rules regarding relationship between students and staff which increases frequencies of staff-students friendships which put students into risk of being involved into unsafe sex due to the fact that in Rwanda, a university teacher/lecturer is respected, especially by students and this create great difference in power relations between them. E.g. A teacher who teaches two or three main courses can look like a final point of success or failure to students. He is powerful because once you fail in his courses; you are fired from the institute.

On the side of services offered by the institute, according to the institute's nurses Emanuel IYAMUREMYE & MUKAFESA Rose, ISAE dispensary has not enough materials to test STDs and treat them. In 2009, 4 cases of STDs (syphilis and gonorrhoea) have been reported among students who were seeking medical assistance and it is known that presence of SDTs

facilitate entry of HIV infection in case of unprotected sexual intercourse with an HIV positive infected partner.

5.4. Social cultural factors and HIV susceptibility among ISAE students

Barnett and Whiteside (2006) stated that

Epidemics do not just happen. They are not random events. They have histories. Histories always depends on how people they are told, by whom, and for what reasons. Histories of infectious diseases reflect the ways in which channels and paths of infection have been created as part of material and cultural lives of societies.

In Rwanda HIV and AIDS is linked with sex which is culturally regarded as taboo and something which should not be said publicly. This signifies why many students do not discuss HIV and AIDS related issues with their parents and prefer to do it with their colleagues, (Figure 5). Hence, what kind of information do they get from their colleagues? The information from them may be wrong, correct and even scaring.

5.4.1 Secrecy around HIV and AIDS

Looking at the figure 4, students discuss HIV and AIDS related issues when it is triggered by something related to sexual relations such as when some is HIV positive, has a STDs, and they also discuss it when making sex with their partners or when knowing that one of their colleagues is going to have illegal marriage. Talking about someone who is HIV positive, may look as stigmatisation once it is done in inappropriate way such as finger pointing or gossiping. Open HIV positive declarations are not reported in ISAE which means that seeking medical assistance is low among students who are HIV positive and it is difficult to the institute to provide them support.

5.4.2 Sexuality situation in ISAE students

According to Robert M. et al, (1993) 'human behaviour is one of the greatest mysteries of our world. We are all "experts" in human behaviour because we are intimately familiar with it. Yet our ability to understand, predict, and control behaviour is still very limited'. Rwanda in general made progress in responding to HIV and AIDS related impact, many students in ISAE know that HIV exists and is a destroyer infection but still some are involved in risk situation where they can get HIV. However it is difficult to consider their behaviour as intended risky situation of getting HIV but possibly they are over weighted by social-cultural, economical, environmental and mainly by personal internal weaknesses in taking and sticking on decisions regarding HIV prevention.

The understanding of various factors that influences sexual relations among ISAE students contribute to the assessment of their HIV susceptibility level and to provide recommendations in order to reduce their chance of being in risk situations of getting HIV infection.

Students in ISAE are involved into sexual relationship with various people (Figure 6) which increase their susceptibility to HIV infection as it has been said by Kalichman et al, (2007 cited in Mireille 2008) that 'multiple and concurrent sexual partners are considered important factors in the rapid spread of HIV in Africa'.

The table 10 in this study shows that respondents who are involved into sexual intercourses do not regularly use condoms which are considered as means for HIV prevention, once abstinence is difficult for unmarried people or faithful for married ones. According to NISR (2008a) 'Rwanda has a low condom utilisation rates compared with its neighbouring countries'. The use of condom in sexual intercourse reduces susceptibility to HIV infection even if it does not 100% protect infection due to the fact that it can be broken or misused, as it was agreed by Iyakaremye (2002). Students in ISAE live with others (Table 9) who have different sexual

experiences and different living conditions. According to the Director of Students, some students of ISAE are family headed or live with their one parent which implies sharing of responsibilities in addition to the one of studying in tough conditions.

Being stressed by courses or other responsibilities may put people into risk of getting HIV infection because the increase of HIV susceptibility has also roots in psychological factors as it has stated by Sandeep & Sunil (2007) that,

Despite biological factors like sexual relationship, drug injection, blood transfusion there are some underlying psychological factors that make one vulnerable to HIV infection-like anxiety, stress, depression, lack of communication, posttraumatic stress disorder, negative effect, domestic problems and etc'.

On the side of motives of ISAE students to be involved into sexual relations, they can be looked from different angles of social and economical factors. Barnett and Whiteside (2002) state that

Conditions that facilitate rapid spread of an infectious disease are also by and large, those that make it hard for societies to respond and ensure that impact will be severe. Rapid spread and harsh impact are only apparently distinct symptoms of the same conditions, inequalities and poverty.

In general, ISAE students do not live in the same conditions and equal accessibility to the different services delivered by the institute. In addition to that, a great number of students is from poor families and thus they are supported by various sponsors (Table 8). This economical inequality may result in imbalanced living conditions which can create greediness which push students into sexual relations with wealth people who can provide them what they need. Once involved in these activities as a student, time to study is reduced and then finds someone to explain or to take notes for you who will sometime request sexual intercourses as an exchange to his/her services offered.

A large number of ISAE students live out of campuses (Table 9) where it is easy for them to be involved in the sexual intercourses. Being involved into sexual intercourses out of campus increase chances of getting HIV once this sexual relations is done with an HIV positive person because the accessibility to the condoms is limited (Table 10). Consequently, sometimes the results from these unsafe sexual relations is increased number of pregnancies which increase burden of those young mothers (9 cases in 2009), STDs (4 cases in 2009) including HIV as it was said by the nurses of the institute. This burden will also in return involve the affected person into risk of getting HIV when she will seek help for surviving and care for the baby.

During this research; I was expecting to find some of female teachers involved in sexual relations with male students. These cases were not reported may be because female in academic staff are few and less receptive to men's proposal as it has been reported by Martin (2008) that 'women naturally see attractive single men as a potential danger and are less receptive to their come-ons'.

5.5 ISAE Commitment towards HIV prevention

Students of ISAE face many challenges which put them into risk of getting HIV as it is analysed throughout this study. To uproot those challenges requires a strong collaboration among the concerned parties which are students themselves, institute, parents and local authorities. In kiyarwanda, there is a saying that 'Umwera uvuye I bukuru bwira wageze hose' (The behaviour from superiors is a model to their inferiors). The commitment is weak because of some available opportunities to the institute which are not explored.

Table 12: Some of unexplored opportunities in ISAE for responding to HIV and AIDS

ISAE is a governmental institute supported by government and it can generate its own income which can be partly used in HIV prevention programs.

ISAE is an education institute of active young female and male students, who can help in implementation of any programs once they are used and involved.

ISAE has educated staff compared to the rest of the population who can be trained on HIV and AIDS issues and then train others.

ISAE has infrastructure and Information technology facilities for disseminating audio and visual information regarding HIV/AIDS.

ISAE as an educational institute can include HIV and AIDS issues in the curriculum so that every student can benefit from that knowledge.

Possible cooperation with national and international partners in HIV and AIDS related programs

Use of Competence Based Learning in academic programs

Source: This study

Chapter 6: General conclusion and recommendations

This chapter summarises this study and gives recommendations basing on the findings from this research. The recommendations are directed to the concerned and to the prospect researchers who want to go far deeply into understanding how Rwanda students are susceptible to HIV and therefore see what can be done to slow down or cut the chain of transmission among Rwandan students.

6.1 General conclusion

This study started with aim of contributing towards effective academic performance of ISAE students and attainment of the Institute goal by assessing various drivers that manipulate students so that they can be in risk situation of getting HIV infection.

This study detailed more diverse range of factors among male and female students aged 20-25 and 26-31. The main factors are related to socio cultural, economical, environmental, political and personal factors. Knowledge of students, behaviour, attitudes and skills regarding living conditions and their sexual relations play a role in determining their level of susceptibility to HIV infection.

People are different and thus living conditions are different, the fact that a human is influenced by environment, students live in environment where they can be tempted by different people who give them promises like money, marks, love and marriage.

In ISAE, students live with others and they are mixed both female and males. Many of them live out of campus and share facilities with others. In the campus, students have access to canteen which provide alcoholic drinks which is known as one of the stimulus to sexual relations proposal and involvement as it shown in this study.

Susceptibility to HIV infection for students is aggravated by their previous sexual experiences before coming in ISAE especially the ones related to sexual home based violence. This study, found that students are involved in sexual intercourses before coming in ISAE and intensify them in their 1st years in the institute. This study revealed that in ISAE there are some cases of pregnancies and STDs including HIV among students which are indications of probability of continuous HIV spread among students.

Students who live in campus have access to condoms while others who live out do not. The use of condom is known as one of the main ways of preventing sexual transmitted diseases including HIV. Students who live out of campus reported difficulties to have easy access to condoms especially when they accidentally need them.

Students reported to have much sexual temptations; this is not something simple because it can be difficult to always be able to resist various temptations from various people.

The Higher institute of Agriculture and Animal Husbandry (ISAE), has not specific means to prevent HIV among students. There is not policy regarding sexual relationship among staff and student, HIV workplace policy, HIV focal point and thus the institutional commitment looks weak which gives more corridors for HIV transmission among ISAE students community. This study has some similarities and differences compared to the literature used for its achievement. On the side of similarities, this study as others done in the same context for example the one of Mireille (2008) about HIV susceptibility to college students, the other for World Bank report (2001) on HIV and AIDS on campuses students are more or less in risky of getting HIV depending on combination of level of knowledge related to HIV and AIDS, number of sexual partners, regularities in using condoms, life in campuses, age and sex and authority commitment.

On the side of differences, in this research it has been found that students are mostly involved in sexual intercourses in their outside residences. They do not do it in classes. They are also involved in sexual relations mostly in their first years of university and sometimes before coming to ISAE. Cases of sexual relationships among male staff to female students have been reported but there are no such relations between female staff and male students. The next figure summarises drivers that put ISAE students in to risk of getting HIV infection

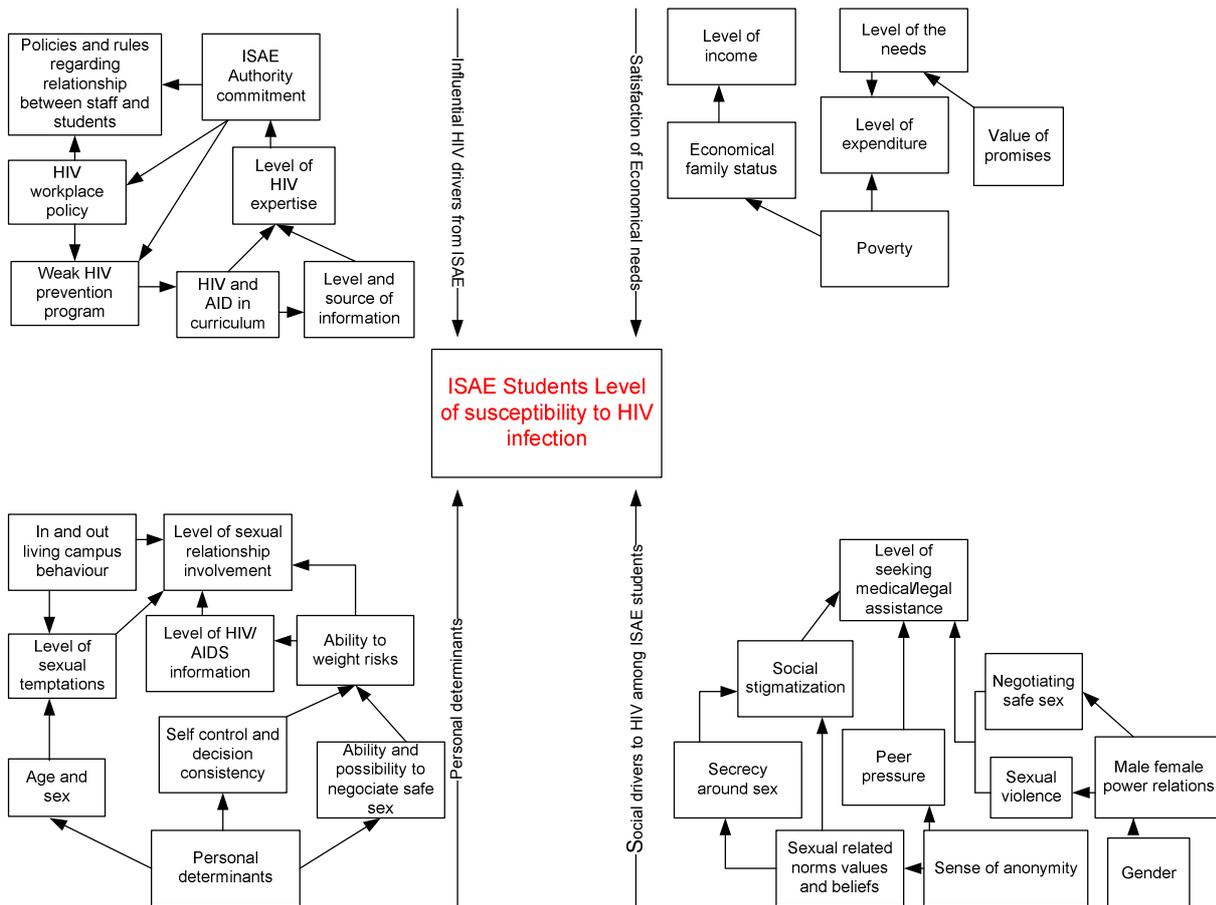


Figure 11: Factors which contribute to HIV susceptibility among ISAE students

Source: This study

6.2 Recommendations

Recommendations proposed in this study have an aim of reducing susceptibility to HIV infection among ISAE students in particular and among Rwandan university students (Male and female) in general. This study found information regarding HIV susceptibility to ISAE students in particular and it can be used with any other researchers in this domain especially in universities of Rwanda as it is the first of this kind. It will be of great importance to add to the gained knowledge in this study to continue analysing HIV situation from all angles in Rwanda and line up with identifying, planning, implementing HIV preventing related activities so that everyone can achieve his/her objective. The recommendations in this study are directed to:

6.2.1 Recommendation to ISAE Students

- ✓ This study found that students have some gaps regarding knowledge on HIV, However, students should read and search any information in line with HIV transmission, and prevention will help ISAE students and others in general.
- ✓ Students should know how to differentiate a good friend and bad friend who push them into risk situations.
- ✓ Students should be able to judge promises made by their sexual partners and see the advantages and disadvantages.
- ✓ For the students who live out of campuses, whether male or female, I recommend them to take condoms from campus and keep them in their residences and use them once it is necessary.
- ✓ Abstinence is a very reliable way of preventing from getting HIV infection, and once failed, use condoms and use them correctly and constantly.
- ✓ Students should be facilitated to report sexual violence cases and taken into consideration. Sexual harassment and sexual relations among teachers and students for marks should be reported to the institute authorities or to the police.
- ✓ Students should participate actively into programs/meeting planned by ISAE or any institution regarding HIV prevention.
- ✓ Students should understand that male can sexually attempt females as female can attempt males, and refusing is not being coward.

6.2.2 Recommendation to parents

- ✓ In this study, students reported to be in sexual relations with some family members or house boys/girls. I would recommend parents to openly communicate with their children, especially on the sexual relations issues, and be role model regarding behaviour and attitude.
- ✓ I recommend to male parents to learn how to communicate with their children

6.2.3 Recommendations to ISAE authorities

On the side of the institute authorities, the recommendations are regarded environment and policies in favour of HIV susceptibility reduction. Martin (1999) said that 'effective and long-lasting change within any society can come only from full and informed debate'. He continued saying that, any change should come from within and outsiders can provide resources. Basing on Martin's sayings, the following recommendations have been made to ISAE authorities.

- ✓ ISAE should at least plan one afternoon per month dedicated to HIV and AIDS related programs; here open debates on HIV and AIDS issues can take place.

- ✓ ISAE should involve students (male and female) in all decision making committees and meetings and in any other programs especially the ones regarding HIV and aids. The program of introductory or free week should be introduced in ISAE so that new students may get information regarding institute and the ones related to HIV and AIDS in particular. The inclusion of HIV related courses into curriculum will help to have continuous knowledge regarding the epidemic. The programs focussing mostly on men will play a great role in reducing level of HIV susceptibility among students as it has been said by Martin (1999) that 'in the absence of an affordable cure or vaccine, changing men's sexual behaviour is essential to containing the epidemic'.
- ✓ Encouragement and facilitate ideas and groups of volunteers to teach HIV and AIDS issues
- ✓ ISAE authorities should install lights in all campuses so that dark places could not be available inside campuses.
- ✓ They should also separate male and female students from their hostels. The improvement of ISAE dispensary in terms of material will play a great role in reducing HIV transmission among students.
- ✓ Creation of HIV workplace policy in ISAE will help staff directly and students indirectly because some of them are involved in sexual relations with staff.
- ✓ Appointing one staff as HIV focal point will help to gather information regarding HIV and thus it will be disseminated to students and staff by using audio and visual method and testimonies of people who declared publicly to be HIV positive. As a result, students and staff knowledge will increase which may contribute to the decrease of HIV susceptibility among students.
- ✓ ISAE authority also, should seek mechanisms such as condom distributing machine in and out campuses students main hostels in order to provide them equal access to the condoms.
- ✓ Creating webpage on ISAE website reserved for information related to HIV and AIDS, inclusion of online asking question and responding will help to provide information and students can be motivated of asking what they consider shame in public.
- ✓ Use of canteen is important it helps students but it should be controlled so that having alcohol drinks may be reduced or time to be opened maybe re-adjusted.

6.2.4 Recommendations to local authorities

- ✓ Last but not least, local authorities should make follow up in collaboration with hotels owner regarding sugar/daddies cases. And be punished. Hostels should also dispose condoms in their rooms.
- ✓ Implementation of punishment of sexual violence to both male and female.

6.3 Recommendations for further studies

HIV is a special infection due to its characteristics and consequences. The prevention requires also special and tough measures from all of the sectors of life especially education. The further studies suggested are:

- ✓ Research on various drivers which may lead primary school pupils into risk of getting HIV infection.

- ✓ Role of involving students of Higher education in responding to HIV prevention.
- ✓ Research on sugar daddies and mummies relationships with students

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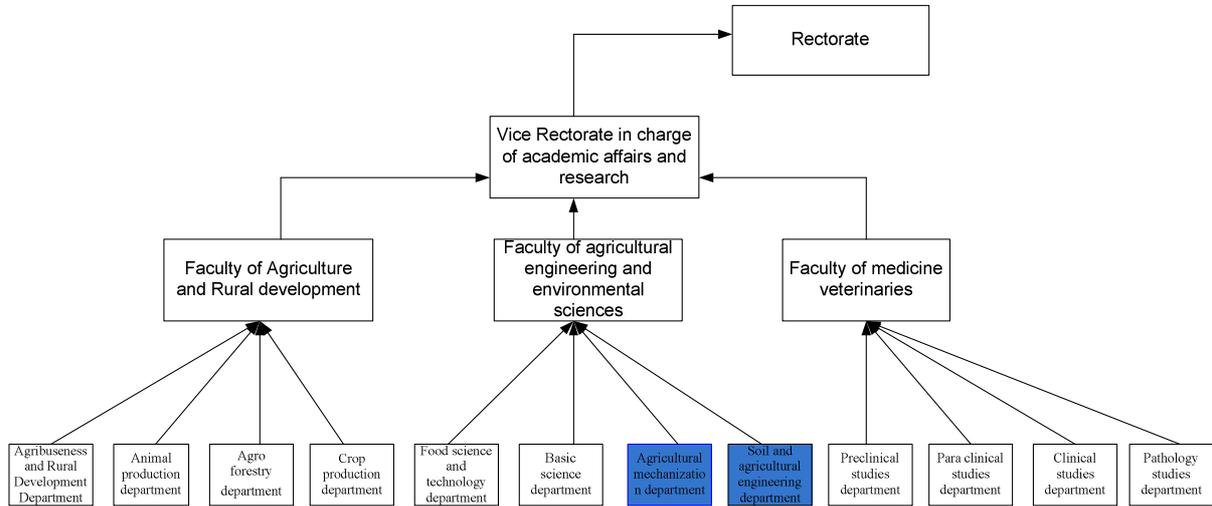
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Annexes

Annex I: Faculties and departments in ISAE



Departments located in Rubirizi campus

Annex II: Research Anonymous Questionnaire

Research questionnaire

Dear respondents thank you for taking your time, feel free and answer these questions. You will be treated anonymously and your answers will only be used for the research purpose. This questionnaire however, has been designed to evaluate how likely are you to be infected with HIV in order to plan according to the real facts and causes. There is no any consequence during and after this research on you not matter what responses you provide.

1. Identification

DateJuly 2010

Age..... Sex.....Faculty.....

Single Married widow widower separated orphan

2. Knowledge related to HIV/AIDS

Answer these questions below by saying yes or no

- a. HIV and AIDS are the same Yes No
- b. There is cure for AIDS related diseases. Yes No
- c. HIV infects only gay people. Yes No
- d. You can get HIV from sharing a cup with someone who is HIV positive Yes No
- e. Mosquitoes transmit HIV. Yes No
- f. HIV stands for Human Immunodeficiency Virus. Yes No
- g. HIV can be transmitted trough kissing HIV infected person Yes No
- h. Unprotected vaginal or oral sex put people at risk of being infected with HIV Yes No
- i. Abstinence is to only have sex with one partner. Yes No
- j. Condoms can be used to prevent HIV infection through sexual intercourse Yes No
- k. It is possible to recognise by appearance that someone has HIV virus.....

If yes, How?

.....
.....
.....
.....

If no, why?

.....
.....

.....
.....

Is it possible to prevent from being infected with HIV? Yes or No.....

If yes,

how.....
.....

.....
.....
.....

If no, why?

.....
.....
.....
.....

I. Have you ever had an HIV test? Yes or no

If yes or no, explain why please,

.....
.....
.....
.....
.....

3. Economical drivers to HIV infection

a. What is the economical status of your family?
Rich.....Poor.....

b. How much money do you get every month?.....Do you find them enough
for you?How much money do you spend every month?.....

c. Where do you get money from?

- Parents
- Relatives
- Others (specify),

.....
.....
.....
.....
.....

m. What activities do you do to get money?

.....
.....

.....
.....
.....

4. Environmental drivers to HIV Infection

a. Do you live in campus?.....or outside of campus.....Do you live alone?.....

b. Where do you spend your free time?

In campus.....in campus canteen.....in pubs out side campus.....in sport.....

c. Who do you spend time with?

Lecturers.....Colleagues.....

d. For what reasons do you spend time with them?

- Negotiating marks
- Discussion academic issues
- Others(specify please)

.....
.....

.....
.....
.....

e. Where do students go for sexual intercourses?

- Inside campus homes
- Outside homes/private home
- Hotels

Others (specify please)

.....
.....

.....
.....
.....

5. Social cultural drivers to HIV infection among students of ISAE

a. What do you think about discussing HIV/AIDS issues publicly?

.....
.....
.....
.....

b. In which situations do you discuss sex related issues in campus?

.....
.....
.....
.....
.....

c. Where do you discuss HIV/AIDS related issues?

- in class? In which courses/subjects do you get information related to HIV/AIDS?.....

.....
.....
.....
.....

- with student colleagues
- With parents (mama or father) or both (specify plz).....

d. What are the topics do u discuss on?

- HIV transmission
- HIV prevention
- Both of them

a. Have you ever had a sexual intercourse with someone?if yes, continue to the next question. If no, go to the **h** question.

b. How many sexual partners have you had from 1/January 2010).....have you had more than one sexual partner during the same time? Yes or no?

if Yes why?

.....
.....
.....
.....
.....

How often do you use condoms?

- Always, (100% in all my sexual intercourses)
- Usually (80 % of all of my sexual Intercourses)
- Often (60 % of all of my sexual Intercourses)
- Sometimes (50% of all of my sexual intercourses)
- Occasionally (30% of all of my sexual intercourses)
- Never (0% of all my sexual intercourses)

If often, sometimes or never, explain why please,

.....
.....
.....
.....
.....

c. What was the reason to do that sexual intercourse?

- To get money
- To get sexual experiences

Other reasons (specify please)

.....
.....
.....
.....
.....

d. Have you ever been proposed to have sexual relationship with:

- A lecturer/teacher

- Administrative staff
- Students

Others (specify please)

.....

I. If yes? What were the promises?.....

J. Was it easy to refuse?..... Yes or No

Explain (please)

.....

K. When have you had much sexual relationship proposals?

- Before coming in ISAE
- In my 1st year in ISAE
- Others (specify please)

.....

L. When have you received more sexual relationship proposals?

- During academic excursion
- During disco funeral
-

- During parties of my colleagues (explain please)

.....
.....
.....

Others (specify please)

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Thank you very much for your responses

Annex III: Check list for interview

Question to use during the interview between me (Researcher), nurses of students

1. What do you think about HIV and AIDS among students of ISAE?
2. Are any HIV positive cases reported in ISAE students? Did they declare themselves?
3. Do you think that your students are in risk of getting HIV infection?
If yes or no, how?
4. How do you think HIV among students can affect them and institute?
5. How many sexual transmitted diseases reported during last year of 2009?
6. How many sexual harassment complains did you receive last year?
7. How many pregnancies reported during last year of 2009?
8. Which relations exist between students and administrative staff, lecturers?
9. Are those relations accepted and recognized by the institute?
10. What are the activities done in ISAE to prevent students from being in risk situation of getting HIV infection?
11. What are activities done last year for preventing HIV infection among students?
12. Where do students get information about HIV and AIDS?
13. What is the budget allocated to HIV and AIDS related activities among students?
14. Do you have an HIV and AIDS focal point in the institute? If no, why?

Annex IV: Informed consent
INFORMED CONSENT

Dear Director, of students /Responsible of students/ Nurse in ISAE,

You are kindly invited to participate in a study on Drivers that Influence Susceptibility to HIV Infection Among Students of Higher Institute of Agriculture and Animal Husbandry (ISAE)-Rwanda.

We hope to learn socio-cultural, economical, environmental and political drivers in and outside campuses which put ISAE students into risk situation of getting HIV infection and how ISAE authorities take action to prevent HIV infection among students' community. You were selected as a priceless possible participant in this study because you are mostly involved in day to day life of students as your professional responsibilities.

If you decide to participate, interview will be done face to face and you will be asked questions regarding students' life in campus and outside campuses, ISAE programs, policies and rules in the interest of students in order to reduce their susceptibility to HIV infection. The interview will take not more than 20 minutes. In the questions, you may face some which requires talking about others as matter of giving information or question requesting to disclose professional secrecy. The frankness in responding will result in drawing relevant conclusion which in turn will help an institute and students in general once applied into action.

If you feel uncomfortable today, a convenient time and place for you will be highly appreciated and respected. Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission. This study will be only used for academic issues in order to achieve my master degree from Van Hall Larenstein University of Applied sciences. It may also used for further research as reference. This final document from this research is not money making oriented.

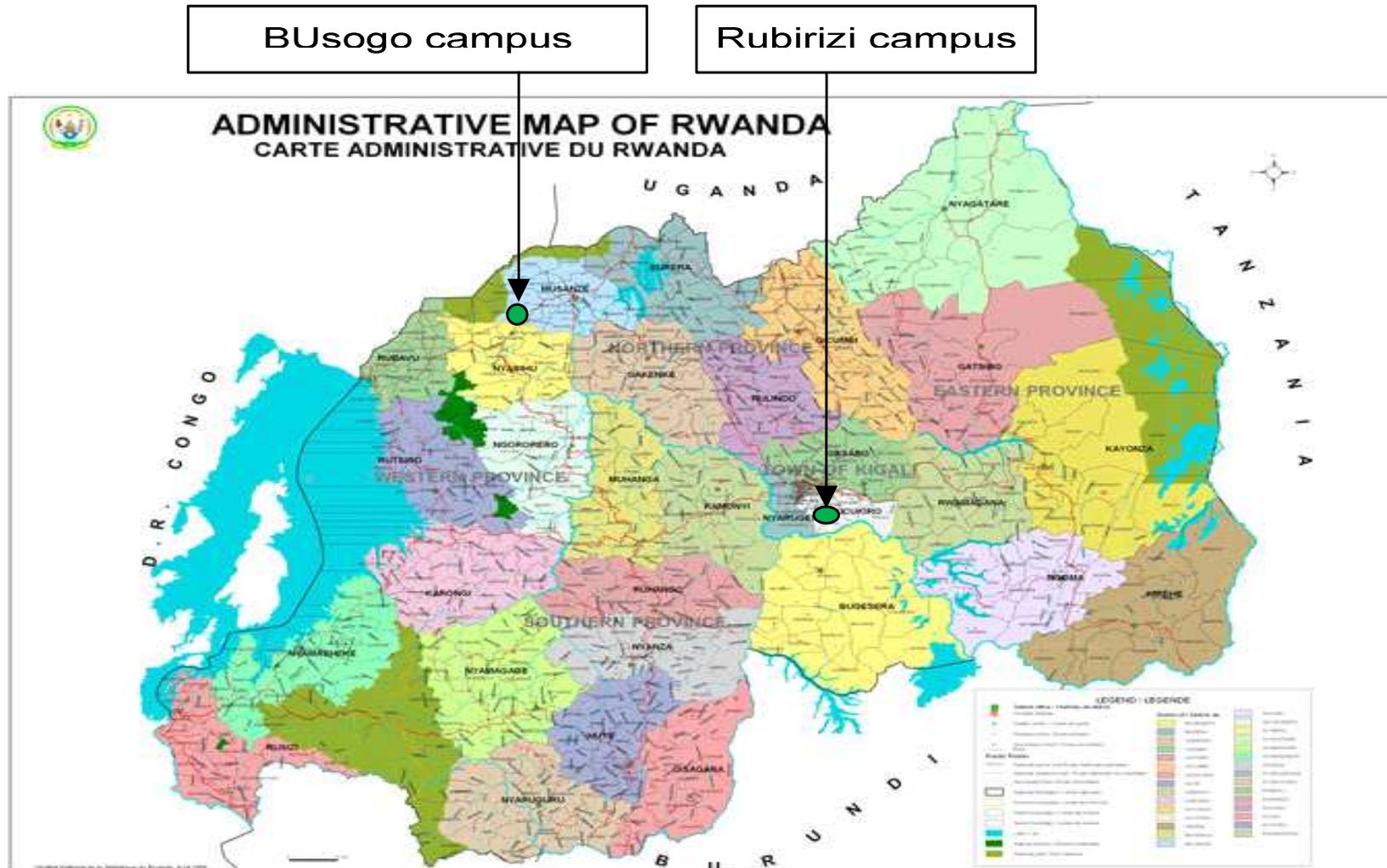
Your decision whether or not to participate will not prejudice your future relation with the Higher Institute of Agriculture and Animal Husbandry.

If you have any questions or any additional information, please do not hesitate to contact me. (Hamiss BIZIMANA) at e-mail: biziham@yahoo.fr or on telephone number: 0788526459. I will be happy to receive them all.

You will be offered a copy of this form to keep.

You can make a decision whether or not to participate. Your signature indicates that you have read the information provided above and have decided to participate. You may withdraw at any time without penalty.

Signature Date



Annex V: Administrative Map of Rwanda

Source: National Institute of Statistics of Rwanda (<http://www.statistics.gov.rw>)