

Agricultural Education Students' Knowledge of the Botswana Government's HIV/AIDS Prevention Educational Programs

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Abstract: The study was a descriptive survey research that used a structured instrument to determine the BSc agricultural education students' knowledge of the HIV/AIDS education strategies being disseminated by the Botswana government. The findings showed that the majority of the respondents were unmarried within the sexually active age group of 15-49 years and were all Botswana citizens. The results further showed that the respondents had knowledge of the consequences of having sex without using a condom, having multiple sex partners and abstinence as the three strategies of combating the spread of HIV/AIDS in Botswana. The study recommended that educational institutions in Botswana review the school curriculum to reflect and intensify the teaching of vocational skills in agriculture and in other practical subjects and that the study of HIV/AIDS disease be included in the school curriculum from primary school level to tertiary institutions.

Key words: Agricultural education, Botswana government, HIV/AIDS, prevention educational, programs, students' knowledge

INTRODUCTION

HIV/AIDS is one of the diseases in the annals of history that has threatened the existence of life with multiple epidemics and impacts. According to Williams (2000), the global magnitude of the epidemic is estimated at 40 million people living with HIV/AIDS. An estimated 19% of the general population and 29% of the sexually active and economically productive persons are infected with HIV/AIDS. The total cumulative death is 21.8 million and new infections were estimated at 5 million in the year 2001. Sub Saharan Africa is home to 28 million infected people. The region accounted for 80% of all deaths and 75% of all new infections in the year 2001. UNDP Report (2004) indicated that due mainly to HIV/AIDS in sub-Saharan Africa, more than 20 countries experienced drops in life expectancy between 1985-1990 and 1995-2000. In Botswana, Burundi, Namibia, Rwanda, Zambia, and Zimbabwe, life expectancy declined by more than seven years. The spread of HIV/AIDS has multiple consequences for development. It robs countries of people in their prime, and leaves children uncared for. By 1999, 13 million children were AIDS orphans

Botswana is considered to be amongst the most HIV/AIDS infected and affected in Sub Saharan Africa. With a population of 1.7 million, the country has 283,764 adults aged between 15-49 years living with HIV/AIDS. The prevalence ranged from 25.7% in the Southern District to 52.2% in Selibe-Phikwe in the Central District,

with women in the age of 25 to 29 years being the most affected (NACA, 2003a). Twenty-five infected children are born daily and HIV/AIDS related deaths account for over 10% of the annual deaths. (NACA, 2002a).

HIV is present in all body fluids of an infected person, but it is concentrated in the blood, semen and vaginal fluid. It is present in virtually all tissues including the brain, spinal cord and cerebro-spinal fluid. HIV can also be found in tears, saliva and breast milk, though these last three are not considered significant routes of infection (Hubley, 1995). According to Arya and Hart (1998), HIV is predominantly sexually transmitted. It is estimated that 75% of all HIV infections result from sexual contact.

The impact of HIV/AIDS in Botswana is felt in all sectors in the country including among others, absenteeism due to illness, grief, premature death of skilled and experienced workers, reduced productivity and general staff attrition, drop in school enrolment, decrease in the number of experienced teachers, as well as increased number of orphans. Life expectancy in Botswana has dropped from 67 to 42 years to-date and infant mortality is expected to increase from 57 to 60 per 1000 deaths by the year 2005 (NACA, 2001).

The impact of HIV/AIDS has also resulted in tremendous increase in costs. Patients of HIV/AIDS related illnesses occupy 60 to 95% of hospital beds. The epidemic has also diverted money from social development programs to caring for HIV/AIDS affected and infected populations. The epidemic has produced new

patterns of poverty and livelihood insecurity, the outcome being a new category of poor people, the “AIDS poor”. These include households with chronically ill young adults, those that have suffered the trauma of a young adult’s death in the last two or five years, house holds headed by single parents, the elderly or orphans and those fostering orphans (FAO, 2004).

The government of Botswana has declared HIV/AIDS a national crisis because of the impact of the disease on the socio-economic development of the country. The pandemic has the potential to reverse and halt the social and economic progress that has already been made, especially in strategic sectors such as health, education and agriculture. In view of this the government has put in place policies, infrastructure and programs to control the epidemic to mitigate its adverse effects.

Botswana government HIV/AIDS main prevention strategies: The government of Botswana has come up with numerous HIV/AIDS prevention strategies, which include among many others, education, vaccine development, voluntary counseling and testing, as well as prevention of mother to child transmission. In 1997 a national HIV/AIDS strategy commonly known as Medium Term Plan II (MTP II, 1997-2002) was developed (NACA, 2003a). The strategy called for the participation of all sectors of society in the HIV/AIDS prevention education strategies including:

Abstinence: This mainly refers to delay in the onset of sexual intercourse and/or celibacy. According to Hubley (1995), abstinence is the safest way of avoiding HIV infection but it is unrealistic for most people. He noted that delaying sex until marriage is becoming uncommon, especially among young people beginning adult life and who get married later in their lives. Mwamwenda, 1996; Ezewu, 2002; and Hubley, 1995; observed that adolescents are influenced by their emotions, passion as well as family and community pressures, and their physical development to go into early sexual relations.

Being Faithful: Arya and Hart (1998) described this sexual behaviour as a decrease in the rate of sex partner change and/or faithful monogamy or polygamy. This method is regarded as the second best method after abstinence if practised consistently, although it may be risky because even if one adopts the message of one partner for life the partner may not adopt it (Hubley, 1995). The author also noted that the method is unrealistic for many people as well. He gave an example of prostitutes for whom sex is a vital source of earnings, and men and women who migrate from home to work in far away places. According to Alice and Estrellita, (2001), multiple partners are culturally acceptable for married and

single men in most African societies. Evidence has shown that after puberty, boys tend to become sexually aroused more readily than girls and therefore engage in sexual intercourse more frequently and with more partners than girls (Mwamwenda, 1996).

Use of condoms: The male latex condoms are 98-100% effective if used correctly and consistently, and female condoms are about 95% reliable if used correctly. Laboratory studies have shown that the HIV virus cannot pass through a condom, even water and air molecules, which are much smaller than the virus, cannot pass through a condom (Hubley, 1995). A range of problems including:

- personal dislike for the use of condoms by men and women
- the association of condoms with promiscuity
- the lack of negotiating power for women in matters regarding sexual intercourse
- religious opposition
- misconception about the effectiveness of condom use
- the link between sexual risk taking behaviour and alcohol and other substance abuse
- low availability of condoms have been encountered in the promotion and use of condoms among men and women (Arya and Hart, 1998).

Other obstacles to the use of condoms include:

- wanting to feel the “real you”
- condoms are not made large enough
- condom create inconvenience during sexual intercourse
- putting condoms on takes away the pleasure of the moment
- putting condoms on deprives sexual partners of the feeling they should experience during sexual intercourse
- using a condom is like bathing with your socks on
- the use of condoms is regarded as lack of respect for one’s partner
- condoms mar the spontaneity that normally goes with intimate feelings of each other (Stine, 1997; Mwamwenda, 1996).

Studies have shown that students only use condoms to prevent pregnancy rather than infection by HIV (Stine, 1997).

Other contributing factors to the HIV/AIDS pandemic:

Gender: According to Alice and Estrellita (2001), Stine (1997), and Arya and Hart (1998), teenage girls are five to six times more likely to be infected by the virus than boys of their age group because:

- biologically women have large mucous surface in the vagina, where micro lesions and infection can occur easily
- socially and culturally women are not expected to discuss or make decisions about sex, let alone request for the use of condoms and often risk abuse if suspected of infidelity
- men's violence against women put women at risky and unsafe situations, such as rape and sexual abuse
- economically, most women are financially and materially dependent on men, and may have to exchange sex for material favors for daily survival
- poverty amongst women lead to risky behavior through either an increase in the number of sexual partners or low use of condoms, due to the low bargaining power of women

Youth: Part of being a teenager is taking risks. Teenagers test limits and question authority (Stine, 1997). This may encourage them to deliberately ignore the suggested preventive measures and see what would happen; unfortunately this might invite life long infection. Statistics show that about half of the people who acquire HIV become infected between the ages of 15 and 24 years. Youth often lack information about life threatening practices such as alcohol and drug abuse and having unprotected sex. Young females are at higher risk than their male counterparts due to little experience in negotiating for safe sex, they are victims of female genital mutilation, early marriages, sexual abuse and their immature genital tract is easily traumatized during sex that may lead to increased risk. Men seek younger partners in order to avoid infection and in the belief that sex with a virgin cures HIV/AIDS and other sexually transmitted diseases (Alice and Estrellita, 2001; Arya and Hart, 1998).

Purpose and Objectives of the Study: The purpose of the study was to determine the agricultural education students' knowledge of the national HIV/AIDS preventive educational strategies. The objectives were to:

- determine whether students have knowledge of the HIV/AIDS preventive educational strategies
- describe the demographic characteristics of the students
- Present students' suggestions about how to stop the spread HIV/AIDS disease

MATERIALS AND METHODS

Study design: The study was a descriptive survey research that was conducted in Botswana in 2008. A structured questionnaire was used to collect data from the study population. The study design was based on information from the HIV/AIDS literature sources.

Study population: The study was a census survey that intended to involve an accessible population of all 98 third and final year B.Sc. agricultural education students who are stake-holders both in the development of agriculture and education in the country. However as HIV/AIDS is a very sensitive issue in Botswana, the researchers relied on volunteers to participate in the study. Only 34 students participated voluntarily in the study in spite of both written and oral publicity persuading the students to participate in the study. The result of the study therefore, may not represent the views of the entire study population.

Instrumentation: The questionnaire used to collect data for the study consisted of close-ended questions and was developed based on the related literature reviewed. A six point Likert-Type scale ranging from 1 = Very Strongly Disagree to 6 = Very Strongly Agree was used to develop section 1 of the questionnaire. Section 2 required the respondents to indicate by ticking their demographic characteristics and Section 3 was an open-ended questionnaire that required the respondents to suggest other possible HIV/AIDS preventive strategies. The validity of the instrument was determined by using a panel of experts in the social sciences from the Botswana College of Agriculture. Reliability of the instrument was established by conducting a filed test with the first and second year students in the agricultural education department. The researchers made a review of the instrument based on the comments from the experts and the result of the filed test.

Data collection and analysis: A list of names of all the third and final year BSc agricultural education students was obtained from the admissions office of the Botswana College of Agriculture. The list was thoroughly checked to control for frame error. The researchers hand delivered the questionnaire to the respondents. Out of a total of 98 in the study population, 34 useable questionnaires were returned. The low rate of response could not allow generalization of the findings but could have implications for HIV/AIDS educational planning and implementation strategies. Data collected were analysed using the SAS computer programme at the BCA computer laboratory. Descriptive statistics (frequencies, percentages, means, and standard deviations) were used to report the research findings. A median of 3.5 would separate agreement from disagreement in Table 1.

RESULTS AND DISCUSSION

Respondents knowledge of abstinence, the use of condoms, and being faithful as HIV/AIDS prevention strategies: Table 1 shows the levels of the respondents' knowledge of the use of condom, abstinence, and being

Table 1: Respondents knowledge of condoms, abstinence, and being faithful as HIV/AIDS prevention strategies

Response Items	Mean	StD
A. Condoms		
1 I am fully aware of the consequences of not using condoms during sex.	5.12	1.72
2 Condoms prevent the spread of HIV/AIDS	4.68	1.55
3 Condoms save lives.	3.76	1.54
4 I have participated in condom use educational programs	3.55	1.89
5 Everything I know about condom use is based on hearsay	1.91	1.60
B. Abstinence		
1 Abstinence is the best way to avoid HIV infection	5.20	1.20
2 Poverty encourages some people to have unprotected sexual relations	4.76	1.28
3 I am fully aware of the benefits of having sex	3.50	1.81
4 I have attended educational programs on how to control my sex drives	2.35	1.50
Being faithful		
1 Education is the key to prevent people from having multiple sex partners	4.59	1.42
2 I am fully aware of the dangers of having sex with multiple partners	3.41	1.37
3 I have attended HIV/ AIDS educational programs about being faithful	1.92	1.29

Likert-Type scale: 1 = Very Strongly Disagree to 6 = Very Strongly Agree

Table 2: Demographic Characteristics of the respondents

Characteristic	Frequency	%
Gender		
Male	28	82
Female	6	18
Marital status		
Single	28	82
Married	6	18
Age (Years)		
21-25	2	6
26-30	8	24
31-35	19	56
36 years and above	6	18
Teaching experience		
Less than 5 years	10	29
6 -10 years	22	65
No Teaching Experience	2	6
Nationality		
Botswana Citizen	34	100

faithful as HIV/AIDS prevention educational strategies being pursued by the Botswana government. According to the table, the respondents agreed that they are aware of the consequences of not using condoms during sexual intercourse (Mean = 5.12), condoms prevent the spread of HIV/AIDS (Mean = 4.68), condoms save lives (Mean = 3.76), and that they have participated in condom use educational programs (Mean = 3.55). The respondents also agreed that Abstinence is the best way to avoid HIV infection (Mean = 5.20), Poverty is the main cause of some people to have sexual relations (Mean = 4.76) and they are fully aware of the benefits of not having sex before marriage (Mean = 3.50). The respondents agreed that Education is the key to prevent people from having multiple sex partners (Mean = 4.59) but have not attended HIV/ AIDS educational programs about being faithful (Mean = 1.92). The data in the table indicate that Alice and Estrellita, 2001 and Arya and Hart, 1998 findings which indicate that youth often lack information about life threatening practices such as alcohol and drug abuse and having unprotected sex are not true for youths in Botswana. The result may be due to Botswana Government's initiatives in providing HIV/AIDS education programs and using other initiatives to create

awareness among the population about the benefits of abstinence, the use of condoms and being faithful as strategies to prevent people from getting infected with the HIV/AIDS disease (NACA, 2003a).

Demographic characteristics of respondents: The respondents were asked to indicate their demographic characteristics in Table 2. The results showed that there were more male (82%) than female (18%) students, the majority (82%) were single, 56% were in the age group of 31-35 years, 65% had taught for 5-10 years, and all of them were Botswana citizens. The fact that all the respondents were in the high risk age group, 15-49 years (NACA, 2003b), made them the most appropriate population to learn from their knowledge of the benefits of abstinence, being faithful and use of condoms as HIV/AIDS preventive measures. The respondent's knowledge of the HIV/AIDS preventive measures also indicate that the Government of Botswana was providing HIV/AIDS educational programs to all citizens (NACA, 2003c).

Respondents' suggestions to prevent the spread of HIV/AIDS: The respondents suggested based on data analysed from their response to open ended questions that: (i) The of study HIV/AIDS disease be included in the school curriculum from primary school level to tertiary institutions (98%); (ii) Cultural schools such as "Bojale" for boys and "Bogwera" for girls to teach moral behaviour be intensified and encourage youth to join churches and other youth organizations (85%); (iii) Vocational education programs be intensified to teach people skills to make them employable and to create their own income earning opportunities in the rural areas (90%). Research shows that people engage in immoral sex behaviour because of poverty (Alice and Estrellita, 2001; Stine 1997; Arya and Hart, 1998); (iv) Compulsory testing and isolation of those who are infected with HIV/AIDS should be passed into law by the Botswana Parliament (100%); (v) Alcohol sale hours be reduced to

8.PM at night (100%) as drunkenness leads to casual sexual behaviour without the use of condoms (Alice and Estrellita, 2001; Arya and Hart, 1998).

CONCLUSION AND RECOMMENDATION

The majority of the respondents were unmarried; within the sexually active age group of 15-49 years and were all Botswana citizens. The respondents had knowledge of the consequences of having sex without a condom, having multiple sex partners and not abstaining from sex. The study recommended that educational institutions in Botswana review the school curriculum to reflect and intensify the teaching of vocational skills in agriculture and in other practical subjects that will make school leavers employable or to create their own income earning opportunities in the rural areas. Research shows that people engage themselves in immoral sex behaviour because of poverty and lack of skills to get jobs.

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