SOURCES OF INFORMATION ABOUT HIV AND AIDS AMONG STUDENTS WITH DISABILITIES IN INSTITUTIONS IN RWANDA

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ABSTRACT

This paper examines a study designed to investigate access to HIV and AIDS information by students with disabilities in institutions of higher education in Rwanda. Purposive sampling was used to select 154 students with disabilities, 5 deans of students, 5 medical doctors and 5 heads of HIV/AIDS clubs. Questionnaire was used to collect data from students with disabilities while the interview schedule was used to collect data from deans of students' medical doctors and heads of HIV and AIDS clubs. The findings of the study revealed that students with disabilities are at increased risk of contracting HIV/AIDS, they are sexually active and they constitute a special group which needs special attention. The study further showed that there is incorrect perception on the mode of HIV/AIDS transmission and prevention among students with disabilities. The findings further revealed that the most available sources of HIV/AIDS information in the community were teachers, non-governmental organizations and health facilities, posters, radio, political party leaders and printed materials. Based on these findings the study recommended that the government of Rwanda, the organization of people with disabilities and other organizations working with people with disabilities should break down barriers by elaborating specific policy and providing training workshops to address the various misconceptions about HIV/AIDS transmission and prevention among students with disabilities.

Key words*:* sources of information; hearing impairment; visual impairment; physical disability; HIV/AIDS; University of Rwanda.

INTRODUCTION

HIV stands for Human Immuno-deficiency Virus. A virus is a tiny particle that attaches itself to a cell of another creature and uses it to multiply, thereby making copies of itself (Mungai, 2000). HIV is a lentivirus, and like all viruses of this type it attacks the immune system, hence the title of Human Immuno-Deficiency Virus (HIV). The major concern with HIV is that it is responsible for suppressing the body's immune system, eventually resulting to the Acquired Immuno-Deficiency Syndrome (ibid).

Today, young people with disabilities are at highest risk of contracting HIV and AIDS. It has been estimated that 10% of the world's population are reported to be people with disabilities and that the majority of persons reported as being with disabilities live in the developing world. Regions in the developing world are most affected by HIV and AIDS in the World (UNAIDS, and WHO 2007). According to *Wanjama, Kimani, and Lodiaga (2007)*, half of all new infections occur in people between the ages of 15 and 24 years. Many are likely to die of

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AIDS before they reach 35. This infection prevalence is regrettable since that age period coincides actually with the age range of university studies in Rwanda.

Nowadays, HIV and AIDS epidemic has left no country untouched and no group of people unaffected. Stine (2009) conducted research to analyze the infection rate among the young people aged between 13 and 24 years living with HIV and AIDS by region, at the end of 2009. The research was conducted in different regions of the world. The total number of the respondents was 11,700,000 which represent 100% of the populations. The research revealed that Sub-saharan Africa had the highest infection rate among the youth (62%). It was followed by South/Southeast Asia with an infection rate of 18%. Eastern Europe/Central Asia and Latin America represented 6.3% and 6.1% respectively. East Asia accounted for 3.4% while the Caribbean and North America represented the same rate of 1.3%. North Africa/ Middle East had 1.2%. The lowest rate was found in Western Europe and Oceania with 0.4% and 0.08 % respectively (ibid).

In Kenya, it is estimated that about 20 per cent of all reported AIDS patients are young people in the age range of 15 to 24 years (Republic of Kenya, 2003) and the population of people with disabilities in Kenya is about 1.3 million, accounting for 3.5 percent of the total population (Republic of Kenya, 2010). In urban areas of Rwanda, young women in the range of 15-24 years have 3.9% prevalence versus 1.1% for young men, and 1% versus 0.3% in rural areas (Republic of Rwanda, 2005). In Rwanda, the 2002 Census found out that about 3.8% of the population is living with disabilities. However, it is likely that this figure is too low (SHIA, 2006).

In a study carried out on HIV/AIDS and Disability among Deaf Population in Swaziland by Groce, Yousafzai, Dlamini and Wirz in 2003, it was found that knowledge of HIV and AIDS is directly related to accessible sources of information. The top three sources of HIV/AIDS information listed by the deaf population were posters (70%), Organizations of people with disabilities (DPOs) (69%) and television (66%). By contrast, the hearing population listed Radio (95%), Relatives (89%) and Newspapers (79%). The survey consistently identified difficulties in communications as the key factor in blocking deaf peoples' access to HIV/AIDS information.

Similarly, a study carried out on HIV and AIDS knowledge, attitude, practices and accessibility by the Steadman group in Kenya in 2007, concluded that radio programs are the most effective source of information for persons who are blind and those with physical disability while seminars and workshops are the most effective source for persons who are deaf. Disability support groups, family and friends are also effective source for persons who are deaf and blind.

PROBLEM

There are increasing concerns regarding information access for students with disabilities due to limited knowledge on HIV and AIDS. Knowledge of HIV and AIDS is directly related to in accessible sources of information. There are many sources of information on HIV and AIDS such as radio, television, newspapers, seminars, health centers, church, school, family. However source of information varies across the disability type (Steadman Group, 2007).Students who have information about HIV and AIDS will guard against infection causing factors and if they are already infected, they will learn to live positively.

However, literature reviewed did not avail information on any research that has been conducted to find out access to HIV and AIDS information by students with disabilities in institutions of higher education in Rwanda, this provoked the need to carry out this study . The current situation of students with disabilities places them not only at a high risk of being

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infected with HIV and AIDS, but also at a vulnerable position in the absence of adequate public support systems. Thus, there is a need of increasing awareness among students with disabilities. This study specifically sought to identify the sources of information about HIV and AIDS for students with disabilities in institutions of higher education in Rwanda.

THEORETICAL FRAMEWORK

This study was based on the health belief model of Becker in 1974. The Health Belief Model (HBM) attempts to explain health-behaviour in terms of individual decision-making, and proposes that the likelihood of a person adopting a given health related behaviour is a function of that individual's perception of a threat to their personal health, and their belief that the recommended behaviour will reduce this threat (Becker, 1974).

Thus, a person would be more likely to adopt a given behaviour if non-adoption of that behaviour is perceived as a health threat and adoption is seen as reducing that threat. In short, individuals conduct an internal assessment of the net benefits of changing their behaviour, and decide whether to act (Ibid). The concept of self-efficacy was added later to the model. The right combination of perceptions adds up to an individual's readiness to act. Health promotion message-through mass media, peer education, and other interventions- act as cues to action, translating that readiness into overt behaviour (Ibid).

The HBM was spelled out in terms of four constructs representing the perceived threat and net benefits: perceived *susceptibility* (Youth believe they can get HIV), perceived *severity (*Youth believe that the consequence of getting HIV is significant enough to try to avoid), perceived *benefits (*Youth believe that the recommended action of using condoms would protect them from contracting HIV), and perceived *barriers (*Youth identify their personal barriers to using condoms (i.e., condoms limit the feeling or they are too embarrassed to talk to their partner about it) and explore ways to eliminate or reduce those barriers. Those concepts were proposed as accounting for people's "readiness to act." An added concept, *cues to action (*Youth receive reminder cues for action in the form of incentives (such as "no glove, no love"; got sex, get tested), would activate that readiness and stimulate overt behaviour. A recent addition to the HBM is the concept of *self-efficacy (*Youth receive training in using a condom correctly), or one's confidence in the ability to successfully perform an action (Becker, 1974).

According to him, the Health Belief Model can be used in research to explain and predict health behaviours regarding access to HIV and AIDS information by students with disabilities (Ibid). There is a link between the theoretical framework and the proposed study because when students have access to HIV and AIDS information, they change their behaviour positively and follow their lessons this is indicated in fig 1 below..

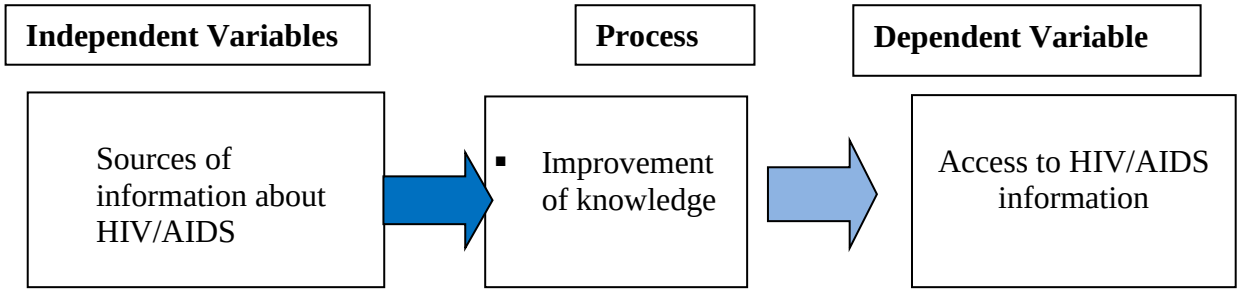

Fig 1. Conceptual Framework

This conceptual framework shows students with disabilities access to HIV and AIDS information about HIV and AIDS to students with disabilities comes from a number of

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sources and varies across the disabilities. Different sources of information about HIV/AIDS contribute to access to HIV/AIDS information and improves knowledge.

METHODOLOGY

Logistics and Ethics

Before proceeding to the field for data collection, approval and an introduction letter from the Director, Graduate School, Kenyatta University was granted which was presented to the Ministry of Education Rwanda for permit to be granted to go to the field for data collection. Consent of participants was sought through a preliminary visit to the selected colleges where the importance of the study and their participation was explained. The participants were then requested to participate at free will and were assured of confidentiality.

Research Design

The study used a descriptive survey design to investigate access to HIV and AIDS information by students with disabilities in institutions of higher education in Rwanda. This design was suitable for this study as it allowed for the researcher to explorer and gather information, summarize, present and interpret for the purpose of clarification (Orodho, & Kombo, 2002). Borg and Gall (1989) point out that descriptive survey research is intended to produce statistical information about aspects of education that interest policy makers and educators. According to Orodho (2009), the survey is the most frequently used method for collecting information about people's attitudes, opinions, habits or any of the variety of education or social issues.

Target Population

This study targeted all students in public institutions of higher education with visual, physical and hearing impairments in Rwanda during the academic year 2013.

Table.1. The target population of the study, academic year 2013-2014

Types of disability	*PI*		*VI*		*HI*		*TOT*	
Colleges	*M*	*F*	*M*	*F*	*M*	*F*	*M*	*F*
Arts and social sciences	40	8	16	5	4	2	60	15
Science and Technology	7	0	0	0	4	1	11	1
Medicine and Health Sciences	7	14	2	0	1	0	10	14
Business and Economics	6	3	2	2	2	0	10	5
Agriculture, Animal Sciences and Veterinary Medicine	16	5	0	0	0	0	16	5
Total of Students with disabilities	76	30	20	7	11	3	*107*	*40*
							147	
Deans of students							*5*	
Medical doctors							*5*	
Heads of HIV and AIDS clubs							*5*	
Total of the target Population							*162*	
Education				Pilot study				

Source: Researcher's design,(2015)

The University of Rwanda comprises the College of Agriculture, Animal Sciences and Veterinary Medicine, Medicine and Health Sciences, Business and Economics, Science and

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Technology, and Arts and Social Sciences. The informants included: students, dean of students' services, medical doctors and heads of HIV and AIDS clubs. All public institutions of higher education have clinics with full time nurses, doctors and lab technicians for treating sick students. Medical doctors and deans of students' services were selected because they have much information about students with disabilities (Mugenda and Mugenda, 1999).

In the table n°1 above, the three colleges (Arts and Social Sciences, Business and Economics, Medicine and Health Sciences) have students with physical, visual and hearing impairments.

One college (Science and Technology) has students with physical and hearing impairments while College of Agriculture, Animal Sciences and Veterinary Medicine, have enrolled students with physical disabilities only, so it helped the researcher during the distribution of the questionnaire and interview schedule.

Sample Size

The sample size for this study consisted of 162 informants of whom 147 were students with disabilities, five (5) deans of students, five (5) medical doctors (working in colleges) and 5 heads of HIV and AIDS clubs for each college.

Sampling Techniques

Since the target population of this study is small, the research worked with the entire population. The researcher purposely included in the study students with disabilities, deans of students, medical doctors and heads of HIV and AIDS clubs. According to Mugenda and Mugenda, (1999), purposive sampling is a sampling technique that allows a researcher to use cases that have the required information with respect to the objectives of his or her study. Cases of subjects are therefore handpicked because they are informative or they process the required characteristics.

Instruments

The questionnaire was adapted from a research report of Munthali, Mvula and Ali (2004) in University of Malawi entitled Effective HIV/AIDS and Reproductive Health Information to People with Disabilities. The questionnaire was made up of Close-ended and open-ended questions which were used to provide needed information for the study. To supplement the questionnaires, an interview schedule was conducted to gather more in-depth information from the deans of students, medical doctors (working in colleges) and heads of HIV and AIDS clubs.

Procedures

The researcher administered and collected the questionnaire. After instructions were given and confidentiality assured, the questionnaire was given to students with physical disabilities and those with hearing impairment for them to fill in. The same questionnaire was transcribed into Braille and given to students with visual impairment who used computers equipped with Jaws for windows to write and then print their answers. All questionnaires were distributed and filled on the spot to avoid any loss and cross sharing of information between the respondents.

An interview was conducted using structured interview schedule, with deans of students in their respective institutions and medical doctors and heads of HIV and AIDS clubs. Audio recorder was used first then afterwards the researcher wrote answers from the recorder.

Data collection was done on three consecutive days. The first day the researcher went to Kigali city where we have three colleges, the second day he went to Huye district where we have one college and the last day he went to Umutara district where we have one college.

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After completion of questionnaires by the students, the researcher gave interviews to selected persons.

Analysis

Data was analysed qualitatively and quantitatively. Data collected from the field was edited. The coding process then followed before the data was keyed into the statistical package for social sciences (SPSS) to aid in data analysis. The crosstabs command was used to obtain counts on more than one variable's values and obtained the Pearson chi-square. Qualitative data was analyzed through content analysis and emerging major themes were identified. Descriptive statistics analyses were done from which percentage, frequency and tables were generated.

FINDINGS

The main objective of this study was to identify the sources of information about HIV and AIDS for students with disabilities. The students with disabilities were asked to indicate the sources of information about HIV/AIDS for students with disabilities in their community. The results are indicated in Table 2.

Table 2. Sources of information

sources of HIV/AIDS information in the community	*Type of disability*						*Total N %*
	Physical disability		*Visual impairment*		*Hearing impairment*		
	Frequency (yes)	*Table Total N %*	*Frequency (yes)*	*Table Total N %*	*Frequency (yes)*	*Table Total N %*	
Health facilities	62	41.1%	20	13.2%	2	1.3%	*55.6%*
Teachers	65	43.0%	19	12.6%	11	7.3%	*62.9%*
Youth peer group	60	39.7%	12	7.9%	1	.7%	*48.3%*
Political party leaders	62	41.1%	12	7.9%	3	2.0%	*51%*
Church leaders	59	39.1%	9	6.0%	2	1.3%	*46.4%*
Printed materials	69	45.7%	14	9.3%	0	.0%	*55%*
Parents	49	32.5%	14	9.3%	7	4.6%	*46.4%*
Friends	55	36.4%	14	9.3%	5	3.3%	*49%*
Film/ Video	60	39.7%	12	7.9%	3	2.0%	*49.6%*
Non-government organizations	71	47.0%	9	6.0%	8	5.3%	*58.3%*
Posters	74	49.0%	6	4.0%	1	.7%	*53.7%*
Radio	58	38.4%	19	12.6%	0	.0%	*51%*
Other (seminar/workshop)	54	35.8%	1	.7%	0	.0%	*36.5%*

Note: (SPSS program generated ‘yes’ frequency only), ticked by the respondents.

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Table 2 depicts the sources of HIV/AIDS information available to disability students. Above half of the respondents considered the following sources of HIV/AIDS information as available to them within the community: Health facilities, teachers, political party leaders, printed materials, nongovernmental organizations, posters, and radio. Nearly two thirds of the respondents considered teachers as the most available sources of HIV/AIDS information in the community while a few of the respondents considered other (seminars/workshop) as sources of HIV/AIDS information.

Table 3.Pearson Chi-Square Tests

		type of disability
sources of information	Chi-square	137.315
	df.	26
	Sig.	.000*

Results are based on non-empty rows and columns in each innermost sub-table.

The Chi-square statistic is significant at the 0.05 level.

Table 3 test the hypothesis:

I. Ho: there are no sources of HIV/AIDS information available in the community.

II. Hi: there are sources of HIV/AIDS information available in the community.

The Chi-square value is 137.315 and the p-value is 0.000, which is significant. The p-value is less than 0.05. Therefore, the null hypothesis is rejected and alternative hypothesis is accepted. Thus, the students with disabilities considered that there are many sources of HIV/AIDS information available in the community.

Table 2 shows that half of the respondents considered health facilities, teachers, political party leaders, printed materials, nongovernmental organizations, posters, and radio as sources of HIV/AIDS information available to them within the community .

Note: (SPSS program generated 'yes' frequency only), ticked by the respondents.

Nearly two thirds of the respondents considered teachers as the most available sources of HIV/AIDS information in the community while a few of the respondents considered other (seminars/workshop) as sources of HIV/AIDS information.

Evidently, this finding was in line with research done by Yousafzai and Edouard (2004), Steadman group (2007) and Munthali et al.,(2004) who said that information about HIV/AIDS comes from a number of sources. The most popular source of information was radio, followed by health facilities and friends. This coincides with the finding of this research in relation to health facilities but radio didn't appear in first line. Dawood et al., (2006) indicated a high degree of exposure to various sources of information.

(i). Response by deans of students, medical doctors and heads of HIV/AIDS clubs.

The deans of students, medical doctors and heads of HIV/AIDS clubs were interviewed on the source of information about HIV/AIDS among students with disabilities. Responses are given in Table 3.

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Table 4. Interview about sources of Information about HIV/AIDS among students with disabilities

	Sources of Information	*Deans of students*	*Medical doctors*	*Heads of HIV/AIDS clubs*	*Total*	*%*
1	Health facilities	2	0	1	3	11.1%
2	Printed material	3	0	0	3	11.1%
3	Radio	3	0	0	3	11.1%
4	Peers	3	0	0	3	11.1%
5	Workshop	1	2	0	3	11.1%
6	Lecturers	1	1	1	3	11.1%
7	Church	0	1	1	2	7.4%
8	Parents	0	1	1	2	7.4%
9	Club	1	0	0	1	3.7%
10	Braille	1	0	0	1	3.7%
11	Seminars	0	0	1	1	3.7%
12	Dean	0	0	1	1	3.7%
13	Modules	1	0	0	1	3.7%
	Total	16	5	6	27	100%

Table 4 shows that health facilities, radio, printed materials, peers, workshop and lecturers are the most preferred sources of information followed by church, parents, club, Braille, seminars, deans and modules. Students with disabilities indicated that health facilities, printed materials and teachers (lecturers) are the important sources of information.

Students with Disabilities Accessing information on HIV/AIDS

The questionnaire was given to students with disabilities to find out how they access information on HIV/AIDS. Response is given in Table 5.

Table 5. Problems in accessing information on HIV/AIDS

		What problems do you face in accessing information on HIV/AIDS?					*Total*
		None	*Old age*	*Lack of materials*	*Lack of person to guide me*	*Other*	
Physical disability	Frequency	42	24	18	7	22	113
	% of Total	27.8%	15.9%	11.9%	4.6%	14.6%	74.8%
Visual impairment	Frequency	5	1	15	4	1	26
	% of Total	3.3%	.7%	9.9%	2.6%	.7%	17.2%
Hearing impairment	Frequency	0	0	2	10	0	12
	% of Total	.0%	.0%	1.3%	6.6%	.0%	7.9%
Total	Frequency	47	25	35	21	23	151
	% of Total	31.1%	16.6%	23.2%	13.9%	15.2%	100.0%

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Table 5.1. Symmetric Measures

		Value	*Approx. Sig.*
Nominal by Nominal	Phi	.729	.000
	Cramer's	.515	.000
N of Valid cases		151	

Note: (Phi and Cramer's V is a measure of association based on chi-square for nominal data). Nearly thirds of the students stated that there is no problem in accessing HIV/AIDS information, but below the threshold of 50%. Around a quarter of the respondents stated that lack of materials is a problem in accessing HIV/AIDS information in the community. On the other hand, a tenth of the respondents stated that lack of a person to guide them is a problem in accessing HIV/AIDS information.

Symmetric measure is shown in Table 5.1. The test is used to measure the association of nominal data (nominal by nominal), and columns and rows. The association is based on scale of 0 to 1. Therefore, there is moderate association (0.515) between the disability students and the problem they face in accessing the HIV/AIDS information. Since lack of materials is 23.2% and 'none' is 31.1%, lack of material is considered in favor of 'none' because of the moderate relationship between types of disability and problems they are facing in accessing HIV/AIDS information. For this reason, lack of materials is a major problem in accessing HIV/AIDS information in the community.

Table 6. Information concerning HIV/AIDS reaching students with disabilities

Do you think that the information concerning HIV/AIDS that is reaching people with disabilities is?		*type of disability*			*Total*
		Physical disability	*Visual impairment*	*Hearing impairment*	
Less accurate than that reaching the general population	Frequency	44	17	9	70
	% of Total	29.1%	11.3%	6.0%	46.4%
Equal to that reaching the general population	Frequency	39	9	3	51
	% of Total	25.8%	6.0%	2.0%	33.8%
More accurate than that reaching the general population	Frequency	30	0	0	30
	% of Total	19.9%	.0%	.0%	19.9%
Total	Frequency	113	26	12	151
	% of Total	74.8%	17.2%	7.9%	100.0%

Table 6.1. Symmetric Measures

		Value	*Approx. Sig.*
Nominal by Nominal	Phi	.324	.003
	Cramer's V	.229	.003
N of Valid Cases		151	

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Table 6 shows that nearly half of the respondents stated that the information reaching them is less accurate than that reaching the general public. Though, it is less than the 50% threshold. Similarly, a fifth of the respondents stated that the information reaching them is more accurate than that reaching the general public. In Table 6.1, depicts the association measures between the nominal data, and columns and rows. Cramer's V, which is 0.229 certain that there is less association between the attitudes the respondents have and the information on HIV/AIDS that is reaching them. Cramer's V, p- value is significant, therefore, there is HIV/AIDS information reaching students with disabilities, but it is less accurate than that reaching the general public due to Cramer's V value (0.229).

The findings show that the information is less accurate than the ones reaching general population without disabilities. The study showed that students with disabilities lack of materials are a major problem in accessing HIV/AIDS information in the community.

Table 7. Interviews about reaching of information concerning HIV/AIDS among students with disabilities

		Information is not reaching		*Information is reaching*		*Total*	
1	Deans of students	1	20%	4	80%	5	100%
2	Medical doctors	2	40%	3	60%	5	100%
3	Heads of HIV/AIDS clubs	0	0%	5	100%	5	100%

The researcher used interview to complete the quantitative data. In the question;" Do you think that information concerning HIV/AIDS is reaching PWDs?" As it shown in Table 6 above, the majority of deans of students and all heads of HIV/AIDS clubs said that the information reach PWDs but some categories of students were hindered by their disabilities like hearing impairments when there is no sign language interpreter, visual impairment when there is no Braille or other equipments like JAWS for windows or when the place is inaccessible for physical disabilities. Students with hearing impairment have difficulties in listening to radio, following a workshop or a seminar. They prefer to use short text messaging service on mobile phone, use of videos, compact disc and sign language. Two-thirds of medical doctors reported that the information reach students with disabilities.

CONCLUSION AND RECOMMENDATION

The study concluded that there are many sources of information on HIV and AIDS in the community, which some PWDs had access to while others are not disability specific like radio for hearing impaired. The study established that the major sources of HIV/AIDS information available in the community were teachers, non- governmental organizations, health facilities, printed materials, posters, radios, and lastly political party leaders. The study recommended that organization working with people with disabilities should establish enough HIV/AIDS programs which will ensure that more students with disabilities are reached using peer education and behavior change communication.

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