



Sexual Health Communication Strategies and HIV/AIDS Awareness among Students in Teachers' Colleges in Central Uganda

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Authors' contributions

This work was carried out in collaboration between all authors. Author AD designed the study, wrote the protocol, managed the literature searches, performed the statistical analysis. Authors JO and JE managed the analyses of the study and wrote the first manuscript. All authors read and approved the final manuscript.

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ABSTRACT

Background: There are about 34 million Ugandans (UBOS 2016) of which 7% adults are living with HIV/AIDS. Although the prevalence of HIV/AIDS among the youth is estimated at 3.7% relatively lower than in adults, about 60% of the Ugandans are youth hence more than 50% of Uganda's total population is at risk of HIV/AIDS infection. Therefore creating awareness among the youth on HIV/AIDS is the key to reducing its spread. Central to awareness creation is ensuring that knowledge on HIV/AIDS is passed through appropriate sexual health communication strategies. Methods of awareness are implemented to the built concept in the prevention of AIDS, with short street dramas, songs and distributing pamphlets at various organizations etc. Teachers, the counsellors of the society have also taken initiative in generating AIDS-related awareness. Despite the existence of provisions for communicating HIV/AIDS, still, there is limited literature found on sexual health communication strategies used by PTCs and awareness of HIV/AIDS among

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students, teachers, and trainees in Uganda. Therefore this Cross-sectional survey study was performed at Primary teachers colleges in central Uganda in 2014 with aim of establishing the relationship between three sexual health communication strategies namely: guidance and counseling, school-based talk shows on stigma and discrimination of children infected or affected by HIV/AIDS and integration of HIV/AIDS in teaching and awareness. For the study 216 students, teachers, trainees were selected along with 6 principals and 12 tutors. The semi-structured questionnaire was completed. In conclusion, it has been found that all of them are well aware regarding the AIDS preventive measures but fail to conceptualize regarding transmitting methods and symptoms.

Keywords: Sexual health communication strategies; guidance; talk shows; integration; student-teacher trainees; teachers colleges; HIV/AIDS.

1. INTRODUCTION

Statistics show that more than 35 million people live with Human immunodeficiency virus infection and acquired immune deficiency syndrome (HIV/AIDS) in the world and more than half of these are in Africa [1]. Although Uganda had attained considerable success in the fight against HIV/AIDS in the 1990s (Stoneburner and Low-Beer 2004) available information shows that of the 34 million Ugandans, about 7% adults are living with HIV/AIDS [2] with infection rate highest among married couples. The prevalence of HIV/AIDS among the youth is estimated at 3.7% [2], relatively lower than in adults. However, about 60% of the Ugandans are youth [3] implying that more than 50% of the Ugandan total population is at risk of HIV/AIDS infection.

Creating awareness among the youth on HIV/AIDS is key to reducing its spread. Central to awareness creation is ensuring that knowledge on HIV/AIDS is passed through appropriate sexual health communication strategies.

There are many sexual health communication strategies that have been used to communicate HIV/AIDS messages [4]. At Universities, sexual health communication strategies such as play and drama [5,6], Voluntary Counselling and Testing (VCTs) [7,8] have been used to raise awareness on HIV/AIDS. A study in South Africa revealed sharing information among peers and colleagues created more awareness and this was attributed to peers being able to understand and identify with each other [9]. Another study showed that 'ABC' communication strategy was used for University students in KwaZulu- Natal with varying degrees of success [10].

At the lower level of education, primary teachers are critical messengers of HIV/AIDS messages

to learners. The teachers in primary schools have the potential to reach larger numbers of learners due to Universal Primary Education (UPE) program and hence a greater multiplier effect. Efforts to involve already practicing primary teachers in HIV/AIDS fight has been through in-service training mainly in the form of seminars and workshops. This approach may not adequately equip teachers with sufficient information and capacity to create awareness about HIV/AIDS for their learners. For effective HIV/AIDS education at primary schools, teachers need to be adequately informed and trained.

In this respect, primary Teachers' Colleges (PTCs), as training institutions have a significant role to play in raising awareness on HIV/AIDS among student teacher trainees and ultimately build their capacity to disseminate HIV/AIDS among their learners upon completion of the training. The student teacher trainees need to be equipped with correct information on HIV/AIDS which eventually builds their confidence to talk about HIV/AIDS to learners. In order for the training colleges to deliver on this, sexual health communication strategies used at the college level are central.

Available literature suggests there is limited information on sexual health communication strategies on HIV/AIDS used in primary teachers colleges and awareness among the student teacher trainees [4,11,12] Onyango (2009) in Kenya, investigated the preparedness of primary student teacher trainees to teach about HIV/AIDS in their classrooms after completion. The findings showed that student-teacher trainees were not confident to discuss HIV/AIDS in their classrooms largely because of inadequate training while at the college. Knowledge of HIV/AIDS was through home science lectures, guidance and counseling and peers.

In Uganda, PTCs were privileged to be among pioneer organizations in training primary school student teacher trainees in sexual health communication strategies. Since 1996, Government of Uganda has supported the ABC sexual health communication strategy to prevent the spread of HIV/AIDS. Uganda was the first country in East Africa to include HIV/AIDS education in the PTC and the primary school curriculum. In 2001, the President of Uganda Yoweri Kaguta Museveni called for a communication strategy named Presidential Initiative for AIDS communication to the youth (PIASCY). In 2003, the Ministry of Education and Sports (MoES) in collaboration with its partners and line ministries launched two resource books called PIASCY Teachers' manual and PIASCY Hand book [13]. The books were to assist the tutors, student-teacher trainees, primary school head teachers and teachers to communicate to children about sexual health. It suggested ten Sexual Health Communication Strategies namely, (i) PIASCY assemblies (ii) School club meetings (iii) PIASCY oriented debates (iv) Action oriented meetings for children on safety friendship (v) PIASCY drama competition and skits (vi) Action oriented meetings on risky situations for children and defilement (vii) School talk shows on sexual abuse and legal issues, abstinence, and stigma (viii) Guidance and counselling (ix) Artwork for talking compound and (x) Action oriented meetings with care givers on positive parenting.

Despite the existence of provisions for communicating HIV/AIDS, there is limited literature on sexual health communication strategies used in PTCs and awareness of HIV/AIDS among student teachers trainees in Uganda. Hence this study was aimed at establishing a relationship between three sexual health communication strategies namely: guidance and counseling, school-based talk shows on stigma and discrimination of children infected or affected by HIV/AIDS and integration of HIV/AIDS in teaching and awareness.

The study was guided by the following questions; what is the relationship between child guidance and counseling, school-based talk shows and integration of HIV/AIDS in teaching as sexual health communication strategies and awareness of HIV/AIDS among student teacher trainees?

2. METHODOLOGY

A cross-sectional survey design was used in this study. Data was collected from six PTCs randomly selected in central Uganda. The respondents included all principals, one science tutor and one tutor in charge of guidance and counseling and 36 second-year student teacher trainees from each of the six PTCs making a total of 234 respondents. The principals and two tutors from each college were purposively selected. This is because they were expected to be more knowledgeable and would provide relevant information needed for the study. Each PTC has two science tutors and one tutor for guidance and counseling. Selecting one science tutor gave 50% representation per college and each guidance and counseling tutor had to participate in the study.

Systematic random sampling was used to select year two student teachers in each of the six PTCs. Year two class was picked purposively because these student-teacher trainees are at the final stage of the training, hence have adequate information.

One face to face interview of about 30 minutes was conducted separately for the principals, science and guidance and counseling tutors in each college by one member of the research team.

Prior to the time of the research, letters were written to the colleges through the principals requesting permission to conduct the research. A pre-tested Self-Administered Questionnaire (SAQ) and interviews were the main data collection instruments.

The data from (SAQ) was edited, categorized, coded and entered into the computer and analyzed using the statistical package for social sciences (SPSS). The dependent variables were HIV/AIDS awareness and the independent variables were sexual health communication strategies. Pearson's correlation coefficient was used to test relationships between sexual health communication strategies and awareness. The awareness level was rated as 0 to 24 percent – very low, 25 to 49 percent - low, 50 to 69 percent- moderate (Not high not low), 70 to 79 percent – high and 80 to 100 percent- very high. The qualitative data generated from semi-structured open-ended questionnaires and interviews were coded categorized, interpreted and analyzed under themes.

2.1 Ethical Considerations

In the study, ethical issues like names of participants, their responses plus their location were handled anonymously. In addition, only willing respondents were interviewed.

3. RESULTS

The respondents consisted of six principals, 12 tutors and 216 teacher trainees from six PTCs from central Uganda. Fifty percent of the principals had experience of more than 10 years of service as principal. All the principals were in the age bracket of 40 years and above, while the tutors were aged between 30-50 years. The student teacher trainees by gender were 93 males and 123 females aged between 18-27 years.

High awareness level was only observed in the knowledge of prevention of HIV/AIDS through correct and regular use of condoms. About three-quarters of the student teacher trainees (76.9%) said that HIV/AIDS can be prevented by correct and regular use of condoms. Low awareness level was recorded in transmission, signs and symptoms, treatment history and types of HIV/AIDS. About 47.7% of the student teacher trainees knew that HIV/AIDS can be transmitted from infected mother to her fetus (Table 1).

Majority of the student teacher trainees (82%) knew the meaning of guidance and counseling. From the interviews, all the six principals also accepted that their tutors have high knowledge of child guidance and counseling. Few student teacher trainees (10.2%) did not know the

meaning of guidance and counseling. About sixty percent of the student teacher trainees reported that they were adequately trained in child guidance and counseling of pupils infected and affected by HIV/AIDS; while (27.8%) were not adequately trained in guiding and counseling pupils who are either infected by HIV/AIDS (Table 2).

Five (83.3%) of the principals interviewed also pointed out that their tutors have adequate knowledge and skills of guidance and counseling. Two of the tutors (16.7%) from the same college also mentioned that the student teacher trainees were helped only once with training in acquiring skills of guidance and counseling by an organization called UNITY. About sixty percent student teacher trainees reported that there were adequate reference books concerning guidance and counseling for children infected and affected by HIV/AIDS (Table 2).

According to the twelve tutors interviewed, the reference books concerning guidance and counselling available in the colleges are: PIASCY hand book (P3-P4) and (P5-P7), Supporting Children in the Era of HIV/AIDS, PIASCY Readers Books 5,6, and 7, Child Guidance and child guidance and Counselling for Primary Schools (Tutors and Teachers Guide). However, they noted that the books were not adequate since a good number of them were sent to the Coordinating Centers (CCs). Slightly more than 50% of the student teacher trainees reported that tutors always conduct demonstration lessons on guidance and counseling of pupils infected and affected by HIV/AIDS (Table 2).

Table 1. Student teachers' knowledge of HIV/AIDS

Item	Disagree	Neutral	Agree
HIV is not the same as AIDS	117 (54.2%)	6 (2.8%)	93 (43%)
HIV/AIDS is transmitted through insect bites	97 (44.9%)	9 (4.2%)	110 (51%)
Signs and symptoms of HIV/AIDS do not appear during the window period	79 (36.5%)	44 (20.4%)	93(43.1%)
HIV/AIDS cannot be transmitted from infected mother to the fetus	103 (47.7%)	8 (3.7%)	105(48.6)
The first cases of HIV/AIDS in the world did not occur in 1987 in Rakai District in Uganda	99 (45.9%)	37 (17.1%)	80(37.1%)
There are two major types of HIV/AIDS	118 (54.6%)	61 (28.2%)	37 (17%)
HIV/AIDS can be prevented by correct and regular use of condoms	35 (16.2%)	15 (6.9%)	166(76.9)
HIV/AIDS can't be treated and cured using antiretroviral drugs	92 (42.6%)	24 (11.1%)	100(46.3)

Table 2. Communication strategies and student teachers' knowledge and training

Item	Disagree	Neutral	Agree
Guidance and counseling			
I know the meaning of child guidance and counseling	22 (10.25%)	17 (7.9%)	177 (82%)
I have been adequately trained in guidance and counseling for children infected and affected by HIV/AIDS	60 (27.8%)	26 (12.0%)	130 (60.2%)
The college has adequate Reference books concerning guidance and counseling for children infected and affected by HIV/AIDS	57 (26.4%)	27 (12.5%)	132 (61.1%)
School-based talk shows			
I know what school based talk show is	69 (31.9%)	4 (21.3%)	101 (46.8%)
The college has adequately trained me in conducting school-based talk shows for children stigmatized and discriminated upon due to HIV/AIDS	87 (40.3%)	17 (7.9%)	112 (51.9%)
In the college, there is adequate reference books on stigma and discrimination of children infected and or affected by HIV/AIDS	67 (31%)	43 (19.9%)	106 (49.1%)
Integration of HIV/AIDS into teaching			
I know what is meant by integration of HIV/AIDS in teaching	52 (24.1%)	32 (14.8%)	132 (61.1%)
Tutors have adequately trained me in how to integrate HIV/AIDS in all my plans and lessons	80 (37%)	38 (17.6%)	98 (45.4%)
My tutors always conduct demonstration lessons on integration of HIV/AIDS in teaching	107 (49.5%)	16 (7.4%)	93 (43%)

The number of student-teacher trainees who got adequate training in conducting school-based talk shows for children stigmatized and discriminated upon due to HIV/AIDS was moderate (51.9%). Five of the principals (83.3%) interviewed also lamented that their tutors and student teacher trainees still lack skills and knowledge of conducting school-based talk shows on stigma and discrimination of pupils affected and infected by HIV/AIDS.

Sixty percent of the student teacher trainees knew what is meant by integration of HIV/AIDS in teaching. However, only 45% of the student teacher trainees were adequately trained on how to integrate HIV/AIDS in their plans and lessons (Table 2). Five of the principals interviewed also explained that their tutors and student teacher trainees still lack knowledge and skills of integrating HIV/AIDS in their plans and lessons. Only one principal (16.7%) said that the tutors in his college have adequate skills and knowledge of integrating HIV/AIDS in their plans and lessons. All the principals (100%) interviewed agreed that their tutors need more training in HIV/AIDS communication methods.

There was a weak positive relationship between communication strategy through school-based talk shows, integration of HIV/AIDS into teaching, guidance and counseling and HIV/AIDS awareness level amongst student teacher trainees in PTCs in Central Uganda (Table 3).

4. DISCUSSION

The study established that the level of HIV/AIDS awareness amongst student teachers in PTCs in Central Uganda is low in some key concepts of HIV/AIDS. Majority of the students did not have adequate knowledge about the difference between HIV and AIDS, transmission, origin, types, treatment and cure. The findings on limited knowledge on routes of transmission among student teacher trainees may explain the continued spread of HIV/AIDS in the population. According to the Uganda AIDS Commission, "There is now a return to widespread risky sexual behavior and low comprehensive knowledge of HIV prevention in the population as was at the very beginning of the epidemic" [14]. Statistics have shown that in Uganda, the infection rate is still high [2]. Results from this

Table 3. Correlation between communication strategies and student teachers' knowledge

		Awareness level
School-based talk	Pearson Correlation	0.131
	Sig.(2-tailed)	0.057
	N	216
Integration of HIV/AIDS into teaching	Pearson Correlation	0.44
	Sig.(2-tailed)	0.524
	N	216
Guidance and Counselling	Pearson Correlation	0.131
	Sig.(2-tailed)	0.054
	N	216

study found in agreement with an earlier study on knowledge and attitudes towards HIV/AIDS amongst Iranian students which found that the knowledge level of HIV/AIDS among the students was low and there were many misconceptions about the routes of transmission of HIV/AIDS [15].

According to this study, the only highest awareness level was 76.9% and was registered in the area of prevention of HIV/AIDS by correct and regular use of condoms. This was in line with the finding of the study conducted by Selkuk et al in 2004 [16] involving 1800 Turkish students on knowledge and attitudes of students towards HIV/AIDS. Research has shown that consistent and correct use of male latex condoms can reduce the risk of STD transmission [16]. Almost half of the student teacher trainees 51% did not know that insects like mosquitoes do not transmit HIV/AIDS. Similarly, another study had reported that 6 – 42 % of students have misconceptions about transmission of HIV/AIDS. In this study, a misconception on the transmission of HIV/AIDS implies that student-teacher trainees may not adequately teach pupils information about transmission of HIV/AIDS.

Almost half of the student teacher trainees (48.6%) reported that HIV/AIDS cannot be transmitted from infected mother to her fetus. A study by [17] showed that a fetus can become infected with HIV through contact with the virus in their mother's blood, cervical and vaginal secretions, and breast milk. Limited awareness of HIV/AIDS transmission among secondary school students has also been reported in China. After a thirty-minute intervention lecture and videos on HIV/AIDS transmission, about 60% of the students surveyed reported that only shaving, tattooing and ear piercing with unsterilized instruments can spread AIDS [18]. The student teacher trainees who participated in this study were in their final year of the training with only about six months left before completion.

Therefore there were limited chances for more increase in awareness of HIV/AIDS transmission through sexual health communication strategies used by the PTCs. However, there have been several documented cases in which HIV has been transmitted through breastfeeding [19,20, 21].

The study also established that the knowledge of student-teacher trainees on signs and symptoms of HIV/AIDS and the window period was inadequate. Less than 50% of the student teacher trainees did not know that the signs and symptoms of HIV/AIDS do not occur during the window period. Limited knowledge of signs and symptoms of HIV/AIDS during window period poses a big risk to the student teacher trainees because lack of signs and symptoms may be interpreted as being free from HIV/AIDS. Inadequate awareness of signs and symptoms during window period counter the fact that Uganda is one of the countries where the battle against HIV/AIDS has been going on since 1986. It may also partly explain the reported increased spread of HIV/AIDS among the population [2]. These findings are in agreement with another study of undergraduate students in India which reported about 40% of the students had inadequate information on signs and symptoms of HIV/AIDS [22].

The finding of this study indicates that about 40% of the student teacher trainees did not know that HIV/AIDS has no cure and reported that antiretroviral drugs can cure HIV/AIDS. Similarly, Iranian students believed that HIV/AIDS can be treated [15]. The implication is that many young people may get complacent about the ABC strategy that government is pushing for thus spreading the infection further.

Research has shown that HIV/AIDS, sexual and reproductive health education in schools if taught adequately by trained educators using appropriate teaching methodologies, can have

positive health outcomes among pupils in both primary and secondary schools [22,23]. Furthermore, teachers who were not adequately trained in HIV/AIDS have challenges in teaching HIV/AIDS because it touches on sexuality – a topic barely explicitly discussed in most communities [24].

Communication through school-based talk shows on stigma and discrimination due to HIV/AIDS has no effect on HIV/AIDS awareness. Tutors and the student teacher trainees are not at the same level while communication of sexual health messages [25]. This may have an impact on the student-teacher trainees graduating from the colleges. This is because student teacher trainees may also not communicate HIV/AIDS-related issues to their pupils through school-based talk shows. Earlier findings from Kenya showed that tutors were not comfortable discussing HIV/AIDS to student teacher trainees because tutors felt that student-teacher trainees were younger and hence culturally it was not proper to discuss sexual issues openly with young people [24]. Despite the effort to fight stigma, there is evidence that stigma still persists [26]. In schools, stigma doesn't originate from pupils alone. Teachers are equally ill-prepared to deal with HIV-positive students and the reaction of others.

Communication strategy through the integration of HIV/AIDS in teaching has no effect on HIV/AIDS awareness in the PTCs. This could have been due to the fact that integration is done at a minimal level hence no impact on awareness. The student teacher trainees reported that they did not know how to include HIV/AIDS in their lesson plans. This points to how the integration is being done. There is evidence that it is useful for a teacher in using the book titled "Supporting Children in the Era of HIV/AIDS alongside the PIASCY Primary Teacher's handbooks which provide an overall summary of how student teacher trainees can integrate HIV/AIDS counseling in their good practice to [27]. In the PTC studied, PIASCY books are not sufficient because most of the books had been taken to Coordinating Centers. Integration of HIV/AIDS into PTC is yielding results not different from integration efforts at secondary schools. For example, [28] reported that although HIV/AIDS has been integrated into secondary schools curriculum through extracurricular means, the integration is not effective enough.

Earlier on, it had been noted that "While people see higher education institutions as creating knowledge through research and innovations, many of these institutions have not established policies about integrating HIV/AIDS into the curriculum" [29]. There is no evidence that "Teacher training colleges or universities are adjusting pre-service and in-service models and curriculum appropriately to integrate HIV education into their program". This situation has not changed in most teacher training colleges but tutors still need support to deal with HIV/AIDS curriculum related issues [30,31]. Recent research shows that the majority of tertiary institutions are either revising their programmes to accommodate HIV/AIDS education or have ignored it altogether [32]. Integration of HIV/AIDS education in the curricula of National Teachers Colleges (NTCs) and universities in Uganda is still very limited [32]. Universities and teacher training colleges have very few comprehensive HIV/AIDS programmes and generally, lack the commitment to implement HIV education policy [33,34].

5. CONCLUSION

Awareness of student-teacher trainees from primary teachers colleges in central Uganda is high in prevention but low in certain areas such as transmission, signs, treatment and its effects at the different level of HIV/AIDS.

There was a non-significant positive relationship between sexual health communication strategies through; guidance and counseling, talk shows and HIV/AIDS awareness. In other words, student teachers appear to obtain their knowledge of HIV/AIDS from other sources other than these strategies.

6. RECOMMENDATIONS

On the basis of the findings of this study, the following recommendations were suggested.

- (i) The tutors and student teacher trainees need more training in how to conduct school-based talk shows on stigma and discrimination of children infected and affected by HIV/AIDS.
- (ii) The tutors and student teacher trainees also need more training in how to integrate HIV/AIDS in their teaching. This can be done through refresher courses and practice how to integrate HIV/AIDS into lesson plans.

7. RESEARCH

- The attitudes of student-teacher trainees towards HIV/AIDS in PTCs in Central Uganda.
- The effectiveness of other HIV/AIDS communication strategies for example meetings with caregivers and school clubs in PTCs in Central Uganda.

ETHICAL ISSUE AND CONSENT DECLARATION

In the study, as per international standard or university standard written ethical approval has been collected and preserved by the author(s). The ethical issues like names of participants, their responses plus their location were handled anonymously. In addition, only willing respondents were interviewed.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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