

**Research Article**
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## Teachers' Perceptions on their Readiness to Teach HIV/AIDS Education in Schools

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### ABSTRACT

South Africa is the highest HIV prevalence country in the world with young people (15-24 years) making up the largest proportion of HIV infected people. Kwazulu-Natal is the worst affected province nationally. Poor teacher training and the stigma around HIV/AIDS are contributing factors. Therefore an effective school-based HIV/AIDS education intervention program should encompass effective teacher training and curriculum development. A cross-sectional study was conducted among teachers to identify the factors that support or hinder their role in HIV/AIDS education. A self-administered questionnaire was used for interviewing teachers from stratified randomly-selected 2 primary and 2 secondary schools in the province of KwaZulu-Natal's Pietermaritzburg region. Teachers from 2 out of the 4 selected schools were trained under an HIV/AIDS education intervention program funded by Community Care Project while those from the other 2 selected schools were not trained. This was meant to compare (using tables and graphs) the teachers' perceptions, ability, skills, and their participation in HIV/AIDS education between the trained and untrained teachers. While about 56% of the untrained teachers never taught about HIV, it was only 5% of the trained teachers who never taught about HIV. While 97% (95% CI 93.85–100) of the trained teachers use interactive teaching methods, it was only 41% (95% CI 28.21-53.99) on the untrained teachers. Higher number of untrained teachers (70%) reported facing difficulty while talking about HIV issues compared to the trained teachers (9%). So trained teachers were more likely to participate, less likely to face difficulties, and more likely to use interactive teaching methods in HIV/AIDS classes compared to the untrained teachers. Inadequate time allocation to HIV/AIDS classes was found to be a barrier to HIV/AIDS education. This suggests the need to provide teachers with more support in terms of training and logistics.

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**Received:** September 14, 2023; **Accepted:** September 21, 2023; **Published:** October 19, 2023

**Keywords:** Course Curriculum, Health Education, HIV/AIDS, Teachers Training, Youth, South Africa

### Introduction

Globally, young people were claimed to account for an estimated 35% of all new HIV infections among adults. Globally, with an estimated 38 million persons live with HIV by 2020, almost half of all HIV-infected people are aged 15 –24 years and 68% of them are in Sub-Saharan Africa with East and Southern Africa reported to have accounted for about two-thirds of these people living with HIV. Sub-Sahara Africa is home to nearly 90% of all children and adolescents living with HIV globally. Lack of knowledge has been identified as one of the leading factors that increase the vulnerability of young people to HIV. Previous studies throughout the world indicated that school-based HIV/AIDS education intervention programs can result in significant changes in knowledge and attitudes that affect sexual behaviour of young people, leading to significant increases in the use of condom and reductions in sexual health problems, such as unwanted pregnancy, sexually transmitted infection, and abortion.

South Africa is said to be the “worst affected country” with regards to HIV with about 7, 7 million people living with HIV, making it the highest HIV prevalence country in the world. Young people (15-24 years) make up the largest proportion of HIV infected people in South Africa. Of the total number of people living with

HIV in South Africa, adolescents accounted for an estimated 40% of the new infections. The kwaZulu-Natal province (my study province) has the highest infection rate at 15,5%. Out of eleven (11) districts in KwaZulu-Natal, seven (7) districts recorded HIV prevalence of 40% and above. Pietermaritzburg, my study location in Umgungundlovu district was chosen because of its highest HIV prevalence rate of approximately 41.1% in the district. This might be because of cultural beliefs and norms in South Africa that considers sex as a recreation, having many partners is acceptable especially to Zulu people (study area tribe).

An effective school-based HIV/AIDS education intervention program should ideally encompass two components: curriculum development and effective teachers training. Even though the South African government implemented age appropriate comprehensive sexuality education into the school curriculum in the Life Orientation compulsory subject, HIV infections among the 15-19 age group are on the increase in KwaZulu-Natal and South Africa at large. Amongst other challenges, the introduction of the compulsory Life Orientation subject into the school curriculum in 2005 did not come with effective teacher training. To try and address the challenges of the school-based HIV/AIDS intervention program, the government opened up space for other stakeholders such as non-governmental organizations (NGO) to go into schools to assist in offering HIV/AIDS education programs. Community Care Project (CCP) is one of the NGOs that heeded to the call

by the government to offer HIV/AIDS intervention programs in schools. CCP focuses on teacher training since it believes that the success of a curriculum depends on the readiness and preparation that has gone into developing necessary skills for educators to implement such a curriculum in the classroom situation. Unlike previous research in this field which only targeted secondary school learners, this study was very important in involving primary school learners since sexual maturity now usually starts in the final two primary school years. Therefore this study was carried out to assess the impact of teacher training on school-based HIV/AIDS education program in primary and secondary schools in Pietermaritzburg, South Africa.

### **Life Orientation as a Subject in Schools in South Africa**

In South Africa Life Orientation was introduced as a compulsory school subject after democracy (independence from colonial rule) in 1994 with an aim of educating scholars about the history of the country and giving them basic life skills. Life Orientation (LO) is defined in the National Curriculum of South Africa as a holistic study of the self and the self in society. It provides an opportunity to develop the emotional side of young people, the citizenship aspects of life in South Africa, democracy and human rights. LO basically involves the accretion of many different things, including health care, lifestyle, healthy living and physical fitness. Life Orientation (in the Senior and Further Education and Training phases) and Life Skills (in the Intermediate Phase) is a compulsory school subject. The South African Department of Basic Education's Sexuality Education Program (SEP) became part of the Life Orientation (LO) learning area in 2002. As stipulated in curriculum policy documents, Life Orientation:

- a) Empowers learners to use their talents to achieve their full physical, intellectual, personal, emotional and social potential.
- b) Enables learners to make informed, morally responsible and accountable decisions about their health and the environment.
- c) Encourages learners to acquire and practice life skills that will assist them to respond to challenges and to play an active and responsible role in the economy and society.
- d) Allows learners to exercise their Constitutional rights and responsibilities, respect the rights of others and show tolerance for cultural and religious diversity in order to build a democratic society.
- e) Enables learners to develop skills to relate positively and contribute to family, community and society, while practicing the values embedded in the Constitution.

However, the integration of HIV/AIDS and sexuality education in the LO curriculum in South African schools came with several challenges that need to be dealt with. It is important to explore these challenges in different settings for decision-makers to have all the information needed to formulate policy and its implementation. The first category of challenges relates to how sexuality education is taught in schools. There is still a general misconception that sexuality education contributes to promiscuous sexual behaviour. This misconception has a lot of implications to teaching sexuality education because there is a tendency for some teachers to simply tell learners to abstain from sex. Some teachers have been found to express fears that prevent them from openly discussing sexual matters with younger learners. To address this challenge, intensive teacher training and embarking on a massive awareness campaign program is the way forward. This is where NGOs such as Community Care Project (CCP) had to come on board to assist the government in this regard.

The failure by the South African Department of Education to offer effective training to LO teachers is due to poor implementation

of the policy. It is further argued that implementation of the LO program operates under the assumption that learners need protection instead of relevant information about themselves and their sexuality.

The other challenge relates to how seriously sexuality education is considered in schools. Many school principals are not serious about the LO learning area. For instance, Smith and Harrison reported that most principals encourage female teachers, with or without experience, to attend workshops concerning LO-related matters, and after the workshops; there are usually no proper mechanisms to share details of such workshops with staff members. We can therefore conclude that this shortcoming hinders teaching sexuality education in most schools. Smith and Harrison further stated that LO teachers do not perform their duties properly due to time constraints, heavy teaching loads, no dedicated time in the school schedule for LO curriculum and schools mainly focus on subjects with formally acknowledged examinations. In addition, some schools fail to fulfill their curricular obligations because of overcrowded classes and limited resources. Indeed, it has been noted that there are huge inequalities in schools in South Africa, an indication that some schools are seriously disadvantaged [1-5].

Lastly, the other challenge is the lack of willingness of teachers to teach the subject. On the one hand, some topics on sexuality education can create anxiety while others can be very embarrassing, thus a teacher who specializes in sexuality education should have in-depth knowledge and be comfortable on the subject matter. On the other hand, some teachers skip certain topics (e.g. condom demonstration) that are against their religious beliefs.

Therefore it is clear that these challenges are pointing to the fact that the overall success of the HIV/AIDS curriculum-based intervention program does not only depend on curriculum content, but also on the selection and training of teachers with desired characteristics. Once a curriculum is developed, teachers need training to enable them to improve students' knowledge about HIV prevention and transmission, attitudes toward HIV prevention, and behaviours relating to HIV/AIDS. Training and knowledge can ensure that they become a source of correct information and trusted persons with whom young people can raise sensitive and complicated issues about sexuality. This requires training on specific content which will enable the examination of their attitudes toward HIV prevention. It can also expose them to the participatory learning approaches that have been shown to ensure classroom discussion of HIV transmission and prevention.

### **Study Methods**

This study was cross-sectional in design; the teachers' ability, skill, and their participation in HIV/AIDS education were compared between two sets of schools in Pietermaritzburg region of Kwazulu-Natal. The first set (set A) was made up of a primary and a secondary school (Haythorne secondary and Forest Hill primary) which are in the Community Care Project (CCP) HIV/AIDS education teacher training intervention program. The second set of schools (set B) is not in the intervention program. This set was also made up of Copesville primary and Woodlands secondary schools [6-10].

The schools were purposively randomly selected based on their exposure to the HIV/AIDS teacher training program. Geographic access and the vulnerability of the school communities to HIV/AIDS pandemic were key considerations in choosing these four schools.

The study population included subject teachers in the primary and secondary schools responsible for teaching general and/or social sciences in grades 6-7(primary schools) and grades 8-10 (secondary schools) in classroom settings. These teachers were responsible for teaching the HIV/AIDS curriculum. These grades were targeted because students in this age-group are at a point in life when they are just beginning to explore their sexuality, and this may make teaching of the curriculum particularly challenging.

In each of the two selected primary schools, 5 teachers were selected using the purposive random sampling procedure. In each of the two selected secondary schools, 10 teachers were selected using the purposive random sampling procedure as well. More teachers were selected from the secondary school section because the majority of the targeted learner grades are in the secondary school phase (grades 8,9,10).

A pre-tested, self-administered questionnaire was used for collecting data in June 2022. The questionnaire included both open- and closed-ended questions. It addressed the level of knowledge on HIV/AIDS, attitudes (personal beliefs and values relating to HIV/AIDS messages included in the curriculum), and views on the value and appropriateness of teaching HIV/AIDS to school students and levels of comfort and confidence in teaching about HIV/AIDS. Problems faced by the teachers and support offered to them by others were also assessed. Finally, questions about practical implementation in the classroom were asked, which included topics, such as the amount of available time for teaching about HIV/AIDS, adequacy of the time available, level of engagement by students during discussions on HIV/AIDS, type of students taught, and teaching methods followed. If new teaching methods introduced by the training were used, comfort in using those methods was also explored.

Two trained field research assistants were engaged to assist in visiting each school and sought permission from the principal, and getting written consent from the subject teachers to conduct the survey. The field team arranged questionnaire-administration session at each school. They briefed each teacher about the study objectives and procedure and obtained individual consent before copies of the questionnaire were distributed. All eligible teachers in a school, who were present on the day of the interview, were invited to participate. All the participating teachers of a school completed the questionnaire during the same session. The field team made the sitting arrangement in such a way that there was a reasonable distance between the participants to ensure confidentiality and to stop discussion among them. The research assistants observed the completion of the questionnaire, responded to the participant's questions regarding the questionnaire, and maintained field notes on the data-collection process.

The researcher reviewed short-answer responses and developed code lists. All the data was edited, compiled, and coded before entering it into the computer. Data were analyzed using the SPSS software (version 22.5). The researcher ensured the quality of data through monitoring, supervision, and checking for the consistency of data. For performing cluster analysis, each school was considered as a unit (containing a group or cluster of teachers). Different results were obtained on schools from set A and set B by accumulating results on individual teachers in the respective

schools. The test statistical values and the p values of these tests are also given here. Due to not meeting the assumption of the number of successes and failures, some tests were not conducted [11-15].

**Validity and Reliability**

The strength of the study was based on a sample of adequate size, use of stratified random sampling, inclusion of students of both sexes, use of items from a validated survey instrument and its adaptation to suit the local cultural context. The validity of the study was enhanced by training the research assistants and adherence to the protocol. Reliability of the results was ascertained by having enough appropriate interview questions; choice of schools from different settings represented in South Africa; training of research assistants and the use of appropriate language.

**Results**

The participants included 15 teachers from 2 schools in set A and 15 teachers from 2 schools in set B. Since the bigger numbers of teachers in all the four participating schools were female, about 67% (20 out of 30) of the participants were female teachers.

The mean age of the participants was 40 years. Nearly half of the participants from both sets of schools had at least either a bachelor's degree or a Bachelor of Education degree (Bed). The majority of the teachers (70%) from the four schools had been working in their current schools for 10 years or more.

**Characteristics of Teachers and Schools in both Sets**

**Table 1: Type of School**

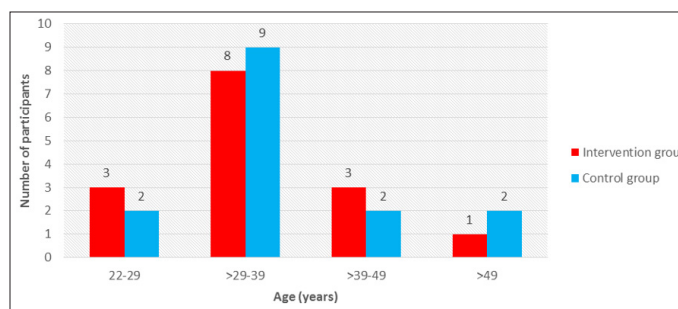
Characteristic	Set A (n= 2)	Set B (n= 2)	Total (N= 4)
Primary	1	1	2
Secondary	1	1	2

**Table 2: Age-Groups of Participants (years)**

Characteristic	Set A (n= 15)	Set B (n= 15)	Total (N= 30)
22-29	3	2	5
>29-39	8	9	17
>39-49	3	2	5
>49	1	2	3

**Table 3: Gender of the Participants**

Characteristic	Set A (n= 15)	Set B (n= 15)	Total (N= 30)
Male	6	4	10
Female	9	11	20



**Figure 1: Distribution of Participants' Ages**

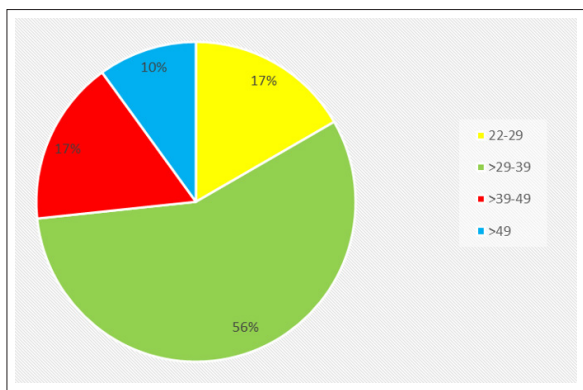


Figure 2: Distribution of all Participants with Respect to Age

this was true in only 5% of the teachers in set A (Table 6). Most (73%) teachers who taught about HIV/AIDS taught boys and girls together, although about 20% taught girls alone. Of those who taught both boys and girls, in a few cases, they taught girls and boys separately; this was more common in the control area (9%).

Table 6: Proportion of Teachers who taught about HIV/AIDS in sets A & B Schools

Percentages	Percentage of Teachers who Taught about HIV-Set A Schools	Percentage of Teachers who Taught about HIV-Set B Schools
None	5	56
1-50	23	36
>50 -75	38	5
>75 -100	34	3

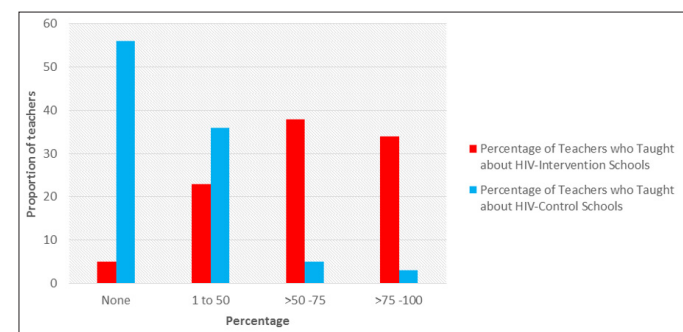


Figure 4: Distribution of Teachers who taught about HIV/AIDS in Set A & B Schools

Table 4: Highest Educational Qualifications of Participants

Characteristic	Set A (n= 15)	Set B (n= 15)	Total (N= 30)
Higher Teachers' Diploma or Below	0	1	1
Bachelors' Degree	1	2	3
Bachelors' Degree with BEd.	9	8	17
Masters' Degree	1	1	2
Masters' Degree with BEd or Med	4	3	7

\*BED: Bachelor of Education, Med: Master of Education.

### Use of Interactive Teaching Methods

When the teachers were asked what teaching methods they had used, (10%) cited traditional teaching methods, such as lectures and question-and-answer sessions. In all schools of both the study areas, at least one teacher used traditional teaching methods. In set A schools, 97% (95% CI 93.85–100) of the teachers used interactive teaching methods whereas, in set B schools, it was only 41% (95% CI 28.21–53.99) of the teachers. The use of interactive teaching methods has a significant difference ( $p < 0.001$ ) between the teachers in set A and set B schools.

The use of interactive training methods was positively associated with asking questions by students during lessons, particularly among the teachers who used group discussions and case study methods. In a separate analysis, about 97% of the teachers who used group discussion mentioned that their students asked questions compared to 89% of the teachers in set B schools who did not use this method ( $p < 0.001$ ). The findings were similar in the case of the use of case study method.

### Facing Difficulties while Teaching about HIV/AIDS

Of the teachers in set A schools who taught about HIV/AIDS in the classroom, 9% did not complete teaching all the HIV/AIDS content. However, slight variations were observed between the teachers in secondary school and the primary school; 40% of primary school teachers ( $n=5$ ) did not complete the content compared to 30% of secondary school teachers ( $n=10$ ). Of those who did not complete the content coverage, the most commonly-avoided content was sexual relationships, which 82% of the teachers in secondary school and 92% of the teachers in primary school avoided. The main reason for avoiding such a chapter in the class was that students (70%) and teachers (26%) felt shy. The reason did not differ between set A and set schools.

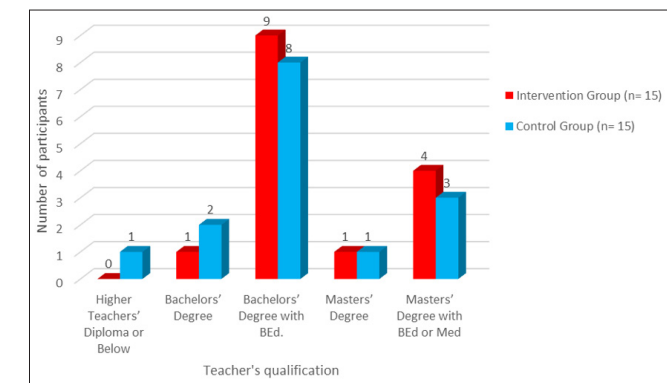


Figure 3: Distribution of Teacher's Qualifications

Table 5: Duration of Teaching in Current School (years)

Characteristic	Set A (n= 15)	Set B (n= 15)	Total (N= 30)
0-4	0	1	1
>4-9	1	2	3
>9-19	11	10	21
>19	3	2	5

### Participation of Teachers' in HIV Education

The subject teachers who received training (50%) were almost twice as likely to have taught about HIV in the classroom compared to those who did not receive the training (50%). The teachers were less likely to teach about HIV/AIDS to students in the lower grades. For example, although a teacher may have taught classes from grade 6 to grade 10, s/he may have taught about HIV/AIDS only to grade 9 students. HIV was taught by more teachers per school in set A schools than in set B schools. About 56% of teachers in set B schools never taught about HIV;

When asked specifically whether it was easy or difficult to talk about HIV transmission and prevention at the school-level analysis, about 9% of the teachers faced difficulty while talking about HIV transmission in set A schools, while in set B schools it was at 70%. More teachers reported that they faced difficulty while talking about HIV issues in set B schools compared to the set A schools.

### Creation of a Supportive Environment for Teaching about HIV/AIDS

To create an enabling environment for teaching about HIV/AIDS in the classroom setting, the teachers who received training were more likely to arrange meetings with the community members, other teachers, and parents than the teachers in set B schools. In set A schools, such meetings were held though not all teachers were involved.

Receiving community support from the members of school management committee, parents, and other teachers was significantly higher ( $p < 0.001$ ) in set A schools compared to set B schools. In set A schools, almost 95% (95% CI 89.84-99.76) of the teachers reported that they got support from the members of school management committees, parents and other teachers about HIV/AIDS-related classes, which is true for only 25% (95% CI 13.66-36.34) of the teachers in the control schools.

### Time for HIV/AIDS Class-Session

The teachers felt that the time allocated for each of the HIV/AIDS classes was insufficient. Although the teachers had 50 minutes in the secondary schools and 35 minutes in the primary schools officially allocated for each class, more than half of the teachers (60%) in set A schools and 20% in set B schools reported not having enough time for teaching HIV/AIDS.

**Table 7: Percentages of various aspects of teaching HIV/AIDS in schools**

ITEM	SET A (n=15)		SET B (n=15)		PROPORTION OF RESULTS	
	% of Teachers	95% CI	% of Teachers	95% CI	Test statistical value	P value
Traditional teaching methods	100		96,4	91,52-100		
Interactive methods	97,4	93,85-100	41,1	28,21-53,99	50,191	<0,001
Difficulties faced-Talking about HIV transmission	9	5,67-14,78	70,01	56,89-65,55	0,055	0,758
Difficulties faced-Talking about HIV prevention	9	5,67-14,78	70,01	56,89-65,55	0,055	0,758
Community support from school management committee	94,8	89,84-99,76	25	13,66-36,34	66,777	<0,001
Community support from parents	94,2	88,95-99,95	25,1	13,65-36,64	66,774	<0,001
Community support from other teachers	94,01	88,97-99,95	25,03	13,56-36,55	66,796	<0,001
Enough mean HIV/AIDS class time allocation (35/50 min)	60	49,78-68,98	20	9,76-29,65	39,78	0,978

### Discussion

The results of the study suggest that simply introducing HIV/AIDS topics into the curriculum is not sufficient to ensure that it is implemented. In set B schools where teachers did not receive training, less than half of them had taught HIV to their learners. The teachers in the schools where training was provided were more likely to have taught about HIV at all grade levels, particularly to the learners of Grade 9 and 10. Exposure to training was also associated with lower levels of difficulties in teaching about HIV/AIDS at the classroom setting. No community members, including parents, actively opposed the teaching about HIV/AIDS in the classroom. The barriers to HIV/AIDS education in the classroom were quite practical; for example, the time for teaching was not adequate.

Training of teachers on the new HIV/AIDS curriculum was positively associated with the development of their individual skills and building of confidence, and this finding directly correlated with the findings of other studies. Training on HIV/AIDS education increased the skills of teachers, which made them more capable to teach about HIV/AIDS-related issues and overcome the barriers, particularly talking to students about sexuality by using interactive teaching methods in the classroom setting. The interactive teaching method seems to be more effective in teaching about HIV/AIDS, and on such methods, more emphasis was given during training.

There is a clear difference between set A and set B schools in using such method by the teachers. In set A schools, almost all teachers use such methods while in set B schools, less than half use such methods. This indicates the necessity of training to the teachers.

Higher number of teachers in set B schools reported facing difficulty while talking about HIV issues compared to set A schools. This also demonstrated the lack of skills of the teachers and indicated the training need among them. Similar findings were observed in several studies of teachers feeling uncomfortable in discussing sexuality-related matters and suggested that training of teachers should address this issue effectively.

With an exception of a few teachers in some schools, no community members actively opposed the teaching about HIV/AIDS in the classroom. This finding contrasts with the findings of other studies in other low- and middle-income countries where the community plays a strong role in advocating against sexual health education. In all the four study schools, teachers reported that they did not receive any negative response from the community members, particularly from the local elites and parents. However, more active support might make teachers more comfortable in discussing these sensitive issues with their learners. Meetings with the local elites and parents ensured more active support from them. Underlining such importance, the teachers should be encouraged

in their training sessions to hold such meetings with the members of school management committees, community stakeholders, and other teachers, alongside conducting the HIV classes.

This assessment also identified factors from the school level that held additional challenges to implementing the curriculum, and these challenges are consistent with findings in other settings. For example, the teachers struggled with inadequate time for teaching about HIV/AIDS, and the time constraint did not allow some teachers to complete the HIV chapter and is a potential obstacle to the full implementation of the curriculum. Consideration should, thus, be given to providing additional time for teaching.

Previous research on this subject reiterated the fact that trained teachers were more comfortable in using interactive teaching methods and in explaining sensitive issues to their learners in HIV/AIDS classes. Previous research has also shown that the training of teachers also helped them in finding their moral compass and become role models to the learners.

### Limitations

This study included only four schools in the same region for rapid assessment. The results obtained from the study in these four schools may not be generalizable throughout the country, particularly given that rural schools were not represented in this study. The comparison of teachers' knowledge on HIV/AIDS between set A and set B schools was not conducted because of time constraints.

### Conclusions

The findings of the study demonstrated that the implementation of the HIV/AIDS education program in school settings was enhanced through training of teachers. This finding is reinforced by the fact that a higher percentage of teachers who received training reported active participation in HIV/AIDS teaching. Globally, there are a few examples that HIV/AIDS information has been provided to the young people through the formal education system. The findings gave new thought in implementing HIV/AIDS education programs in a high-epidemic country, like South Africa which is worst affected in Africa. Addressing a few key issues such as adequate lesson time allocation and making materials available, may improve the implementation of the HIV/AIDS curriculum in future. Moreover, the results of the study indicated that teachers' training program needs to be improved, considering the practical barriers to implementing the HIV/AIDS curriculum successfully [16-20].

In view of the results of this study, future research must focus on how various stakeholders including the family institution; traditional, religious and health authorities can come onboard to encourage adolescents to continue to embrace old customs that are health preserving such as promotion of virginity before marriage.

### Acknowledgements

The authors acknowledge the commitment of the KwaZulu-Natal Department of Education and Community Care Project (CCP) to this research effort. The authors also thank the school principals of all the four schools that participated, and the subject teachers who participated in the study. The authors are grateful to Dr Olivia Kunguma for reviewing the earlier draft of the manuscript and Estelle Jackson for her support during data analysis. The authors also thank the Field Research Supervisors and Field Research Assistants who helped during data collection.

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