

TEACHERS CONFRONTING THE HIV EPIDEMIC: SKILLS FOR TEACHING AND SURVIVAL



A REPORT ON THE WORLD HEALTH ORGANIZATION (WHO),
EDUCATION INTERNATIONAL (EI),
AND EDUCATION DEVELOPMENT CENTER'S (EDC)
**TEACHER TRAINING PROGRAM TO PREVENT HIV INFECTION
AND RELATED DISCRIMINATION**



This report was commissioned by the Division of Adolescent and School Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention (CDC). The analysis and report were completed by Eric Pevzner, MPH who is a doctoral candidate and independent evaluator with the Department of Health Behavior and Health Education, School of Public Health, University of North Carolina at Chapel Hill. (Submitted April 5, 2005)

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INTRODUCTION

An estimated 39.4 million people worldwide are infected with HIV.¹ In 2004, approximately 4.9 million people were reported to be newly infected with HIV and 3.1 million deaths occurred from AIDS.¹ The HIV epidemic continues to disproportionately impact Sub-Saharan Africa, which is home to approximately 10% of the world's population and 64% of all people living with HIV. In 2004, an estimated 3.1 million new infections and 2.3 million deaths occurred in Sub-Saharan Africa.¹ The number of new infections in Sub-Saharan Africa continues to exceed the number of deaths suggesting the worst may be yet to come.

Prevention is the most effective method for combating the spread of HIV/AIDS.² The opportunity to prevent HIV infection among future generations is threatened because of the number of teachers that are dying or too sick to teach because of AIDS.³ According to the World Bank:

“AIDS is turning back the clock on development. In too many countries the gains in life expectancy won are being wiped out. In too many countries more teachers are dying each week than can be trained.”³

In order to provide an education for future generations, we must stop the spread of HIV among teachers by providing them with the skills to protect themselves and to teach others to protect themselves from HIV infection.

Recognizing the urgency for the education sector to respond to the HIV/AIDS epidemic, the World Health Organization (WHO), Education International (EI), and the Education Development Center, Inc. (EDC) developed a skills-based *Teacher Training Program to Prevent HIV Infection and Related Discrimination*. The Program trains teachers to use interactive teaching and learning methods to provide them with the skills to: 1) protect themselves, 2) advocate for HIV prevention in their schools, and 3) teach students to avoid HIV infection.

A comprehensive evaluation of the *Teacher Training Program to Prevent HIV Infection and Related Discrimination* was launched in 2004. This report is organized around the four components of the program evaluation:

1. Description of development of the Program (Formative Phase)
2. Documentation of the number of teachers trained (Program Reach)
3. Assessment of changes in teacher's knowledge, confidence, and intentions to perform and teach HIV prevention skills (Program Impact)
4. Focus group discussions with teachers (Program Implementation)

SECTION 1: DEVELOPMENT OF THE PROGRAM

In 1994, WHO, EI, and EDC formed a partnership to help countries protect teachers, students, and ultimately their communities from HIV infection and AIDS. The partnership draws on the special capacities of inter-governmental and non-governmental agencies and brings together the unique resources, experiences, and constituents of the health, education, and labour sectors.

WHO's School Health/Youth Health Promotion (WHO/SHP) is part of WHO's Department of Chronic Diseases and Health Promotion. It provides the public health and science background, strategic and programmatic planning, and access to national ministries of health and education through WHO Regional and country representatives.

Education International (EI), the largest global federation of teachers' unions, is a singular institutional means of reaching a major portion of the world's teachers. EI's 319 affiliated teachers unions in 162 countries *represent more than 29 million teachers and workers* in the education sector. EI is headquartered in Brussels with regional offices in Togo, Malaysia, Fiji, St. Lucia, and Costa Rica. EI provides unparalleled access to the world's teachers through its affiliates and their international and national administrative structures and communication channels.

Education Development Center, Inc. (EDC) is a not-for-profit, international NGO with country offices across the world. Its Health and Human Development Program (EDC/HHD) serves as the WHO Collaborating Center to Promote Health through Schools and Communities. EDC/HHD provides technical expertise in behavior change, social science, teacher education and training, materials, and curriculum development. It works to rapidly transfer the most up-to-date social science and educational research on effective behavior change strategies, as well as research on teacher development, to health and education agencies worldwide.

From 1995 to 1999, the partnership convened a Global Conference on HIV/AIDS Prevention for teachers unions followed by five inter-country workshops to build the capacity of teachers unions to work as full partners with their respective ministries of health and education. In virtually every region, *the need to train teachers to address HIV infection and advocate for effective intervention* dominated calls for action and support.

From 1999 to 2000, the partnership collaborated with UNESCO, UNICEF, the World Bank, and others to insure that school health programs and HIV prevention efforts were not "overlooked" as organizations and countries renewed commitments and created strategies for achieving Education for All (EFA). As a result, a joint initiative to Focus Resources on Effective School Health (FRESH)

was launched at a roundtable hosted by WHO, UNESCO, UNICEF, EI, EDC, and the World Bank at the World Education Forum in Dakar, Senegal in April 2000. The following strategies were adopted to address HIV prevention and achieve EFA:

- Implement as a matter of urgency education programs and actions to combat the AIDS pandemic.
- Create safe, healthy, inclusive, and equitably resourced environments conducive to excellence in learning, with clearly defined levels of achievement for all.
- Enhance the status, morale, and professionalism of teachers.

In 2001, the partnership launched the *EI/WHO/EDC Teacher Training Program to Prevent HIV Infection and Related Discrimination* with teachers unions and officials responsible for school health in their respective countries. From 2001 to 2004 the Program was primarily funded by the U.S. Centers for Disease Control and Prevention (CDC). Other organizations collaborating with the Partnership include: the Dutch Confederation of Trade Unions (FNV) which provides support for the Program in Lesotho, Swaziland, and Namibia; UNESCO which provides partial support for the Program in Burkina Faso, Guinea, and Mali; the American Federation of Teachers (AFT) provides partial support in Zimbabwe and cooperates with unions in South Africa and Kenya. In Botswana, Zimbabwe, and South Africa the teachers unions provide additional funding to support implementation of the Program.

Although many organizations contribute to the Program, the work of the Program is carried out by thousands of teachers -- union volunteers -- who are giving their own time to prevent HIV infection and provide hope for the teachers and students of Africa.

Figure 1. Teachers in Malawi demonstrate a role-playing activity to teach about the impact of HIV and related discrimination on families.



Goal and Aims of the Program: The goal of the Program is to train as many teachers in as many schools as possible with the aims of:

- Aim 1:** Providing teachers with the knowledge and skills to protect themselves from HIV infection and train other teachers how to prevent HIV infection.
- Aim 2:** Training teachers and students to advocate for effective HIV prevention efforts in schools.
- Aim 3:** Helping young people acquire knowledge and skills to prevent HIV infection.

Uniqueness of the Program: The Program is distinct from many other HIV/AIDS-related prevention efforts in that it:

- emphasizes the acquisition of skills to act on HIV-related knowledge.
- uses training exercises developed/adapted by classroom teachers working with health and education experts.
- is based on studies demonstrating that *participatory learning experiences* are the most effective ways to help people acquire skills.
- includes developmentally appropriate activities for young children, pre-adolescents, and adolescents.

Figure 2. Students in Botswana using role-playing to build HIV prevention skills.



Program Implementation: In each country, considerable effort was made to build sufficient infrastructure to implement nationwide training efforts. The partnership fostered collaborative planning and cooperation between teachers unions, their respective MOH and MOE, and other organizations working on HIV and AIDS prevention. The Program strengthened the administrative and managerial capacities of teachers unions to implement an ongoing *nationwide* training effort. The Program also enabled teachers from high incidence/low resource countries and public health experts to work together to produce a culturally acceptable, teacher-friendly training and resource manual (i.e., Teacher's Exercise Book for HIV Prevention).

Program implementation was supported and monitored through 1) annual site visits to each participating country by representatives from WHO, EI, and EDC, and 2) annual regional planning and evaluation workshops. The 3-day site visits were used to review and discuss Program implementation and provide technical support for each country. At the completion of the each site visit, the teachers union received a written report that included recommendations on how to improve Program implementation and fidelity. The regional planning and evaluation workshops were held separately for French speaking and English speaking countries to review Program goals, share experiences and insights, and plan for the coming year. The workshops included representatives from each country's teachers union, ministry of health, and ministry of education. Both the site visits and workshops were critical for building capacity to implement the Program.

All teachers unions supported by the Program are striving to train as many teachers in as many schools as is possible within the limits of their resources. All unions are training a cadre of "trainers" who then train other teachers, either at the province, district, or school level to use the participatory teaching and learning activities in the Teacher's Exercise Book for HIV Prevention.

Teacher's Exercise Book for HIV Prevention: WHO, EI, and EDC developed the Teacher's Exercise Book for HIV Prevention based on the following needs of teachers:

1. Before teachers can be expected to help other adults and students avoid HIV infection, they first need to examine their own vulnerability to infection, knowledge of how the disease is transmitted, and attitudes toward helping others, especially students, avoid infection. *The first set of teaching and learning activities in the Exercise Book addresses this need.*
2. Before teachers can implement effective HIV prevention efforts in schools, they will need to justify their intent and convince administrators, teachers, parents, and members of their community that HIV prevention through schools is appropriate and essential to the welfare of their children, their

families, and their nations. *The second set of teaching and learning activities in the Exercise Book addresses this need.*

3. Before teachers can expect to help students acquire the skills needed to prevent HIV infection, teachers themselves will need to acquire skills to use participatory learning activities to enable their students to acquire prevention skills. *The third set of teaching and learning activities in the Exercise Book addresses this need.*

The unique focus of the Program is *skills building* with the goal of providing *teachers* with the training they need to use the activities in the Teacher's Exercise Book for HIV Prevention. The participatory learning exercises in the Exercise Book are designed to build teacher's and student's knowledge, confidence, and skills to protect themselves and train others to prevent HIV.

SECTION 2: PROGRAM REACH

The *Teacher Training Program to Prevent HIV Infection and Related Discrimination* is currently being implemented in 17 countries. The goal of the Program is to train as many teachers in as many schools as possible. The following table presents the number of teachers trained and number of schools with at least one trained teacher by country between 2002 to 2004.

Table 1. Number of teachers trained and number of schools with at least one trained teacher by country, 2002-2004.

Country	Number of teachers trained	Number of schools with a trained teacher
Botswana	2,843	584
Burkina Faso*	5,106	5,542
Côte d'Ivoire	15,326	1,096
Guinea	16,528	2,161
Guyana	985	300
Haiti	2,280	1,750
Lesotho	854	304
Malawi	30,570	3,057
Mali	23,230	1,930
Namibia	815	132
Rwanda	8,194	2,800
Senegal	1,509	1,220
South Africa	336	336
Swaziland	617	389
Tanzania	1,693	323
Zambia	21,600	540
Zimbabwe	1,957	112
Total	134,443	22,576

* Number of teachers exceeds number of schools because some teachers teach at more than one school.

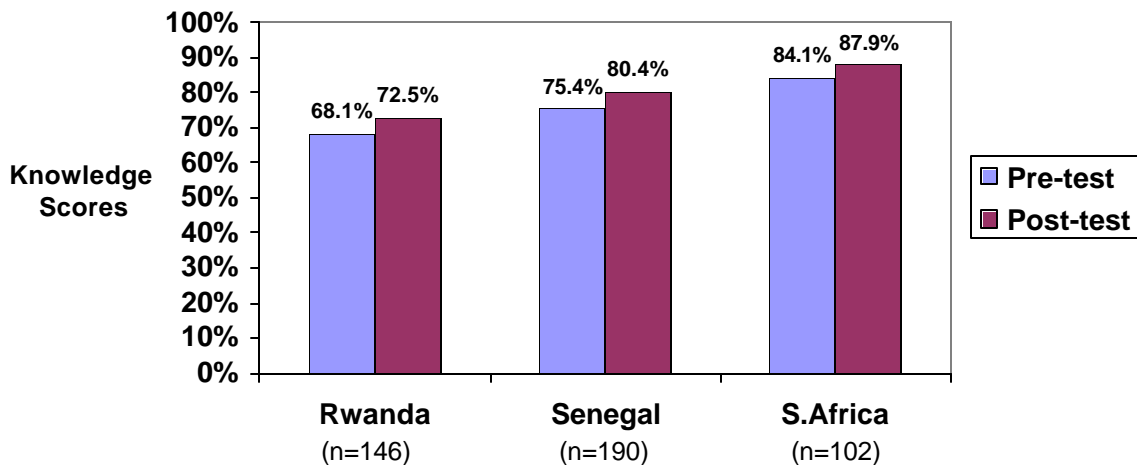
SECTION 3: PROGRAM IMPACT

The Program was designed to increase teacher’s HIV related knowledge and improve their confidence to perform and teach others HIV prevention skills. Program impact was assessed based on self-administered pre-training and post-training questionnaires. The assessment forms included sections on 1) HIV related knowledge, 2) confidence to perform or teach others HIV prevention skills, and 3) intentions to practice and teach others HIV prevention behaviors. To maximize the statistical power of the evaluation the analysis was limited to matched pre-training and post-training data from Rwanda, Senegal, and South Africa – data from other countries were not used for this report.

Teacher’s HIV Related Knowledge

Statistically significant increases ($p < .01$) in overall HIV related knowledge between pre-training and post-training assessments were observed in all three countries (see Appendix A).

Figure 3. The average knowledge score at pre-training and post-training by country, 2004.



Key Findings

- In Rwanda, the percentage of teachers who correctly agreed with the statement “youth need to have life skills such as decision-making, to protect themselves from HIV infection” increased 23% from 70.5% to 87.0%[†].
- In Senegal, the percentage of teachers who correctly disagreed with the statement “it is okay to use oil-based lubricants, such as petroleum jelly to lubricate a latex condom” increased 76% from 45.2% to 79.6%; the percentage of teachers who correctly agreed with the statement “women are

[†] Percent change is calculated by: $[(\text{pretest \%} - \text{posttest \%}) / \text{pretest \%}] = \text{percent change}$

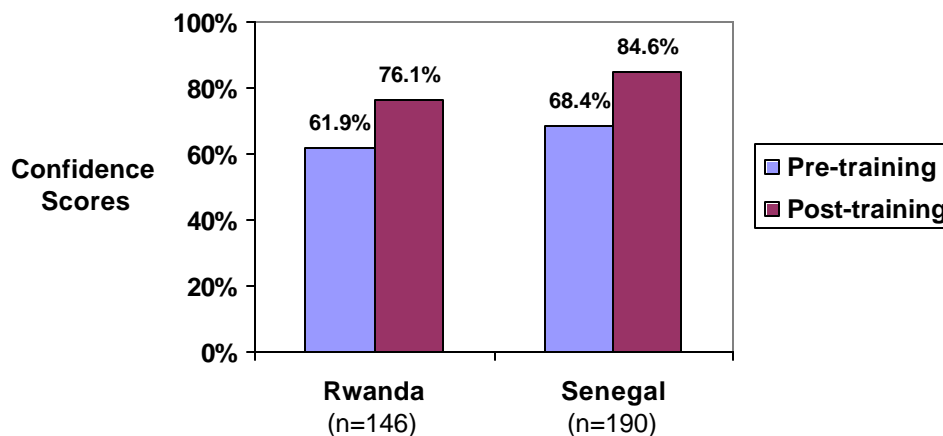
more susceptible than men to HIV infection” increased 15% from 63.6% to 73.1%; and the percentage of teachers who correctly disagreed with the statement “if people have only one sexual partner, they are at no risk of HIV infection” increased 80% from 25.5% to 46.0%.

- In South Africa, the percentage of teachers who correctly disagreed with the statement “if people have only one sexual partner, they are at no risk of HIV infection” increased 29% from 51.0% to 65.7%.

Teacher’s Confidence to Perform and Teach HIV Preventive Skills

Statistically significant increases ($p < .001$) in teacher’s confidence to perform and teach HIV related skills were observed between pre-training and post-training assessments in Rwanda and Senegal (see Appendix B). Pre-training and post-training comparisons were not possible for South Africa because of different questions asked at pre-training and post-training.

Figure 4. The average confidence score at pre-training and post-training by country, 2004.



Key Findings in Rwanda

In Rwanda, significant increases in teacher’s confidence were evident for 11 of the 16 items. The percentage of teachers who were “very confident or confident” to use the learning activities to:

- help teachers and other adults increase their knowledge of HIV and AIDS increased 13% from 81.9% to 92.4%.
- help teachers and other adults identify behaviours that put them at risk increased 26% from 66.9% to 84.0%.

- help teachers and other adults understand why people take risks increased 39% from 60.0% to 83.3%.
- help teachers and other adults to use negotiation and communication skills to reduce their risk of HIV infection or STIs increased 56% from 52.1% to 81.5%.
- help teachers and other adults to obtain and use condoms effectively increased 33% from 45.2% to 60.3%.
- advocate for HIV/STI prevention programmes and policies increased 33% from 59.0% to 78.6%.
- respond constructively to challenging HIV-related questions increased 39% from 49.7% to 69.0%.
- help young children acquire communication, decision-making, and interpersonal skills increased 33% from 59.6% to 78.6%.
- help pre-adolescents acquire the skills needed to effectively communicate a desire to delay the onset of sexual intercourse increased 54% from 52.4% to 80.8%.
- help pre-adolescents acquire the skills needed to communicate about sexuality with peers and adults increased 24% from 59.6% to 73.8%.
- develop adolescent's skills in risk assessment and negotiation for safer sex increased 51% from 50.0% to 75.3%.

Key Findings in Senegal

In Senegal, significant increases in teacher's confidence were evident for 21 of the 24 items. The percentage of teachers who were "very confident or confident" to use the learning activities to:

- help teachers and other adults increase their knowledge of HIV and AIDS increased 14% from 82.0% to 93.6%.
- help teachers and other adults identify behaviours that put them at risk increased 15% from 84.7% to 97.3%.
- help teachers and other adults understand why people take risks increased 18% from 75.1% to 88.5%.
- help teachers and other adults to use negotiation and communication skills to reduce their risk of HIV infection or STIs increased 26% from 70.9% to 89.4%.

- help teachers and other adults to obtain and use condoms effectively increased 17% from 78.5% to 91.5%.
- advocate for HIV/STI prevention programmes and policies increased 25% from 68.8% to 86.2%.
- respond constructively to challenging HIV-related questions increased 38% from 60.0% to 82.8%.
- mobilise support and resources for HIV and AIDS education in schools increased 22% from 59.0% to 72.2%.
- help young children acquire communication, decision-making, and interpersonal skills increased 24% from 69.6% to 86.0%.
- help young children acquire the skills needed to deal with emotions and stress increased 35% from 57.1% to 76.8%.
- help pre-adolescents acquire the skills needed to effectively communicate messages about HIV prevention to friends, family, and others in the community increased 14% from 77.7% to 88.4%.
- help pre-adolescents acquire the skills needed to effectively communicate a desire to delay the onset of sexual intercourse increased 38% from 61.3% to 84.7%.
- help pre-adolescents seek out information related to their sexuality increased 33% from 67.0% to 88.8%.
- help pre-adolescents acquire the skills needed to communicate about sexuality with peers and adults increased 15% from 79.1% to 90.9%.
- help pre-adolescents acquire the skills needed to identify a range of health decisions and consequences increased 37% from 59.1% to 80.7%.
- help pre-adolescents acquire the skills needed to refuse sexual intercourse increased 15% from 78.0% to 89.5%.
- help pre-adolescents express empathy towards persons who may be infected with HIV increased 21% from 71.0% to 86.1%.
- help pre-adolescents discuss personal issues with confidence and self esteem increased 37% from 62.5% to 85.8%.
- maintain pre-adolescent's personal value systems, independent of peer influence increased 28% from 63.7% to 81.7%.

- help adolescents acquire the skills needed to use and talk about condoms increased 27% from 64.3% to 81.6%.
- train adolescents to seek out and identify sources where condoms may be obtained increased 41% from 55.3% to 77.7%.

Teacher's Intentions to Implement Training Program Activities

The trainings are designed to increase teacher's knowledge, confidence, and skills so that they can 1) protect themselves, 2) advocate for HIV prevention, and 3) train other teachers and students to protect themselves from HIV infection (see Appendix C). The increases in teacher's knowledge and confidence are associated with increases in teacher's intentions to implement the skills they learned from the trainings.

Key Findings

- In Rwanda, teachers were asked whether they were *likely to perform* five HIV prevention strategies at pre-training and post-training. The percentage of teachers who were likely to talk to family and friends about the prevention of HIV and related discrimination increased 22% from 76.7% to 93.2% and the percentage of teachers who were likely to talk to school staff about the prevention of HIV and related discrimination increased 18% from 71.2% to 84.2%.
- In Senegal, teachers were asked *how often they performed* five HIV prevention strategies at pre-training and then whether they were *likely to perform* each HIV prevention strategy at post-training. For 4 of the 5 strategies, less than half of the teachers had "frequently" performed the strategy at pre-training, but at least 80% indicated they were likely to perform each strategy at post-training.
- Similarly, in South Africa, teachers were asked *how often they had performed* five HIV prevention strategies at pre-training and then whether they were *likely to perform* each HIV prevention strategy at post-training. From one half to two-thirds of the teachers had "frequently" performed all five strategies at pre-training, but at least 90% indicated they were likely to perform each strategy at post-training.

SECTION 4: PROGRAM IMPLEMENTATION

In August of 2004, focus groups were conducted with teachers in Botswana, Malawi, and Zambia* to evaluate teacher's experiences and impressions of the *Teacher Training Program to Prevent HIV Infection and Related Discrimination*. Overall, teacher's indicated the Program was providing them with the knowledge, skills, and materials to effectively train other teachers and students to prevent HIV infection. The following themes emerged from the teacher's focus group discussions.

Improved awareness and confidence

The discussions with teachers reinforced the program impact findings that the trainings increase teacher's HIV related knowledge and confidence. The trainings provided teachers with the knowledge and confidence to adopt preventive behaviors and teach others skills to prevent HIV infection. Teachers emphasized the trainings and Exercise Book gave them the confidence to answer questions, teach others, and address sensitive topics related to HIV prevention.

Skills to survive and teach

The teachers acknowledged that prior to the trainings they had the knowledge but lacked the skills to protect themselves from HIV. The trainings increased their knowledge and confidence and gave them the skills to protect themselves and teach others to prevent HIV.

"We used to only have one method [lecturing] but after the workshop . . . we had many other skills for teaching like counseling, brainstorming, role-playing, also we got skills in negotiating, problem-solving, and decision making." – Teacher in Zambia

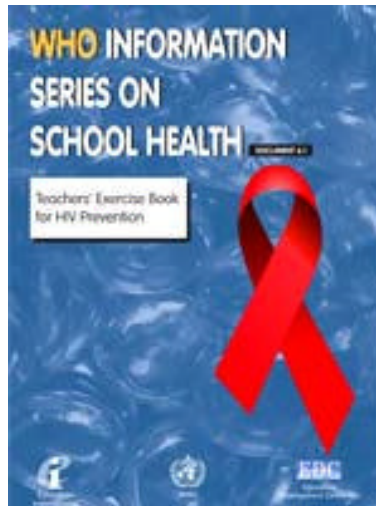
By practicing the skills-based activities teachers developed competencies to teach others the participatory learning activities at the trainings. Teachers reported using the skills to teach and to reduce their own risk of HIV infection.

Usefulness of the Exercise Book

The Exercise Book served as a "syllabus" or "roadmap" for teaching about HIV prevention. The teachers valued how the Exercise Book provided concrete steps for implementing the participatory learning exercises. The step-by-step instructions in the Exercise Book helped teachers get past the discomfort of teaching about the sensitive topics associated with HIV prevention. Teachers cited multiple occasions when the participatory learning exercises enabled them to initiate discussions that would otherwise be difficult because of cultural barriers to talking about sexual behavior.

* The number of teachers in each focus group: Botswana (10), Malawi (4), and Zambia (5).

Figure 5. Exercise Book for the *Teacher Training Program to Prevent HIV Infection and Related Discrimination*



The skills-based activities made teaching and learning more fun. Teachers described how the learning exercises increased student's and teacher's interest, understanding, and motivation to learn about HIV prevention. Teachers emphasized how the Exercise Book was a useful resource for addressing the "day-to-day situations" facing teachers and students. In Malawi where teachers had not yet received the Exercise Book, teachers described needing a skills-based curriculum for teaching HIV prevention. After having a chance to review the Exercise Book the teachers were excited to begin using it and the age-appropriate activities for their students.

Addressing sensitive issues

Teachers described how their culture makes it difficult to talk about HIV and sex and how the training and skills based activities provide teachers with a way of initiating dialogue.

"The manual is really assisting teachers in the sense that it outlines steps which teachers could follow when addressing certain topics. Because you will find some teachers feel very uncomfortable in discussing issues of HIV/AIDS because they've got an element of sex . . . and if you have something that will guide you from how to move from point A to point B it is very easy for a person who is shy to address HIV/AIDS."— Teacher in Botswana

The Program and Exercise Book have helped teachers deal with the discomfort of addressing "sensitive topics" with other teachers and especially students. After attending the trainings, teachers reported being more confident to discuss HIV prevention issues and respond to "sensitive" questions.

Teachers confronting HIV related discrimination

The trainings and Exercise Book activities helped teachers address the stigmatization associated with HIV/AIDS. The trainings promote open discussion and have fostered an environment where teachers have felt comfortable enough to publicly share their HIV status with teaching colleagues. Prior to the trainings many teachers would avoid other teachers or students who were “sick” and most likely infected with HIV. After the trainings these same teachers were more likely to extend help and support to HIV positive teachers and students.

“if trained . . . you can encourage those that you are taking care of to open up because they know that they have somebody there who is always there to assist at times of need.” – Teacher in Botswana

The teachers believe that increased awareness and discussion among teachers and students has decreased discrimination and increased support for HIV positive people. Several teachers described how their schools have developed support systems for teachers, students, or members of their communities that have HIV. In Botswana, the student “HIV Prevention Clubs” have developed peer educator programs and support programs for their communities.

Figure 6. Student HIV Prevention Club in Botswana standing in front of the garden they maintain to provide food for HIV orphans.



Teachers recognize the impact of the Program

Teachers in all three focus groups believed that the Program has increased teacher’s awareness, confidence, and skills to prevent HIV. The trainings have also had the intended effect of diffusing HIV prevention skills from teacher to teacher and ultimately to students. In each focus group, teachers talked about how they had trained other teachers in their schools who then were observed using the participatory learning exercises with other teachers or students.

Teachers that attended the trainings became valuable HIV prevention resources for their schools and communities. In each focus group the teachers talked about how they were viewed and labeled as “HIV experts” after conducting trainings in their schools. It was not uncommon for the teacher trainers to be approached by HIV positive teachers, students, or parents seeking counsel or resources.

Teachers created school-level changes by advocating for HIV prevention to be integrated into the general teaching curriculum or by forming HIV prevention clubs for students. Teachers reached out to their communities by providing skill-based trainings, working to make condoms available, or by counseling parents.

“[The trainings have increased teachers] interactions with the community. It has also helped very much because some parents have come to school to seek counseling (i.e., HIV prevention or treatment information) which is very important because we are in touch with the community.” – Teacher in Zambia

Teachers provided examples of how parents were supportive of children learning about sex and HIV prevention in schools. Teachers recognized they must continue taking a leadership role in framing HIV and AIDS as societal problems that must be addressed and not ignored.

Behavior Change

Teachers were confident the Program was having an impact on teacher’s behavior. As a result of the trainings teachers claimed more teachers were using condoms and having monogamous relationships. Teachers also shared stories of female teachers being more assertive with their partners regarding condom use.

“The information that we get from the manual is not only assisting learners it is also assisting teachers [by giving them] skills to implement in their daily living. At the same time after adopting the skills you don’t end in the classroom applying them you use them in every day living.” - Zambian Teacher

The teachers credited the Program and other prevention efforts with creating an environment where teachers could more openly discuss and adopt HIV prevention behaviors.

SUMMARY

The *Teacher Training Program to Prevent HIV Infection and Related Discrimination* is a skills-based model for providing teachers with the knowledge, confidence, and skills to protect themselves and teach others to prevent HIV. Once trained, teachers pass on their newly acquired HIV prevention skills to other teachers who implement them in their schools and communities. To date the Program has:

1. trained 134,445 teachers in 22,576 schools in 17 countries.
2. increased teacher's knowledge to prevent HIV.
3. provided teacher's with the confidence and skills to use participatory learning exercises to train teachers and students to prevent HIV.
4. motivated teachers to modify their own behavior, advocate for HIV prevention, and talk with other teachers and students about HIV prevention.

The observed increases in knowledge, confidence, and intentions to perform HIV prevention strategies suggests that the Program is making progress in empowering teachers and students to confront the HIV epidemic. The sustainability of the education sector and the lives of students and teachers are dependent upon teachers having the skills to protect themselves and train others to prevent HIV. **Therefore, every effort should be made to maintain and expand the Teacher Training Program to Prevent HIV Infection and Related Discrimination.**

APPENDICES

APPENDIX A. Percentage of teachers that correctly agreed or disagreed with the knowledge related items at pre-training and and post-training by country, 2004

Item	Knowledge related questions (correct response)	Rwanda* (n=146)		Senegal (n=190)		South Africa (n=102)	
		Pre	Post	Pre	Post	Pre	Post
1	Individuals can prevent HIV infection by adopting protective behaviors. (Agree)	89.7	99.3	91.1	94.2	95.0	97.0
2	It is okay to use oil-based lubricant, such as petroleum jelly, to lubricate a latex condom. (Disagree)	--	--	45.2	79.6	72.3	79.0
3	Women are more susceptible than men to HIV infection. (Agree)	--	--	63.6	73.1	75.5	83.3
4	Teaching youth people about preventing HIV and other STIs should include informing them about the effectiveness of proper use of condoms. (Agree)	--	--	92.6	92.5	93.1	97.0
5	Teaching youth people about sex and HIV and AIDS will make them promiscuous and immoral. (Disagree)	--	--	61.2	69.7	84.3	91.1
6	HIV-infected staff and students should not be allowed to attend school because they put others at risk of infection. (Disagree)	--	--	93.0	93.1	99.0	95.0
7	If people have only one sexual partner, they are at no risk of HIV infection. (Disagree)	--	--	25.5	46.0	51.0	65.7
8	When asked a question about HIV that you don't know the answer to, it is okay to say, "I don't know the answer, but I will try to find out." (Agree)	--	--	65.2	61.4	92.1	97.0
9	Teachers can play an important role in preventing HIV infection. (Agree)	89.7	97.3	100.0	98.9	96.1	98.0
10	Knowing the basic facts about HIV is enough to prevent its spread. (Disagree)	85.6	83.6	48.9	44.6	39.2	43.6
11	Teacher can help colleagues and other adults reduce their risk of HIV infection. (Agree)	96.6	98.6	99.5	96.8	95.1	100.0
12	Youth need to have life skills such as decision-making, to protect themselves from HIV infection. (Agree)	70.5	87.0	85.6	92.1	92.1	95.1
13	Teachers' unions should leave the responsibility of HIV and AIDS education to the ministries of health and/or education. (Disagree)	78.8	82.9	88.4	90.5	95.1	92.2
14	Even the youngest learners need the knowledge, attitudes, and skills to adopt protective behaviours. (Agree)	94.5	91.8	94.2	94.7	94.1	100.0
15	It is important for teachers to know their HIV status. (Agree)	--	--	91.6	90.4	95.1	99.0

*Rwanda's questionnaire included 7 of the 15 knowledge related items.

APPENDIX B. Teacher's confidence to use HIV prevention skills at pre-training and post-training by country, 2004

Item	Percentage of teachers "very confident or confident" to use the learning activities to . . .	Rwanda [‡] (n=146)		Senegal (n=190)		South Africa [§] (n=102)	
		Pre	Post	Pre	Post	Pre	Post
1	help teachers and other adults increase their knowledge of HIV and AIDS (<i>Activity 1.1</i>)	81.9	92.4	82.0	93.6	--	89.6
2	help teachers and other adults identify behaviours that put them at risk (<i>Activity 1.2</i>)	66.9	84.0	84.7	97.3	--	95.7
3	help teachers and other adults understand why people take risks (<i>Activity 1.3</i>)	60.0	83.3	75.1	88.5	--	93.8
4	help teachers and other adults to use negotiation and communication skills to reduce their risk of HIV infection or STIs (<i>Activity 1.4</i>)	52.1	81.5	70.9	89.4	--	91.7
5	help teachers and other adults to obtain and use condoms effectively (<i>Activity 1.5</i>)	45.2	60.3	78.5	91.5	--	83.3
6	advocate for HIV/STI prevention programmes and policies (<i>Activity 2.1</i>)	59.0	78.6	68.8	86.2	--	87.0
7	respond constructively to challenging HIV-related questions (<i>Activity 2.2</i>)	49.7	69.0	60.0	82.8	--	84.8
8	mobilise support and resources for HIV and AIDS education in schools (<i>Activity 2.3</i>)	63.1	66.7	59.0	72.2	--	87.0
9	help young children acquire communication, decision-making, and interpersonal skills (<i>Activity 3.1</i>)	59.6	78.6	69.6	86.0	--	95.8
10	help young children acquire the skills needed to deal with emotions and stress (<i>Activity 3.2</i>)	--	--	57.1	76.8	--	93.8
11	help pre-adolescents acquire the skills needed to effectively communicate messages about HIV prevention to friends, family, and others in the community (<i>Activity 4.1</i>)	71.9	78.8	77.7	88.4	--	89.6
12	help pre-adolescents acquire the skills needed to effectively communicate a desire to delay the onset of sexual intercourse (<i>Activity 4.2</i>)	52.4	80.8	61.3	84.7	--	91.7
13	help pre-adolescents seek out information related to their sexuality (<i>Activity 4.3</i>)	--	--	67.0	88.8	--	93.6
14	help pre-adolescents acquire the skills needed to communicate about sexuality with peers and adults (<i>Activity 4.4</i>)	59.6	73.8	79.1	90.9	--	93.8
15	help pre-adolescents acquire the skills needed to think critically and to understand the consequences of their choices (<i>Activity 4.5</i>)	--	--	80.1	89.8	--	85.4
16	help pre-adolescents acquire the skills needed to identify a range of health decisions and consequences (<i>Activity 4.6</i>)	71.9	78.4	59.1	80.7	--	89.6
17	help pre-adolescents acquire the skills needed to refuse sexual intercourse (<i>Activity 4.7</i>)	80.1	89.7	78.0	89.5	--	81.3
18	help pre-adolescents express empathy towards persons who may be infected with HIV (<i>Activity 4.8</i>)	--	--	71.0	86.1	--	87.5
19	help pre-adolescents discuss personal issues with confidence and self-esteem (<i>Activity 4.9</i>)	--	--	62.5	85.8	--	89.6
20	maintain pre-adolescents' personal value systems, independent of peer influence (<i>Activity 4.10</i>)	--	--	63.7	81.7	--	89.4
21	develop adolescents' skills in risk assessment and negotiation for safer sex (<i>Activity 5.1</i>)	50.0	75.3	80.2	84.2	--	91.7
22	help adolescents acquire the skills needed to use and talk about condoms (<i>Activity 5.2</i>)	50.0	58.2	64.3	81.6	--	89.6
23	train adolescents to seek out information and counselling services to help with substance abuse problems (<i>Activity 5.3</i>)	--	--	80.1	86.8	--	87.5
24	train adolescents to seek out and identify sources where condoms may be obtained (<i>Activity 5.4</i>)	--	--	55.3	77.7	--	89.6

[‡] Rwanda questionnaire included 16 of the 24 confidence items.

[§] Comparisons could not be made for South Africa because of different questions asked at pre-test and post-test.

APPENDIX C. Percentage of teachers responding that they were “likely” to implement HIV prevention strategies following the trainings by country, 2004

HIV Prevention Strategies	Rwanda ** (n=146)		Senegal ^ (n=190)		South Africa ^ (n=48)	
	Pre - Likely to Perform	Post - Likely to Perform	Pre - “Frequently “ Performed	Post- Likely to Perform	Pre- “Frequently” Performed	Post- Likely to Perform
Talk to family and friends about the prevention of HIV and related discrimination	76.7%	93.2%	44.4%	87.8%	49.3%	95.8%
Talk to school staff about the prevention of HIV and related discrimination	71.2%	84.2%	35.8%	90.4%	50.7%	93.8%
Talk to students about the prevention of HIV and related discrimination	83.6%	89.0	48.4%	88.2%	66.7%	93.8%
Use interactive learning methods in the classroom to build students skills to protect themselves from HIV	75.3%	82.8%	33.2%	81.1%	53.6%	89.6%
Take action to reduce their risk of HIV infection through abstinence, monogamy, or condom use	82.9%	91.8%	80.7%	85.6%	64.7%	89.6%

** Same question asked at pre-test and post-test.

^ Pre-test measured previous experience and post-test measured intentions to perform the skill addressed by the training.

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