

ORIGINAL RESEARCH ARTICLE

Empowering Teachers to Change Youth Practices: Evaluating Teacher Delivery and Responses to the FLHE Programme in Edo State, Nigeria

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Abstract

School-based programming is one of the most common approaches to HIV/AIDS prevention among youth. This paper presents the history and development of the Family Life and HIV Education (FLHE) programme in Edo State, Nigeria and results of evaluation of teacher actions and responses to training in its delivery. Results indicate that teachers benefited from the training, were aware of new and/or existing teaching resources and began to teach about HIV/AIDS. Teachers expressed that the programme facilitated open dialogue about HIV/AIDS. However, given limited human resources, FLHE was viewed as additional work to already overloaded teaching schedules. It is recommended that the Ministry of Education channel resources to enhance teachers' efforts towards combating HIV/AIDS. To facilitate learning about sexual health and family life, it is recommended that FLHE-based training be viewed as the first rather than the only step towards teacher professional development in this area (*Afr J Reprod Health 2012 (Special Edition); 16[2]: 87-102*).

Résumé

La programmation basée sur l'école constitue une des approches les plus communes à la prévention du VIH/SIDA chez les jeunes. Cet article présente l'histoire et le développement du programme de la Vie Familiale et l'Éducation sur le VIH au Nigéria et dans l'état d'Edo ainsi que les résultats de l'évaluation des actions des enseignants et les réponses à la formation dans leurs réalisations. Les résultats ont montré que les enseignants ont profité de la formation, qu'ils étaient au courant de nouvelles et/ou de ressources de l'enseignement et qu'ils ont commencé à enseigner le sujet du VIH/SIDA. Les enseignants ont révélé que le programme a rendu facile le dialogue ouvert sur le VIH/SIDA. Pourtant, étant donné les ressources humaines limitées, on a aperçu la VFEV comme une tâche supplémentaire qui vient s'ajouter aux programmes d'enseignement déjà surchargés. Nous recommandons que le ministère de l'Éducation dirige des ressources pour améliorer les efforts des enseignants vers la lutte contre le VIH/SIDA. Pour faciliter l'apprentissage de la santé sexuelle et la vie familiale, nous recommandons qu'on considère la formation basée sur la VFEV comme la première, plutôt que la seule, démarche vers le développement professionnel et de l'enseignement dans ce domaine (*Afr J Reprod Health 2012 (Special Edition); 16[2]: 87-102*).

Keywords: Teacher empowerment; teaching practices; HIV/AIDS education; Nigeria

Introduction

Literature suggesting the importance of schools in teaching about and combating the spread of HIV/AIDS in Africa is plentiful¹⁻⁶. First, because

schools house large numbers of young people, tactics to address the crippling pandemic have often been strategically incorporated as part of the school curriculum. Also, literature suggests that conveniently locating HIV/AIDS initiatives in

schools is beneficial because the majority of students are sexually active by the time they graduate⁷⁻¹⁰. Following this logic, over the past two decades, the sub-Saharan has implemented several school-based initiatives that have been designed to teach youth about sexual health and HIV/AIDS. Insertion of HIV/AIDS and sexuality education into school curriculum implies developing new school guidelines, effective programmes and classroom lessons, teacher instructional manuals, and conducting extensive teacher preparation in interactive teaching methods. In combating HIV infection, the crucial responsibility of schools is to teach young people how to avoid either contracting the infection or transmitting it to others and to serve as a catalyst for the development of policies that are based on the most current scientific knowledge about HIV and AIDS. In doing so, schools have the opportunity to make important improvements in the quality of sexual health education provided to young people worldwide as a step towards improving global health. Several reviews evaluating the effectiveness of some of this school programming in the sub-Saharan are easily accessible and some of the results have been used to inform other initiatives including the *HIV Prevention for Rural Youth* (HP4RY) programme of research in Edo State, Nigeria, which is the basis for this paper. While there are plenty of advantages of school-based programming, some of these reviews caution of the limitations surrounding it. For instance, these reviews indicate the need to pay attention to institutional readiness as well as the availability of trained, willing teachers to provide HIV/AIDS education. Also, because of some traditions against adult 'interference' in teaching children about sexual activity, there often exist resistance from parents and other adults (teachers included) to promote anything but sexual abstinence. Often the statement, "when the time comes, our children will learn everything about this issue by themselves" looms large.

This paper presents results of the school component of a larger *HIV Prevention for Rural Youth* (HP4RY) project. HP4RY is a Canada-Nigeria Action Research project funded by the Global Health Research Initiative of Canada. It

had the purpose to develop, implement and evaluate research-informed programme to reduce the vulnerability of rural youth to HIV infection. A full description of the programme¹¹ and its methodology¹² are available elsewhere in this volume. The setting for the project was 30 rural Junior Secondary Schools in Edo State, Nigeria. In particular, the paper looks at the role of teachers in teaching about HIV/AIDS. It begins by offering a brief history of sexuality and HIV/AIDS education in Nigeria, followed by a review of the literature on teacher training and school-based sexuality and HIV programming in the sub-Saharan, which is followed by a description of the implementation of Family Life and HIV Education in the 30 rural schools in Edo State participating in the HP4RY project. The final part of the paper discusses the research findings, which are aligned to the implementation and the results of the evaluation of teacher responses to the delivery of the programme in those schools.

The History of Sexuality and HIV Education in Nigeria

In the sub-Saharan, the 1994 International Conference on Population Development (ICPD) set the wheels of school programming spinning and legitimised many then existing ad hoc HIV/AIDS-based school initiatives. Unlike other ICPD conferences that had focused on population control, the 1994 conference shifted to emphasize the importance of reproductive health and individual sexual health behaviour within human populations. Consequently, teaching and learning about sexual health gained legitimacy together with initiatives designed to combat HIV/AIDS. In Nigeria, the 1994 ICPD resolutions on programme of action, one of which was the need for more initiatives addressing the devastating impact of the HIV/AIDS pandemic on the Nigerian population, resulted in a closer look at existing curricula and how these were to be used to infuse lessons on HIV/AIDS prevention. As stated in the introduction to the National Family Life and HIV Education curriculum¹³, "the recent scourge of HIV/AIDS in Nigeria brought to the fore the urgent need to deal with adolescent reproductive health issues. In 1998 for instance, 60% of all

reported cases of HIV/AIDS came from the age group 15 – 24 years, who constitute more than 50% of the national population.”

In response to the 1999 National Council of Education’s directive for formally including sexuality and HIV/AIDS content in school curricula, the *Nigerian Educational Research and Development Council* (NERDC)¹³, in collaboration with *Action Health Incorporated* (AHI), a Lagos based non-governmental organization that focuses on programming and advocacy for youth sexual health, with support from international donors, developed programming for Nigerian schools. A range of groups and individuals, which included academics, state ministries of education, civil society organizations (CSOs), and religious groups, also contributed to development and review of the curriculum.

This programming built on then existing *Family Life Education* curriculum to produce *Family Life and HIV Education*. The FLHE educational model fits criteria established by WHO expert consultation groups¹⁴⁻¹⁵. The National FLHE Curriculum was developed as a planned process of education that fosters the acquisition of factual information, formation of positive attitudes, beliefs and values as well as development of skills to cope with the biological, psychological, sociocultural and spiritual aspects of human living. The main goal of FLHE is the promotion of preventive education by providing learners with opportunities to: develop a positive and factual view of self; acquire the information and skills they need to take care of their health including preventing HIV/AIDS; respect and value themselves and others, and; acquire the skills needed to make healthy decisions about their sexual health and behaviour.

The curriculum is structured to provide a framework for the acquisition of knowledge of self and family living from childhood to adulthood. It also reflects a comprehensive approach to HIV prevention education from primary to tertiary levels of education.

Teacher Training

One of the identified challenges of viewing schools as mediums for delivering sexual health and HIV/AIDS education involves training and teacher willingness to teach about these subjects.

Literature illustrates that Teacher Education Programmes in Africa do not provide teachers with the skills and content knowledge to teach about sexual health and HIV/AIDS; consequently, there exists a need for training in this area before any school-based HIV/AIDS programming can be implemented¹⁶. There is also literature, which indicates that even when trained, teachers remain apprehensive about using sexual health and HIV/AIDS-based materials. For instance, Ahmed et al.¹⁷ conducted a pre- and post-training questionnaire to determine the effects of a teacher-training programme on a sexuality education project. Results indicated that teachers reported increased confidence and comfort in teaching the sexuality curriculum; however, many struggled with the transfer of sexual reproductive knowledge and facilitative teaching methods into the classroom context.

Additionally, studies such as Flisher & Knut-Inge’s 2009¹⁸ study conducted in Tanzania and South Africa, cites teacher confidence as lacking, therefore, negatively impacting school-based sexuality and HIV/AIDS education. Also, a comparative study conducted in India and Kenya¹⁹ aimed to investigate the impact of HIV/AIDS and examine how education can be used in the prevention and control of HIV/AIDS indicated that teachers often embark on ‘selective teaching’ in which messages on HIV/AIDS are either not communicated at all, or are restricted to overly-scientific discussions without direct reference to sex or sexual relationships. In addition to training and teacher readiness, literature indicates that the lack of appropriate teaching materials coupled with teaching methods often negatively impact the effects of school-based programming about HIV/AIDS. For example, Chifunyise, Benoy, & Mukiibi’s 2002²⁰ HIV education and nation-wide evaluative Zimbabwean study, emphasized the need for upgrading materials as well as for participatory teaching methodologies that would enhance students’ ability to internalize positive attitudes and behaviours. Further, while accredited for providing basic and needed information about HIV/AIDS, these materials were found to be lacking in addressing female (dis)empowerment to make decisions and negotiate safer sex practices. Finally, studies indicate that teacher impact and

effectiveness in school-based HIV/AIDS programming is shaped by teacher professional security and safety, and parental and community support. Kinsman et al.'s 2001²¹ evaluation of a comprehensive school-based AIDS education programme in rural Masaka, Uganda indicates that the programme was unsuccessfully implemented, and that key activities such as condoms and the role-play exercises were covered only very superficially. The main reasons for this were shortage of classroom time as well as teachers' fear of controversy and the unfamiliar. Overall, most studies suggest that large-scale comprehensive school-based HIV/AIDS education programmes in sub-Saharan Africa may be more completely and successfully implemented if they are fully incorporated into national curricula and examined as part of life-skills education.

Family Life and HIV Education in Nigeria

As indicated by the above discussion on the 1994 ICPD resolutions on programme of action, Nigeria is one of the countries in the sub-Sahara that incorporated HIV/AIDS programming into the national curriculum by infusing programme content into several regular classroom subjects (referred to as carrier subjects). While the core curriculum content and the training and delivery model are common across the country, each state has the responsibility for determining the specifics of implementation. This includes identification and expansion of carrier subjects, incorporating FLHE content into schemes of work for carrier subjects (parallel to North American curriculum guides), training teachers, implementation and monitoring delivery of the programme. AHI, with support from international donors, provided training for a core group of Master Trainers in each state and is available for consultation and additional training on request.

At the beginning of the HP4RY project in 2008, the Edo State Ministry of Education (ESMoE) was in the process of incorporating FLHE into schemes of work for Junior Secondary School levels 1, 2 and 3 and 84 schools in the state had teachers trained in programme delivery. Teacher training had been conducted by a team of Master Trainers under the direction of the

secretary to the State Action Committee on AIDS who, at the time of HP4RY, was also the Director responsible for delivering and overseeing HIV/AIDS education for the State Ministry of Education²². During the HP4RY project, 30 schools that had not previously received FLHE training participated in the impact evaluation and received training led by the Director and the team of Master Trainers in 2009 and 2011. In 2010, under a two-year capacity building grant from TY Danjuma Foundation, AHI in collaboration with ESMoE, conducted a review and scale-up of delivery of FLHE in Edo State schools. This included reviews of the status of FLHE implementation in Edo State and of the state's FLHE scheme of work, and documentation of the subsequent production and distribution of schemes of work to schools. Under this funding initiative, the Director, working with AHI and the ESMoE, contributed to the coordination of training workshops on FLHE curriculum implementation for 50 additional Master Trainers and 200 teachers, carried out in January 2011. By the end of the HP4RY project in 2012, schemes of work had been completed and distributed to all schools in the state, the number of carrier subjects was expanded, and over 300 teachers had been trained in Edo State.

Methodology of FLHE Delivery and Research

Selection of Schools

Thirty rural public schools participated in the HP4RY project. Three schools were selected from each of 10 local government areas (LGA) spread across the North, Central and South Senatorial Districts of Edo State, Nigeria. For evaluation purposes, 20 schools were randomly assigned to have their teachers and principals trained in the delivery of the Family Life and HIV Education (FLHE) programme in August 2009 and peer educators trained in December 2009 and January 2010. Of these 20, 10 were randomly assigned to have youth serving in the National Youth Service Corps (Youth Corpers), trained in working in communities with youth and adults using the AIDS Competent Community model²³⁻²⁴ placed in

the corresponding community²⁵. The final 10 schools were randomly assigned to have teacher, principal and peer educator training delayed until April to August 2011 after all paper data were collected. These latter schools served as controls for schools that received the intervention earlier. In this paper, the first 20 schools that had teachers trained in delivering FLHE during the research period, are referred to as FLHE. The final 10 schools, which had teachers trained after the research period, are referred to as Delay.

HP4RY-supported Training of Teachers: The teachers involved in the HP4RY-supported FLHE programme received training that occurred in two stages. First was refresher training of Master Trainers (MTs), which was undertaken by the Ministry of Education in collaboration with members of the research team in May 2009. The MTs training was focused on teaching facts about health, sexuality, rights, and HIV/AIDS; incorporating information about sexuality and youth sexual scripts from the baseline data collection in Edo State to bring a local context into the curriculum; providing diverse teaching strategies for the delivery of FLHE; as well, it focused on teacher self advocacy/support about sexual health and HIV/AIDS. In a nutshell, the MTs were taught to reflect on their knowledge and beliefs about sexual health and practices; were taught facts about the anatomy and human reproduction system; and they were taught diverse facilitation strategies and teaching methods.

Second was the training of principals, classroom, Guidance and Counseling (G&C) teachers, and peer educators by the MTs. Training for teachers in FLHE schools took place in August 2009 and for teachers in delay schools in April and May 2011. Principals received 2 days of training, classroom teachers 10 days, G&C teachers 6 days and peer educators 5 days. Table 1 provides information about the number of people trained in each of the training periods. Theoretically, government teachers from carrier subjects (English studies, social studies and integrated science) were to be trained. However, the reality of teacher shortage necessitated the training of LGS's to supplement those provided by the government and from other subjects such as math and business.

Similar to the refresher course for master trainers, the objectives of the teacher-training course were to increase the knowledge, awareness, and skills of carrier subject teachers in the concepts, content and methodology for classroom delivery of the FLHE curriculum in schools. An additional objective for the counselors was to increase their knowledge of adolescent sexual and reproductive health issues so that they could improve their skills and abilities in dealing with these issues in schools. Training included didactic instruction to convey information, review and discussion of schemes of work, discussion of contentious or troublesome issues, and practice teaching and counseling sessions followed by feedback and critical commentary from peers. Following this training, in their respective schools, FLHE teachers were expected to share with other teachers what they had learned; as well, they were to directly teach students about HIV/AIDS in their classroom subject. Teachers were also encouraged to start a question box, which would be used by students to anonymously ask questions about HIV/AIDS.

Table 1: Number of Teachers Trained in Delivery of FLHE

	FLHE Schools	Delay Schools
Date of training:	Aug 2009 – Jan. 2010	April- Aug. 2011
Number of schools:	21*	10
Principles trained	21	10
Subject teachers trained	67	18
Guidance & Counseling Teachers trained	17	2
Peer Educators trained	750	unknown

*20 research sites and 1 school that participated in piloting of research materials and processes

The Master Trainers trained peer educators from each school with Guidance and Counseling teachers expected to maintain the ranks of peer educators over the years by recruiting and training successive cohorts of new students. The role of peer educators was, under the direction of the G&C teacher or another designated teacher, to form 'Anti-AIDS' clubs in the schools, to work with teachers on preparing responses to questions

in the question box and to act as informal teachers and mentors for their peers. The first round of training of peer educators occurred in December 2009 and January 2010 and the second in July and August 2011. To identify best practices and ensure that the objectives of FLHE programming were being met, the Ministry of Education monitored schools through onsite visits in June 2010.

Schools in Edo State are severely understaffed. HP4RY had difficulty finding schools for the study because we needed to have at least 1 government teacher teaching a carrier subject for a school to participate. During the recruitment period, 97 Junior Secondary Schools were visited in order to establish a sample of 30. Schools were excluded for several reasons (e.g., having existing HIV/AIDS programming in the school or community, extreme difficulty travel to schools), but primarily because they did not have at least one government teacher.

Given the evident teacher shortage, schools have been innovative in supplementing their teaching staff. For instance, many have teachers who, because the community or the LGA hires them, are referred to as "community teachers". These teachers may or may not have prior teacher training and are in schools for varying lengths of time with no guarantee that they will continue in schools over the years. Schools also enlist members of the National Youth Service Corps who are recent university graduates, to provide a year's teaching service. Finally, Junior Secondary Schools that are on the same campus as Senior Secondary Schools may use Secondary School teachers to cover subjects. Among the teachers in the 30 schools recruited for HP4RY 57% were government employed, 33% were community employed, and 10% were Youth Corps members. However, because of the instability of community-based employment and the 1-year mandatory Corpers' service, these proportions fluctuated over the course of the project. Therefore, it is important to keep in mind the limited and unstable resources under which the programme was implemented as indicated in the following sections.

Data Collection

Data used in this paper were collected in October-November 2008 (wave 1) before principals, teachers, and peer educators were trained and

deployed, and in February-March 2011 (wave 3), 18 months after programmes were initiated in schools. An additional wave of data was collected in February-March 2010 (wave 2), 3-4 months after teachers were trained. The wave 2 data are not used in this evaluation because the time period for programme delivery was short and results could only be considered preliminary. In each of the 30 schools, 3-5 teachers were invited to complete self-report questionnaires. In addition, 3 teachers from 9 (wave 1) and 8 (wave 3) of the 30 schools spread across the three Senatorial Districts were invited to participate in in-depth interviews.

Survey Measures and Interview Guides

Teachers' responses to and implementation of the FLHE programme were evaluated using a series of survey and interview questions that inquired about the resources present in the school; teaching practices related to HIV, AIDS and sexuality; knowledge about HIV and AIDS; attitudes toward teaching about this topic and perceptions of barriers to such teaching; and personal awareness of HIV and AIDS in the community together with personal assessment of risk. These questions were asked at wave 1 and subsequently at wave 3 allowing us to examine if changes occurred as a result of the training. Six scales were created from the survey data to measure availability of teaching resources in the school, factual knowledge, rejection of myths, implementation of the FLHE programme, talking to students about abstinence, and talking to students about condoms. The questions that contributed to these scales, their coding and psychometric properties are reported in Appendix A. Other questions were analyzed individually.

Data Analysis

Survey Data. Six scalar measures and 2 responses to individual questions were each regressed on wave of data collection (1 or 3), whether respondents were trained and in FLHE schools or were untrained and in Delay schools, and the interaction between these two variables. Questions chosen for regression analysis were those that, during preliminary bivariate analyses,

showed potential changes in responses that might be related to FLHE training. Consistent with the nature of the outcome variables (a mix of continuous and categorical variables), both Ordinary Least Squares (OLS) and logit models were employed. Regression models were tested using the SURVEY module of STATA 12 to accommodate the stratified and clustered nature of the sample. Schools had been selected within strata (LGAs) and teachers were clustered in schools. Given this identification of strata and clusters, the SURVEY module estimated standard errors by its default method (linearization)²⁶.

In-depth Interviews. Transcripts of interviews were coded for themes that paralleled the outcomes tested in the statistical models. Summaries of teacher interviews were organized by research arm for each theme to produce an overview of how teachers spoke about these topics.

Findings

The results discussed here draw from both quantitative and qualitative data of teachers, observations from the FLHE training workshops, as well as from the monitoring exercise of the implementation process. The focus is on comparison of wave 1 (pre-teacher training) and wave 3 (18 months post training) data with wave 2 data providing a first preliminary look at what was happening in schools as teachers began to deliver the FLHE programme.

Literature in teacher education as well as in critical school ethnography informs of the importance of teacher identity in working with students to reflect on community values and traditions. Therefore, while teachers were not chosen according to their identities, it is important to keep in mind their sex, age and religious markers as informing some of the implementation of FLHE programming.

As would be expected given the sampling design, there are no differences in these characteristics between teachers who responded to the survey in FLHE and delay schools. Teachers were predominately male (65%), over half of them were 40 years or older and 96% were Christians. Seventy-six percent of the trained teachers had

been teaching in JSS for between 3 to 10 years while 60% of them taught at their current school for 3 – 10 years. Because of the requirements for school selection (see Dlamini et al. 2012)¹² over all waves of data collection the majority of the teachers (74%) who responded to the survey were employed by the government and were relatively evenly spread over the 3 carrier subjects with Guidance and Counseling teachers having low percentages (8%) – an indication of the lack of this category of teachers in rural schools in Edo State. For wave 3 in-depth interviews, 17 teachers were interviewed. Eight of these teachers had received FLHE training. Seven taught integrated science, seven taught social studies, two provided guidance and counselling, and one teacher taught basic science.

Wave 2 Observations

In wave 2, amongst the topics examined in beginning to understand how the teachers felt about the programming they were initiating in schools, was the effect of the FLHE training on their practice. That is, HP4RY was interested in learning whether or not the training had built teacher knowledge and confidence to teach an HIV/AIDS infused curriculum in their subject areas. As well, we wanted to learn more about teacher beliefs about the topic, which would mediate what teachers chose to emphasize or neglect in their teaching. Wave 2 qualitative data indicate that teachers reported that the FLHE training had been helpful. With the exception of teachers in one school, all teachers identified new learning that happened at the FLHE training, which included the learning of new knowledge about HIV/AIDS, new teaching strategies, and gaining confidence to talk about these issues to students. Even the teachers who mentioned that they had not learnt anything new from the training noted that the training was advantageous because it facilitated open conversations about HIV/AIDS.

Resources

Table 2 indicates that there were more resources (teacher and student reference books and schemes of work) in FLHE intervention schools than in

delay schools. This is an important finding because at the time of HP4RY presence in schools, the Ministry of Education in Edo State was distributing resources to all schools in the state. However, although the HP4RY programme distributed the same resources as the Ministry, it was in the schools with teachers who participated in FLHE training that those who responded to surveys were aware of the resources. This suggests that resources may or may not get to schools through regular channels, further, if they do get to schools, without training, teachers may not have sufficient awareness of the resources to utilize them.

Table 2: OLS Regression for Resources Available for Teaching FLHE

	Resources Available		
	b	beta	s.e.
wave 1 or 3 ^a	0.11	0.06	0.26
Delay or FLHE ^b	0.27	0.13	0.20
wave by FLHE ^c	0.70 *	0.32	0.31
Constant	0.22		0.17
R ²	0.19		

Footnotes: a. wave 1=0; b. Delay=0; c. Interaction of wave by training status

* $p < .05$; ** $p < .01$; *** $p < .001$

Qualitative data also confirm that trained teachers were aware of and utilized the resources in their schools. However, there is inconsistency around the nature of resources that teachers received at the FLHE training as indicated by the following quotations.

I: During the training did they give you any material?

P: They gave some textbooks.

I: Did they give you any big blue book? That book contained a lot of information.

P: No, we did get that one

I: It was only textbooks, textbooks on HIV?

P: Yes. (IM1193: 31-37)

Q: Were you given workshop bags, materials during the training?

P: No, we were not given; it is only the students that were given a notebooks and biro to write.

Q: Can you think of any big blue book given to you?

P: Yes, we were given one and it is in the principal's office, the book contains the entire course guide for the FLHE scheme.

Q: What about a small blue book, were you given that?

P: No, we were not; you can check the principal's office, but I only know of the big blue one. (ISS1193: 36-44).

Teachers' Knowledge

Table 3 indicates that there are no increases in either factual knowledge or in recognition of myths as false information related to training. This is not surprising since knowledge in these areas was already high before training. On scales where 5 was the highest possible score, before training the average score for teachers was 4.33 on knowledge and 4.51 on myth rejection (or 86% and 90% correct responses respectively). This suggests that although training cannot ignore knowledge this is not where it needs to focus. While statistical data suggest that there were no increases in either factual knowledge or in recognition of myths as false information, qualitative data from waves 2 and 3 indicate that teachers were vocal about gains from this training and that the gains were both pedagogical (e.g. confidence) and content-based. The following quotes indicate these gains.

Q: Do you find it difficult to teach about sex and HIV/AIDS when other teachers are not teaching about it?

P: Not that difficult. I think because I was trained and still have some textbook and I have been with them for some months, so it is not that difficult for me (IIS1073: 46-49)

P: If not for that training I wouldn't have had the knowledge I have now, and a lot of students wouldn't have benefitted from it. I use it every day, and even outside the school I use it to educate the youth when they are going wrong. (IGC1123: 16-18)

P: I think everybody has accepted the fact now that sex and HIV is very important to be delivered in a school system, our teachers are fully aware, most especially with the assistance of the Ministry of Education by giving us proper knowledge on that

Table 3: OLS Regression for Teacher Factual Knowledge and Rejection of Myths Related to HIV/AIDS

	Factual Knowledge			Rejection of Myths		
	b	beta	s.e.	b	beta	s.e.
wave 1 or 3 ^a	-0.62	-0.24	0.38	-0.84 *	-0.31	0.38
Delay or FLHE ^b	-0.45	-0.16	0.30	-0.21	-0.08	0.30
wave by FLHE ^c	0.63	0.22	0.46	0.54	0.18	0.46
Constant	4.33 ***		0.25	4.41 ***		0.25
R ²	0.02			0.04		

Footnotes: a. wave 1=0; b. Delay=0; c. Interaction of wave by training status

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 4: Logistic Regression of Teacher Readiness to Teach

	Comfortable Teaching			Enough Training		
	Coefficient	Adj. OR	s.e.	Coefficient	Adj. OR	s.e.
wave 1 or 3 ^a	-0.32	0.73	0.58	-0.77	0.46	0.89
Delay or FLHE ^b	-0.59	0.56	0.47	-0.93	0.39	0.68
wave by FLHE ^c	1.78 *	5.94	0.74	2.22 *	9.17	1.07
constant	0.22	1.25	0.33	-1.48	0.23	0.50

Footnotes: a. wave 1=0; b. Delay=0; c. Interaction of wave by training status

* $p < .05$; ** $p < .01$; *** $p < .001$

topic. Our students are taught on how to avoid indiscriminate sex, they are taught too even if they are not using condom to protect themselves. (IGC1123: 22-27)

Potential Barriers to teaching about HIV/AIDS

To determine barriers to teaching about sexuality and HIV/AIDS, teachers were asked to respond to nine questions about potential structural (e.g. enough time and training) and attitudinal (e.g. whether this teaching was important, comfort level) barriers related to teaching the FLHE content. On four of these questions over 90% of teachers in all schools were in agreement: that teaching about HIV/AIDS was important, that it did not do more harm than good, that students were old enough for these lessons, and that the lessons were necessary. Teachers were also in agreement on two other questions, with no change over the waves of data collection: 40% of teachers felt there was not enough time to cover the FLHE subject matter and 40% felt students were too shy for this material. In response to a question of whether parents would object to teachers talking

about sexuality and HIV/AIDS, there were no changes in responses across the waves of data collection; however, while 70% of teachers in FLHE schools felt parents would not object, only 47% of teachers in delay schools held this view. For none of these questions was there any indication that training affected responses. However, for two questions – whether teachers felt they had enough training and whether teachers were comfortable teaching these topics – training did make a difference. As seen in Table 4, after training, teachers in FLHE schools were significantly more likely than those in delay schools to feel they had enough training and that they were comfortable teaching FLHE subjects. While statistical data indicate that teachers felt that there was not enough time to teach about HIV/AIDS qualitative data indicates that teachers did not mention anything about lack of time, instead, some teachers indicated that there were not enough resources to use in their schools as indicated by the following two quotations.

Q: What has been the greatest challenge for you in teaching about HIV/AIDS?

P: No equipment, enough materials (ISS1243: 24)
 Q: *What has been the greatest challenge for you in teaching about HIV/AIDS?*
 P: One, Capital, who provides this or that, nothing to go by? It is possible for teachers to organize seminar, lectures, and inter-school competitions in terms of debates, quiz but no money to do this. You don't expect a teacher to use his/her salary for it. Even this spare time we are creating for these students is at our own expense. (IGC1123: 16-22)
 Qualitative data confirms the quantitative finding that teachers felt comfortable and well prepared to teach about HIV/AIDS.

Q: *Do you find it difficult to teach about sex and HIV/AIDS when other teachers are not teaching about it?*

P: Not that difficult. I think because I was trained and still have some textbook and I have been with them for some months, so it is not that difficult for me (IIS1073: 46-49)

Q: *What should we be teaching junior secondary school students about HIV/AIDS?*

P: We can start to be teaching these junior secondary school students so that they themselves will begin to be aware about the presence of AIDS in the country. (ISS1183: 12-16)

Q: *Should JSS students be learning about sex and sexuality?* P: In fact, right from the JSS they should be taught sex education so that they will not be in a position to be learning how to practice sex wrongly.

Q: *Many teachers find it uncomfortable to talk about sex with students. What do you think about this?*

P: To me that idea should be ruled out. They should boldly be talking to them in respect to this sex, so that they will not be trying to harbour or hinder some sensitive issues in the students (ISS1183:17-30).

Those teachers who expressed discomfort teaching about sexual health and HIV/AIDS did so mainly because of the age of the students and not because of lack of training.

Q: *Do you feel uncomfortable in teaching about sex and sexuality?*

P: Well it depends on the class, I feel very comfortable talking about sex with the JSS3 students because of their age.

Q: *What about the JSS 1 & 2?*

P: I feel uncomfortable because of their age, and many of them are not up to that age.

Q: *When do you think we should start teaching students about HIV and AIDS?*

P: Probably from 15 years upwards because of the civilization around. (ISS1083: 34-40)

Teaching and beliefs

What teachers believe, together with their attitudes about HIV/AIDS, shapes what they do with students in schools; therefore, part of HP4RY exploration was to garner information on these beliefs and to measure changes over the life of the project. Similar to the findings on potential barriers to teaching FLHE, there was agreement in responses to several of these collections. Well over 90% of teachers agreed that the more information they provided to students, the better and that it was important to talk openly about these topics. Less than 1/3 of teachers believed AIDS was God's punishment to the wicked, that those who are infected had only themselves to blame, or that AIDS was not as big a problem as it was made out to be. All of these responses suggest that teachers' attitudes are supportive of teaching about HIV and AIDS and that few of them hold stigmatizing views of those who are infected. Responses to one question were not as encouraging. Over 70% of teachers, across all schools and without any change following training, felt that teaching that condoms give protection against HIV encourages sexual activity. This is consistent with the Director of HIV/AIDS education for the State Ministry of Education's²² observation following training that attitudes towards condoms were particularly difficult to influence with most teachers 'not moving' in their attitudes that condoms should not be taught as a method of preventing HIV transmission.

Teaching FLHE

Not surprisingly, Table 5 indicates that trained teachers were delivering the curriculum more than untrained teachers. This was through classroom teaching and various co-curricular activities. In the two areas of talking to students about abstinence

and talking to them about condoms, we found that for talking about abstinence there were no gains with training. This was common in all schools with 2/3-3/4 of teachers talking about abstinence whether or not they were trained. However, despite the consistently negative attitudes about condoms displayed above, with training there was an increase in talking to students about condoms.

Wave 3 qualitative data confirms statistical data as documented in Table 4, that is, it confirms that abstinence as the first and most important message teachers taught students did not change after FLHE training. Further, qualitative data also confirms the increase in the number of teachers mentioning condoms as a prevention method. This finding was also confirmed by wave 3 focus group data in which in all schools students named at least 1 teacher who spoke to them about condoms (for detailed student results see, Arnold et al. in this volume)²⁷. Put differently, while abstinence was the teachers' first 'preferred' method of prevention, it was not usually the only message condoms were commonly mentioned as well, especially when speaking to older students or students that teachers knew were already sexually active.

Q: Thinking about prevention, what do you think is the most important thing for students to learn about preventing HIV/AIDS?

P: They should learn to prevent it so that they will not be victims by using condoms, by running away from that relationship because they might contact it before carrying out the test before having that relationship. (IIE 1013: 83-87) [Students should learn to avoid having sex by not getting in any dating –“that relationship”. If they have sex before conducting an HIV test, they can avoid infection by using condoms.] The increase in the mention of condoms however, did not mean that teachers were passing on a single uniform message to students; rather, there were multiple messages. As indicated by the quotes below, these messages ranged from teachers who did not agree with the idea of teaching about condoms, to teachers who provided misinformation about condoms (leaks, holes), to others who believed that students should be given information about condom use, especially older (and sexually active) students. The following

quote IIS1183 indicates a teacher who favours abstinence but mentions condoms as another secondary way to protect from HIV/AIDS. In this teacher's statement, the secondary positioning of condoms is indicated by the word 'jingle', which were it her conviction, she would have followed the questioning terminology and used “I think/believe”.

Q: Thinking about prevention, what do you think is the most important thing for students to learn about preventing HIV/AIDS

P: Like we keep on telling them, abstinence is the best, they should abstain from having this sex they should wait for when they are legally married and it is even advisable now that before you marry it is even better you go for the test so that you know whether you are positive or negative; so that you know yourselves and so that the person you are marrying knows whom he is marrying but according to the *jingle* if you feel you cannot hold yourself then you need to protect yourself.

I: So, how do you protect yourself?

P: *The jingle* says you should use condom (IIS 1183: 67-77) [emphasis added].

Quotes from participants ISS 1013 and IIS 1083 below are illustrative of teachers who do not believe that students should be taught about the use of condoms at all.

Q: Some people say that once girls and boys begin to have sex they must use condoms to protect themselves from HIV/AIDS. What are your views on young people using condoms to protect themselves against HIV and AIDS?

P: They should stay away from sex. I do not see any reason why they should be using condom they should just stay away from it until they are married or mature enough. (ISS 1013: 65-69)

Q: Thinking about prevention, what do you think is the most important thing for students to learn about preventing HIV/AIDS?

P: Actually the most important thing is abstinence from it.

Q: What else is important?

P: Nothing else just abstinence (IIS 1083: 105-109)

Participants ISS1083 and IMU1193 are illustrative of teachers who believe that abstinence is the most important message to pass on to students about

prevention. Additionally, these teachers disapprove of teaching about condoms and further challenge their reliability as a preventative method against HIV/AIDS.

Q: Some people say that once girls and boys begin to have sex they must use condoms to protect themselves from HIV/AIDS. Now what are your views on young people using condoms to protect themselves against HIV/AIDS?

P: I don't believe condoms protect us from HIV/AIDS, because it could be that when they are meeting together, part of their body will be touching, and they have injury on their bodies they can get it, or they may scratch each other. Me, I don't believe that condoms can protect. (ISS 1083: 85-91)

P: I don't even encourage them to go into sexual activities neither will I tell anyone to use condoms. It means we are encouraging them, you can abuse yourself sexually and all, if we tell them use condoms it means that we are encouraging them, what if the thing burst or it pulls away? We have known of situations like that, where a man will use condoms and the wife will still become pregnant; I don't think it is 100% good. So we should not encourage its use. (IMU 1193: 191-197).

The last set of teachers (ISS 1123, IIE 1013 and ISS 1193) promotes a 'balanced' message to students, which are abstinence and the use of condoms. It is also with this group of teachers that we learn of students' views about the use of condoms, which, in this one case, knowing that they were sexually active, when the teacher suggested that they use condoms, the student responded that condom use reduces sexual pleasure (ISS 1123).

Q: What have you told students who you know are already having sex about protecting themselves?

P: Yes, students in this school even told me that, one girl even came and showed me that this is my boyfriend, so I told them to be applying brakes little by little [control their sexual urges]. And you should also be using condoms, her reply was that if they use condoms it [sex] is not too interesting, so I say just try. (ISS 1123: 130-135)

Q: What do you think young people should be told about using condoms?

P: They should be taught on how to make use of it

Q: Should boys and girls be told the same thing?

P: Yes (IIE 1013: 154-157)

Q: What have you told young people about how to protect themselves from HIV?

P: I told them that they should hold themselves [abstain], but if they know they cannot hold themselves they should use condoms. I tell them if you are having a boyfriend and the two of you are having sex, use condoms to protect yourself from infection, from HIV. (ISS1193:155-160)

P: Sometimes when I see the way they are moving and talking to each other, I call them to order and tell them there is need to use condoms whenever they want to get involved in a sexual relationship. (IIE1083: 166-168)

Teacher's Own Experiences with HIV and AIDS and Perceived Personal risks

To determine personal experiences with HIV/AIDS, teachers were asked if they knew someone in their village who was infected and or someone who had died of AIDS. There were no significant differences between delay and FLHE trained teachers from wave 1 to wave 2 or 3 in knowing someone with HIV or knowing someone who has died of AIDS. Fifteen percent of teachers know someone in their village who was infected and 34% knew someone who had died of AIDS. Data indicate that there were also no significant differences over the 3 waves in personal perception of risk. Teachers were asked the question: What do you think are your chances of getting HIV/AIDS? Survey data indicate that the majority (over 60%) of teachers in all the three waves responded that there was no or only a small chance that they could get AIDS.

Discussion

Training and professional development are emphasized as key to how teachers engage students in learning. This training becomes central when teachers are expected to teach new and sometimes taboo material such as sexual health and HIV/AIDS. Literature documenting HIV/AIDS school-based programmes in the sub-Saharan indicate the important need for training because, in general, teacher education programmes in Africa are said to not provide teachers with the

skills and content knowledge to teach about sexual health and HIV/AIDS¹⁶. Some literature further indicates that even when trained, teachers remain apprehensive about teaching sexual health and HIV/AIDS-based materials¹⁷.

HP4RY contributed to this identified need for teacher training through embarking on a programme of research, programme delivery and evaluation that successfully built capacity for teachers through supporting FLHE-based training. Results of the study indicate that by wave 3, teachers were confident to teach about HIV/AIDS in schools and sometimes used knowledge gained through the training in the communities in which they lived. Part of the success of this training can be accredited to the length of the training itself. That is, most program-based training usually occurs over a period of five days. HP4RY training was conducted over two weeks for classroom teachers and six days for those teachers who were school counsellors. Further, that HP4RY team of members who are experts in the areas of training (sexual health, family life, education) were involved in the training of Master Trainers positively enriched the quality of the training. This study supports the importance of using schools in teaching about HIV/AIDS; as well, it demonstrates that when adequately trained teachers are capable of working with students to gain more knowledge about the subject. It would be interesting to engage in a longer term follow-up investigation to determine whether or not the gains made in students' knowledge, attitudes and behaviours as a result of the teaching and learning of this project were sustained, or even, perhaps improved on. Certainly, some other programmes with longer term followups have demonstrated both continued and enhanced gains over time²⁸⁻²⁹. This would also address some of the suggestions by other sub-Saharan based studies about measuring the length of behavioural changes²⁰. The HP4RY programme of study supports studies that emphasize the importance of teacher knowledge and confidence in teaching about sexuality and/or HIV/AIDS¹⁸. Some of this literature suggests that even when knowledgeable, trained and with confidence, teachers still embark in 'selective teaching'¹⁹ and/or cover topics very superficially²¹. In our study, there is considerable evidence that

illustrates teachers' increased confidence to teach about HIV/AIDS. In general, teachers recognized the seriousness of HIV/AIDS and nearly all teachers believed that there should be open communication about sexual health and ways to prevent contracting HIV/AIDS. It is interesting to note however, that the messages teachers passed on to students regarding preventative methods diverged. Moreover, data indicates that there were no gains in teachers considering abstinence as the most important method of prevention. Further, while data indicate increase in talk about condoms, teachers' messages were different and sometimes conflicted the spirit of safer sex through condom use.

Another important finding concerns the availability of resources in teaching and learning. Accordingly, literature suggests that lack of teaching resources makes it difficult for teachers to implement new programs. This is true of change programmes geared towards teaching for social justice and equity, for example, and of HIV/AIDS initiatives. In HP4RY there is considerable data suggesting the availability of resources to teach about HIV/AIDS; however, availability did not translate to teacher awareness of the resources nor did it translate to value-free teacher uses where there was knowledge (as indicated by the teaching about condoms discussed above). Also, teachers differentiated between content resources and pedagogical resources. The former were easily available while pedagogical resources that would lead to student classroom participation and could lead to empowerment and behavioural transformation in this area²⁰ were scant. HP4RY findings contribute to the literature that indicates the importance of utilizing teaching methods that would lead to youth empowerment, especially girls.

As previously stated, FLHE trained teachers were predominately male, over half of them were 40 years or older and the majority were Christians. It would be of interest to examine the influence of gender identities, religious and other personal beliefs in teaching about prevention methods. In fact, in HP4RY one male teacher reflected on the challenges he faced when attempting to teach sexual health to girls. Further, given the fact that the majority of FLHE trained teachers were males,

it would be of interest to examine what this gender distribution means for the socioeconomic livelihoods of women and girls. There exists literature that informs on the encompassing uneven distribution of resources in the global south consequently marginalizing women's socioeconomic livelihood and civic participation. While acknowledging the abundance of practices that result in the feminization of poverty, studies conducted by members of the research team in the sub-Sahara also illustrate the strength and success of initiatives that empower women to fight inequities³⁰⁻³². Therefore, as we move forward acknowledging the contribution of the project towards developing more informed and HIV/AIDS competent schools, we question the degree to which our project worked towards the socioeconomic empowerment of the pillars of the Benin state, the women (teachers). Finally, our project has important implications for education in

Edo State. First, it is clear from the FLHE programme that when given the resources (knowledge, schemes of work, time), teachers can effect change in youth lives; therefore, it is recommended that the Ministry of Education develop a policy that mandates a continuous teacher development scheme that will enable more teachers to get equipped with these resources. Further, it is important that this policy include opportunities for already trained teachers to reflect on their FLHE and sexual health teaching practices as well as refresh their knowledge base and skills. Second, the data from HP4RY indicate that though willing and prepared, teachers are overwhelmed by the amount of work they already have; therefore they view some change programmes such as FLHE as additional work. It is recommended that the Ministry of Education train and hire more teachers in order to redress the enormous teacher shortage in rural Edo State schools.

Appendix A

Scale Psychometrics

Variables	Questions used to derive summative scales	Coding	Cronbach's alpha	Min-Max	Mean (sd)
Resources for teaching FLHE in the school	Teacher reference books; student reference books; and schemes of work are present in the school	Yes=1; No=0	785	0-3	0.88 (1.12)
Factual Knowledge about HIV/AIDS	Not having sex helps keep you safe from HIV/AIDS; you can get infected by sharing razor blades, knives or sharps; being faithful to one, uninfected partner helps you stay safe from HIV/AIDS; condoms help protect against HIV/AIDS; sharing blades in circumcision can spread HIV/AIDS.	Yes=1; No=0	766	0-5	3.94 (1.39)
Rejection of Transmission myths	You can get HIV/AIDS by wearing the clothes of someone who has it' you cannot get HIV/AIDS from someone you know well; you can get HIV/AIDS by sharing plates of food with infected people; mosquitoes spread HIV/AIDS; you can get HIV/AIDS by shaking hands with someone who has it.	Yes=0; No=1	789	0-5	4.03 (1.40)
Implementation of FLHE	During this school year, HIV and AIDS were addressed in: classroom displays, debates, classroom teaching, school displays, drama or music, class competitions, staff meetings	1=never; 2=once or twice; 3=3 or more times	767	8-24	13.25 (3.73)
Talk to students about abstinence	Talked to students about: how to resist sex, how to control natural urges, how to resist pressure from a girlfriend or boyfriend; how to avoid sex with older men or women.	Yes=1; No=0	744	0-4	2.08 (1.46)
Talk to students about condoms	Talked to students about how condoms protect against HIV/AIDS; about how condoms protect against pregnancy.	Yes=1; No=0	68	0-2	.92 (.86)

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