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Teacher approaches, attitudes, and challenges to sexuality education: A case study of three junior high schools in Ghana

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Abstract

While school-based sexuality education programs are established to reduce risky sexual behaviour among young people, teachers who play a central role are challenged by social factors which affect program outcomes. This study aimed to investigate the training and support offered to teachers on the delivery of sex education in three contrasting Junior High Schools in Ghana, the attitudes and approaches to the delivery of sex education, and the response of students to teacher delivery of sex education. A qualitative study design was employed with 13 in-depth interviews with head teachers, teachers, and students. Although teachers received similar training, teachers adopted different attitudes and approaches which resulted in student accounts of disinterest in sex education programs. Applying the health-promoting schools framework, the study concluded that the individual values and attitudes, as well as the type of school support, affects teacher modes of delivery and influences student interest in sex education, and should be considered in the design of in-school sex education programs. *(Afr J Reprod Health 2021; 25[4]: 153-166).*

Keywords: Health-promoting schools, Young people, Sexual health and wellbeing, teachers, sex education, Ghana

Résumé

Alors que les programmes d'éducation sexuelle en milieu scolaire sont mis en place pour réduire les comportements sexuels à risque chez les jeunes, les enseignants qui jouent un rôle central sont confrontés à des facteurs sociaux qui affectent les résultats du programme. Cette étude visait à examiner la formation et le soutien offerts aux enseignants sur la prestation de l'éducation sexuelle dans trois collèges contrastés au Ghana, les attitudes et les approches de la prestation de l'éducation sexuelle, et la réponse des élèves à la prestation de l'éducation sexuelle par les enseignants. Une conception d'étude qualitative a été utilisée avec 13 entretiens approfondis avec des chefs d'établissement, des enseignants et des étudiants. Bien que les enseignants aient reçu une formation similaire, les enseignants ont adopté des attitudes et des approches différentes qui ont abouti à des témoignages d'élèves sur le désintérêt des programmes d'éducation sexuelle. En appliquant le cadre des écoles-santé, l'étude a conclu que les valeurs et les attitudes individuelles, ainsi que le type de soutien scolaire, affectent les modes de prestation des enseignants et influencent l'intérêt des élèves pour l'éducation sexuelle, et devraient être pris en compte dans la conception de l'éducation sexuelle. programmes scolaires d'éducation sexuelle. *(Afr J Reprod Health 2021; 25[4]: 153-166).*

Mots-clés: Écoles-santé, Jeunes, sante et bien-etre sexuels, enseignants, éducation sexuelle, Ghana

Introduction

School-based sexuality education programs are well documented to reduce risky sexual behaviour in young people as they transition to adulthood[1,2]. This especially holds for comprehensive sex education (CSE) which takes into account all social determinants of health such as culture, gender and power, and poverty that interacts to result in risky sexual behaviours of young people[3,4]. A CSE curriculum adopts a human rights and gender equity-power and sexuality approach to comprehensively covering a range of topics to include but not limited to: 'sexual and reproductive anatomy and physiology; puberty and menstruation; reproduction, modern contraception, pregnancy and childbirth; and STIs, including HIV and AIDS[5], relationships, values, attitudes and skills, culture, society and human rights, human development, sexual behaviour, and sexual and reproductive health[6]. Indeed, the gamut of CSE covers 'the full range of topics that are important for all learners to know, including those that may be challenging in some social and cultural contexts'[5]. Universal Primary Education is the most prominently achieved goal[7], suggesting that a

majority of basic school children are engaged in teaching and learning activities under which sexual health and education are a focus. Young people can therefore be worked with through participatory approaches to in-school CSE to enhance positive sexual health outcomes. Further, reviews of successful CSE interventions by the United Nations Population Fund[8] and the United Nations Educational, Scientific and Cultural Organization[9] in Nigeria, Zambia, South Africa, and Egypt suggest that CSE interventions can be tailored to the sexual health needs of out-of-school children and young people who form a majority in sub-Saharan Africa (SSA)[10]. In contrast to CSE, many writers[11-14] have criticized the fear-based approaches to disease prevention employed in abstinence sex education as ineffective. With a major focus on the prevention of premarital sex, abstinence-only education lacks the ability to comprehensively address the whole range of socio-cultural and economic factors that affect young people's sexual health in different cultures and value systems. Indeed, abstinence approaches fail to deliver on the United Nations Convention on the Rights of the Child or The United Nations Human Rights Council[15] and International Conference on Population and Development[16] promises of providing individuals (including children and young people) with information with which to protect their sexual and reproductive health and wellbeing. Implementation of CSE in SSA has been on the increase since the International Conference on Population and Development1[17], yet barriers exist resulting in poor implementation in practice, and the prominence of abstinence-only education[18,19]. It may therefore be inferred that evidence of the failure of abstinence-based approaches in SSA is seen in the high unmet need for CSE health services such as contraception among young people[20], and its far-reaching consequences including the high incidence of early and unintended pregnancies[21], unsafe abortions[22], and HIV/AIDS[23].

Teachers play a central role in the delivery of sex education programs in school[24,4]. Yet they are highly challenged in their ability to deliver sex education programs, especially in developing contexts such as SSA (and by implication Ghana) where socio-cultural norms, community values, and perceptions result in societal opposition to sex education programs[25,26], and inadequate resources limit their ability to efficiently deliver CSE programs[27,28]. Keogh, Stillman, Awusabo-Asare, et al[19] in a multi-country review of CSE implementation in Ghana, Peru, Guatemala, and Kenya highlights a number of major challenges. In Ghana, they identified centralization as a barrier, resulting in a lack of coordination between the Municipal and District Education Authorities (local authorities) and central government in the development of the CSE curriculum. This undermines the quest to make CSE socio-culturally sensitive to the sexual health needs of young people in particular contexts. Further, young people reported that although there were consulted in the design of CSE curricula, the content was not reflexive of their views, potentially creating a teaching and learning environment where CSE runs parallel to the sexual health needs of young people[19]. Teachers are encouraged to adopt the CSE curriculum to teaching needs, yet they are ill-equipped and improperly oriented to deliver on the curriculum[19]. In a more recent study by the same authors[29] in Ghana, improper teacher orientation to teaching CSE reflects discomfort in teaching particular topics and the sharing of inaccurate sexual health information with young people. In addition, there is a lack of comprehensive teaching resources to aid teachers in adopting the CSE curriculum to particular contexts[19]. This is corroborated by regional-level reports by UNESCO in East and Central Africa, as well as West Africa which highlight the lack of comprehensive teacher training programs to adequately prepare teachers to deliver sex education programs[30,31]. This is highly problematic considering that personal beliefs, values, and attitudes influence teacher abilities to efficiently deliver sex education curricula[32].

The sustainability of sex education programs in Ghanaian basic schools is also threatened with a lack of consistent funding from Government sources, after non-state actors exit funding arrangements[19]. This tends to affect consistency and adequate provision of resources to enable teachers to efficiently deliver the CSE curriculum. There is also a lack of rigorous impact evaluations to create an evidence base for teachers to draw on for future programs[19]. Disagreements from entities such as parents and religious bodies with the CSE agenda stifle attempts to develop a good CSE curriculum, and results in opposition to the teaching of any comprehensive forms of sex education[19], on the basis that it promotes promiscuity[33]. The perception of promiscuity

associated with CSE played a major role in the rejection and subsequent postponement of a CSE curriculum in Ghana in 2019 after teachers had undergone training at the national level on how to deliver CSE curricula[34,35]. Teachers in Ghanaian basic schools are also identified to be selective on CSE aspects such as biology to the detriment of important topics such as contraception, gender equity, and power[29,30].

Teachers and sex education in Ghanaian junior high schools

In Ghana, teachers feature prominently in overarching sexual health policies developed by the Ministry of Education to educate young people about their health and wellbeing. A certain level of support is generally given to teachers to deliver sex education programs at the Junior High School level. The School Health Education Program (SHEP) was put in place in 1992 to address young people's health issues such as water, sanitation, and hygiene, as well as sexual and reproductive health (SRH), challenges including early sexual activity, teenage pregnancy, and early school dropouts of young women and girls, sex-based gender violence, HIV/AIDS and STIs[36]. Specifically, the policy stipulates that sex education interventions are to be aimed at the "prevention *of premarital sex*", an approach that formally limits all school-based discussions on sexuality and relationships merely to the concept of abstinence[20]. Under this policy, the role of teachers is clearly defined as facilitators of young people's sex education programs in schools through learner-centered approaches to teaching[20].

Later in 2006, the Ministry of Education, with support from the United Nations Children Fund (UNICEF), developed the HIV/AIDS programme *HIV Alert School Mode*[37] as a response to the sexual health risks identified prior to the initiation of SHEP but with a greater focus on HIV/AIDS. Subsequently, in 2010, the Enhanced School Health Education program (e-SHEP) was developed to help children in basic schools develop relevant life and value skills to avoid risky sexual behaviour and be focused on completing education[38]. Under the HIV Alert Model and e-SHEP models, one of three pillars was a teacher-led approach (the other two being community-led and child-led pillar), which sought to encourage teachers to apply participatory approaches to teaching sexuality education in schools[39]. These policies led to the production of a number of manuals such as the *Life Skills Based School Health Education*[23], *The Enhanced School Health Education Manual*[40], and the *HIV/AIDS Alert School Model (The Teacher-Led Pillar)*[21] to aid teachers in the delivery of sex education programs. Additionally, since the implementation of these policies, training has been given to teachers by the School Health Unit of the Ghana Education Service, with technical support from the Ministry of Health[41,42].

A review of policy points to the prevalence of abstinence and CSE forms of sex education in Ghanaian Junior High Schools which may present challenges to teacher delivery. The broader government position is not, however, consistent: evidence from policy statements of the Ministries of Health and Education suggests that while abstinence is the official stance of the Ministry of Education[20], nurses as part of community health services from the Ministry of Health implement more comprehensive forms of sex education such as condom use[25,26].

Considering the perception in the Ghanaian community that teaching comprehensive forms such as condom use leads to promiscuity among young people[43], a high level of skill is required of teachers to efficiently deliver on both forms of sex education programs. Moreover, a study of a CSE intervention called *The World Starts With Me* in some developing countries, including Ghana, has shown the lack of skill of some teachers who are basically unpractised to deliver sex education in Ghanaian Junior High Schools[44].

This article presents findings from interviews with a Municipal School Health Coordinator, head teachers, school-based coordinators, and students on training and support offered to teachers of sex education in three contrasting schools, the results of such training on the skills and attitudes of teachers to delivering sex education, and the response of students to the approaches of teachers. The findings and conclusions drawn from this study derive from a project aimed at assessing the level of implementation of CSE in three contrasting schools in the Central Region of Ghana, against UNESCO's International Technical Guidance on Sexuality Education[45].

The health promoting schools framework

The study was analysed by the Health Promoting Schools Framework (HPS) which forms part of the

healthy settings approach proposed under the Global School Health Initiative of the World Health Organization since the early 1980s. The healthy settings envisage a holistic approach to the promotion of health promotion through interactive social spaces such as schools[46]. Health-promoting schools as an example of a healthy setting seek "to generate awareness of the linkages between health and the environment, to improve upon the school environment given these concepts, and to facilitate the inclusion of best practices the wider community"[47]. The role of local factors within and outside the school environment in shaping in-school interventions cannot be overemphasized. To a large extent, a good relationship is required between the school, its immediate environment, and the wider community to successfully implement school-based interventions such as CSE.

From the above, the study was guided by the health-promoting schools (HPS) concept based on its six principles: "*Healthy school policies, The school's physical environment, The school's social environment, Individual health skills and action competencies, Community links, and Health services"*[48]. The HPS model helped to assess the supportive environments available to support teachers in the delivery of sex education, the challenges faced by teachers in the delivery of sex education, and the views of students on the pedagogical modes employed by teachers.

The study was guided by three research questions:

- What kind of training is offered to teachers for the delivery of sex education in the three contrasting schools?
- What are the attitudes and approaches of teachers to the facilitation of sex education in the three schools?
- How do students respond to the delivery of teacher-facilitated sex education programs?.

Methods

Study design, sample size, and setting

The study was a qualitative case study. Purposive sampling was employed to select three contrasting schools (henceforth Schools One, Two, and Three) with different backgrounds and according to criteria based on a sex education assessment tool known as the HIV Alert Tool[24]. In relation to the background of schools, School One was situated in the district capital Elmina. It consisted of a complex of Primary and Junior High sections with a School-Based Coordinator attached to each unit. School Two was the second closest to the educational administration. It consisted of a Junior High School and also had a School-Based Coordinator. School Three was the furthest from the educational administration and also consisted of a Junior High section but did not have a School-based Coordinator at the time of the conduction of this study. The School-Based Coordinator who had been transferred to another school was replaced by the school's Girls' Education Coordinator who acted until a new School-Based Coordinator was appointed.

Schools were selected using criteria based on a sex education assessment tool known as the HIV Alert Tool[24]. Lesson notes of teachers from the previous two terms provided by head teachers were analysed according to the HIV Alert Tool. The analysis focused on the ***content of sex education*** curricula recorded by teachers in the HIV Alert tool. Next, the ***level of incorporation*** of the sex education content in lesson notes was assessed to ascertain the level of activities. Finally, ***physical components such as posters and timetables*** for sex education activities were consulted to corroborate the level of sex education activities in the schools. A summary of selection criteria is given in Table 1.

Purposive sampling was further employed in the selection of three (3) School-based coordinators, six (6) students-three (3) boys and three (3) girls, three (3) head teachers, and a Municipal School Health Education Coordinator. School-Based Coordinators were selected for their dual roles as teachers and coordinators of sex education activities in the schools, while head teachers were included to corroborate perspectives of School-Based Coordinators from the angle of administration. The Municipal School Health Education Coordinator gave perspectives for the role of coordinator of health promotion programs in the Municipality. Three factors informed the choice of JHS students as participants. Firstly, reports in the district suggest a prevalence of early and unintended pregnancies among JHS females aged 12 to 15 years[49,50], suggesting the need to investigate their views on how sex education engages with their interests. In addition, student participants had been engaged in sex education training activities under e-SHEP[40,41]. Further, two students-one female and one male from each school were selected due to training they had been selected

Table 1: Contrasting sex education curricula and activities in selected schools

Selection Criteria	School One	School Two	School Three
Topics	• Abstinence • Condom use • Chastity • Assertiveness • Biology: Female and Male Reproductive system • Causes of Pregnancy and risks • Causes of HIV/AIDS, Modes of Transmission • ABC Approach	• Abstinence • Condom use • Chastity • Biology: Female and Male Reproductive system • Causes of Pregnancy and risks • Causes of HIV, Modes of Transmission • ABC Approach	• Abstinence • Chastity • Biology: Female and Male Reproductive system • Causes of Pregnancy and risks • Causes of HIV/AIDS, Modes of Transmission
Activities	• Integration of content in all subjects including Social Studies, Religious and Moral Education Science, and Mathematics • Posters rooting abstinence on campus • Talks by Nurses from the Ministry of Health • Talks by Queen mothers Association in the Municipality • *Talks during Worship • Outreach programs by students • School Health Clubs	• Integration of content in some subjects: Social Studies, Religious, and Moral Education and Science • Talks by Nurses from the Ministry • *Talks during Worship • School Health Clubs	• Integration of content in some subjects: Social Studies, Religious, and Moral Education and Science • *Talks during Worship • Talks by Nurses

* Worship is a religious assembly of staff and students before classes begin

to undergo initially and were therefore identified as peer counsellors for school health clubs. They were therefore well positioned to give student perspectives on sex education delivered by teachers in the schools.

Criteria for selection of participants were roles played in the development and coordination of training programs by headteachers and the Municipal Coordinator, and training received by student and School-Based Health Education Coordinators (who are also teachers) as participants under the e-SHEP program. The Komenda-Edina-Eguafo-Municipality was selected due to its status as one of the districts under the Government of Ghana-UNICEF sponsored e-SHEP scheme. The e-SHEP scheme as discussed earlier promotes abstinence as an approach to sex education. Mirroring the state of sex education at the national level in Ghana, NGOs and nurses from the Ministry of Health are allowed into schools in the Municipality to teach CSE forms of sex education, particularly condom education. Abstinence and CSE forms of sex education are therefore implemented concurrently in basic schools in the Municipality, thereby making it suitable for investigating teacher modes of sex education delivery in the contexts of CSE and abstinence.

Data collection procedure

In-depth interviews were conducted with the Municipal School Health Education Coordinator, head teachers, school-based coordinators, and students between the 10th and 23rd of May 2016. The interview guides were developed based on the objectives of the larger study. In the wider study, interview questions sought to generate data on the content specific to sex education in the curriculum of the three schools, the contexts within which sex education takes place, factors that were perceived to influence the success of these activities, and the suggestions for improvement. Contextualized in this study, interview questions elicited perspectives on training and support offered to teachers, attitudes and pedagogical approaches to sex education delivery, the challenges faced by teachers

in sex education delivery, and perspectives of students on teacher-facilitated sex education.

Data analysis

Interviews were recorded, transcribed verbatim, and analysed using a template format of content analysis as described by[51], which uses rows and columns to correlate qualitative data per interview questions. Thematic analysis was used to analyse transcribed data, with quotes from participants to support themes.

Results

The findings from this study represent a part of a larger data set aimed at assessing CSE implementation in the three Junior High schools in the KEEA Municipality. Findings from the larger study were grouped into three themes: purpose, content, and context of sex education; perceived strengths and areas of improvement of sex education; and suggestions for improving sex education. Results presented here are grouped into four general themes: training and support for teacher delivery of sex education; challenges faced by teachers in sex education delivery; approaches of teachers to sex education; and student responses to teacher-facilitated programs.

Training and support for teachers on sex education

In line with the overarching Enhanced School Education Program policy on the teacher-led pillar[23], responses from the Municipal School Health Coordinator and School-Based Coordinators in all three schools show a certain level of support and training from the district education level in terms of school health in general, and sex education in particular, for all basic schoolteachers in the district. Training programs and workshops were provided by UNICEF firstly to School-Based Coordinators who were themselves teachers and acted as trainers of all teachers in the schools. Following, training was provided for all teachers. Two students per class, a male and a female each were selected for initial training as peer educators, with training organized subsequently for all students according to a cluster of schools. Specialized manuals were also prepared for Peer Educators to engage with peers on sex education[40]. Teachers and students were engaged in sex education topics and activities as summarized in Table 1. The same level of training was given for all schools without any particular attention to the particular needs of individual school settings.

The following responses indicate adequate levels of training for teachers including School-Based Health Education Coordinators:

"*We have what we call enhanced SHEP (school health education program) and under this, we train all teachers in the school on ARH (adolescent reproductive health) through workshops and seminars at the district assembly and sometimes in schools, and by doing this we equip them with the knowledge and skills to impart them in the classrooms…Because we are doing integration and infusion we train all teachers to infuse sex education in the classrooms and also train School Health Education coordinators to handle clubs in the schools*" (Municipal School Health Education Coordinator).

The quotes above, given by the Municipal School Health Education Coordinator, sum up the kind of support given from the Municipal Education Office for the implementation of school health programs.

In confirmation of this, the school-based coordinators for Schools One, Two, and Three stated that:

"*UNICEF gives training to all the school community in three sessions for teachers, headteachers, and students. So, no teacher can have any excuse when asked to support the school-based coordinator for help on sex education issues such as the School Health Club"* (School-based Coordinator, School One).

"*We* (teachers) *were trained at workshops on the e-SHEP program and sex education was part of the training'* (School-based Coordinator, School Two)

"*...teachers are very supportive and make work less difficult…I think this is because all teachers, headteachers, and students partake in training activities at the district level*" (School-based Coordinator, School Three).

These views, as expressed by the program managers in the persons of the Municipal School Health Education Coordinator and School-Based Coordinators, affirm a certain level of training given to all teachers for the delivery of sex education in schools.

Table 2: Socio-Demographic Characteristics of Interview Respondents in Komenda Edina Eguafo Abrem Municipality, Ghana (N=13)

Students (N=6)		**School-Based and Municipal School Health Education Coordinators (N=7)**	
Age		**Age**	
11-14	1	25-35	3
15-19	5	35-45	1
		45-60	3
Sex		**Sex**	
Female	3	Female	4
Male	3	Male	3
Religion		**Religion**	
Christianity	6	Christian	6
Current Grade Level		**Education Level**	
JHS 1	0		5
JHS 2	4	Bachelor	2
JHS 3	2	Masters	
Living With			
Parents	5		
Relatives	1		

*JHS (Junior High School)

Limitations to teacher support in sex education

Although program managers gave evidence of training provided to teachers to facilitate the teaching of sex education, all school-based coordinators (and some students too) expressed concerns about some challenges in the form of inappropriate teaching aids and time constraints.

Lack of appropriate teaching aids

The lack of appropriate teaching aids came up as a limiting factor to the effective implementation of teaching and learning activities both within and outside the classroom. All school coordinators expressed reservations about the old nature of teaching and learning materials provided under the e-SHEP, while most students expressed the desire to see more learning aids used for sex education programs. The Coordinator of School One put it bluntly that:

"*...The old nature of teaching and learning aids and the need to introduce new ones will kindle student interest in sex education and foster effective facilitation of sex education*" (School-based Coordinator, School Two).

A female student in School One also expressed dissatisfaction with teaching materials used in sex education programs facilitated by teachers as against those led by third parties such as nurses:
"*I like it when nurses come to teach us how to use condoms because they use pictures and books to teach it better*" (Female Student, School One).

The student preference for nurse-facilitated programs (Ministry of Health) on the basis of new learning
material is indicative of the limitations posed by perceived old teaching and learning materials used by teachers.

Time constraints

Time constraints came up as a sub-theme, with head teachers of Schools One and Two expressing concern about the packed school timetable affording limited opportunities for optional facets such as sex education activities. In School One, Junior High School students in year three were the most disadvantaged due to the inability of the school community: "…*to combine sex education activities with their busy schedule in preparation for final promotional exams to the Senior High School level* (Head teacher, School One).
By extension, the Head teacher of School Two revealed that:
"*The non-flexible nature of the timetable, as well as the non-compulsory nature of sex education activities does not compel teachers to engage to the fullest extent and potential of sex-related discourse and activities"* (Head teacher, School Two).

From the statement above the Head teacher for School Two emphasized that so long as sex education remains an optional feature in the school curriculum, it will continue to be difficult for teachers to dedicate a certain level of extra time and effort in implementing sex education and its content in an already packed school timetable.

Approaches of teachers to sex education in contrasting schools

Two themes came up under teacher pedagogical approaches to teaching sex education in the three contrasting schools: participatory as against didactic/shy approaches, and level of inclusion of sex education in lesson plans.

Participatory as against didactic/shy approaches to sex education

Student and school-based coordinator responses put forward teachers' approach and temperament as preferential in School One as compared to Schools Two and Three. To illustrate, both student participants in School One showed high satisfaction with the mode of sex education by their teachers, reporting that they applied a more participatory approach to the teaching and learning of sex education. The female respondent for School One, for example, in response to the question on factors that make sex education interesting, stated that:

"*...Because the teachers have gone through the practicals they even teach it (sex education) far better than our parents*" (Student One, School One).

In School Two, however, teachers were perceived to be shy to discuss explicitly matters in relation to sex education:

"*Some of the teachers feel shy to teach about sex education and I think this is a huge challenge*" (School-based Coordinator, School Two). Per the author's culturally situated interpretation of this statement, it was being asserted that teachers avoid discussions on sexual and reproductive health when presented by students for discussions, or as part of the e-SHEP curriculum. This statement by the School-Based Coordinator for School Two highlights findings on discomfort stemming from shyness on the part of teachers in School Two to openly discuss issues related to sex, love, and relationships. Further, the author's contextual interpretation of teacher shyness or discomfort with teaching some content on sex education is that teachers' personal beliefs and values conflict with certain topics on sex, love, and relationships. The School-based Coordinator for School Two identified this issue as a very huge obstacle on the part of colleague teachers in ensuring that sex and relationships information is shared freely in an appropriate atmosphere for its intended impact.

Further, in School Three, students expressed heavy reservations about the non-friendly modes used by teachers in relation to teacher-student relationships. As a result, the participatory approach which involves students as active participants in sex education activities in School One seemed not to have been applied in School Three. By inference, the 'unfriendly' approach (as described by students) refers to a didactic, instructive approach to teaching and learning activities in contrast to more participatory modes where the students are involved actively, and teachers act as facilitators. This is evidenced by this response from a female student in School Three on what she thinks can be done to make sex education more interesting and effective: *"The teachers should be friendlier with us the students"* (Student One, School Three).

The unfriendly attitude of teachers as presented by student participants presents another barrier to the free flow of sex-related information between and teachers and students, against the context of genuine interest in sex education issues by the students. This is supported by the further finding from this study that students in School Three preferred third-party stakeholders to teachers in sex education activities in this school:

'*I prefer programs that are done by nurses who visit the school because they are much nicer to us the students and allow us to ask any question we like. Sometimes, they even allow us to talk to them separately after they have finished giving us talks*' (Student Two, School Three).

Level of inclusion of sex education in curriculum

Responses featured very strongly the level of inclusion of sex education content in the various schools as an influence on implementation. In this regard, School One which was closest to the local education authority came up as the most preferred model with sex education content predominant in most subjects as compared to levels of inclusion of sex education in the curriculum for Schools Two and Three, in order of geographical closeness to the local education authority. This is confirmed by the School-based Coordinator for School One who gave the following response to a question about the integration of sex education in teaching and learning: "*In our (teachers') individual classrooms, we all integrate sex education component of e-SHEP in the teaching aspects of all the subjects*" (School-based Coordinator, School One).

On the other hand, the School-based Coordinator for School Two gave a picture of less prominent inclusion of sex education in teaching plans: "*Though most of us do not include it* (sex education

content) *in our lesson notes, we still teach it in some subjects in the classroom"* (School-based Coordinator, School Two). Not only does this response show less involvement of sex education in teaching and learning activities, but it also introduces a different dimension to the study in that analysis cannot efficiently proceed on the level of incorporation of sex education content due to its perceived non-inclusion in lesson notes. Equally, responses from the Health Coordinator in School Three highlighted the same limitation, reporting that sex education is included only in the content of some but not all subjects as should be the case:

"*The problem we have is that most teachers do not integrate or infuse sex education into the subjects they teach…I think some of them find it difficult to do it*" (School-based Coordinator, School Three).

Student responses to teacher-facilitated sex education programs

Students highlighted two themes in the context of teacher approaches to sex education delivery: teacher approach in relation to student (dis)interest in sex education programs; and teaching aids and student (dis)interest in sex education programs.

Teacher approach and temperament versus student disinterest

This study identified the perceived poor teacher approach and temperament in relation to student-teacher relationships in general, and sex education in particular, in Schools Two and Three as a cause of student disinterest in sex education programs. All students in Schools Two and Three expressed high levels of interest in sex education activities facilitated by third parties such as health workers and retired educationists "*...as for teachers, we have been seeing them so when they talk to us, we don't take them seriously*" (Student Two, School Two).

Here again, the response given by the male student for School Three gives an idea of the preference for sex education programs facilitated by outsiders as a result of the unfriendly modes of interaction taken by teachers: *"The teachers should be friendlier with us the students"* (Student One, School Three).

Inappropriate teaching aids and student dissatisfaction with sex education

This study concluded that the perceived inappropriate pedagogical methods employed by teachers in Schools Two and Three are not the only reason that accounts for student preference for third-party stakeholder-delivered sex education programs. This conclusion is drawn on the basis that perceived teacher relationships with students in School One are quite adequate, but then students still preferred third party involvement to that of their teachers.

The perceived lack of proper teaching aids also played a role in student disinterest in teacher-facilitated school programs. A female student from School Three noted that teachers "*...should use more pictures when teaching us sex education*" (Student One, School Three). She went on to elaborate that this would help students like herself appreciate much better what is being taught. A possible reason for student complaints about inadequate teaching aids may be due to the use of old manuals and teaching and learning aids with very little or no revision to include the different varieties of approaches to the teaching of sex education in schools, an assertion reemphasized by the School-based Coordinator of the same school when asked for ways to improve sex education in the school:

"*The manuals and materials given to us during the initial training by UNICEF are what we are still using* (elaborating by showing the researcher an old manual and a leaflet on e-SHEP). *I think new ones should be brought in to enhance teaching and learning under e-SHEP*" (School-based Coordinator, School Three). This suggests that the training and teaching aids provided for teachers to deliver sex education were quite old and teachers required new ones in addition to refresher courses to efficiently teach sex education.

Discussion

This study investigated the training and support offered to teachers under a sex education program in three contrasting schools, challenges encountered, attitudes and approaches of teachers to sex education delivery, and the response of students to teacher modes of sex education delivery. In promoting sexual health through schools, teachers play a central role in ensuring that comprehensive sex education, which is basically a curriculum-based program[29], is implemented in innovative ways to ensure student interest and maximum impact[52]. However, studies have shown

that teachers are challenged by personal beliefs and values which challenge their orientations and dispositions to adequately implement comprehensive sex education programs. For example, a review of sex education policy implementation at the Senior High School level in Ghana shows that while teachers believed that young people should be taught about sexuality and contraception, they were selective in teaching only content that bordered on abstinence influenced by personal beliefs on marriage and contraception[19]. In addition to personal beliefs, teachers are challenged by non-supportive school environments such as inappropriate curricula and unfavourable timetables. For instance, a review of what has worked in terms of sexuality education in four West African countries (Benin, Côte d'Ivoire, Senegal, and Togo) shows that training, as well as support, plays a crucial role in ensuring that teachers are successfully deploying their abilities to deliver sex education[17]. In the absence of appropriate teacher orientation, teachers are unlikely to confidently deliver comprehensive sex education which adequately addresses young people's needs.

Against these discussions, the study employed two tenets of the HPS framework: *Healthy school policy* and *Individual health skills and action competencies*[53] to analyse findings on teacher delivery of sex education, and any challenges to comprehensive sex education curricula implementation, as well as student responses to sex education by teachers. Correspondingly, two themes came up for discussion: *School policy in support of teacher delivery of sex education* and *Teacher Skills and competencie*s. It was shown in subsequent discussions that these two factors influence students' interest/disinterest in sex education programs.

School policy in support of sex education delivery

According to the HPS framework, healthy school policies such as timetables and curricula help to facilitate teacher delivery of sex education[29]. In support of this assertion, teachers in all three schools gave evidence of the negative impact of old teaching and learning materials on teachers' ability to deliver sex education, which consequentially results in student disinterest in sex education programs. This is seen in the three contrasting schools, where students preferred programs led by third parties such as nurses, to those facilitated by teachers. This finding is also in line with an evaluation of HIV Education in 20 schools in the Lower Manya Krobo Municipality of Ghana[14] which showed that students have less interest in teacher-facilitated sex education programs due to the less innovative teaching methods employed.

Further, the level of sex education activities seems to have reduced with an increase in the geographical distance of the selected schools from the central educational administration. For example, while School health clubs, outreach programs by students, posters, and talks by the Queen mothers' Association were undertaken in School One, these were absent in School Three which is the furthest geographically from the local education authority. Keogh, Stillman, Awusabo-Asare, *et al*[19] argue that inconsistent funding of school-based sex education policy by the Central Government after external actors exit leads to poor implementation as seen with the varying degrees of implementation in the three schools. However, there is not enough proof from the data to suggest that that the variation in curricula implementation is a result of poor funding from the Central Government. Notwithstanding, there is glaring evidence to suggest an abject lack of resources to support teachers in implementing sex education in the three schools, and this is what has resulted in young people's disinterest in teacher-facilitated sex education.

Teacher skills and competencies

Despite evidence of the same level of training having been given to all teachers in the three contrasting schools, teachers took different approaches to sex education delivery. Firstly, in School One, teachers were perceived to adapt the participatory approaches which are recommended for sex education[17,29] in contrast to the unfriendly/didactic and shy approaches identified in Schools Two and Three respectively. Furthermore, sex education was identified as being integrated more into the curriculum in School One in comparison to Schools Two and Three. The fact that teachers who underwent the same training program responded differently to sex education delivery affirms global evidence for sexuality education in West Africa (Togo, Ivory Coast) which argues that '*teachers' attitudes and beliefs towards sexuality have an effect on delivery*'[15]. To

a large extent, this approach of exempting the individual skills and competencies of teachers during training under e-SHEP, may not have worked to the benefit of properly orienting teachers to adequately deliver sex education. This reflects a finding by Keogh, Stillman, Awusabo-Asare, et al[19] which showed that the inclusion of local evidence such as pedagogical needs to enhance impactful CSE interventions is low, thereby challenging the quest to make CSE culturally sensitive in Ghanaian basic schools. The study, therefore, reasoned in line with the tenet of the HPS framework of individual skills and competencies which argues for the importance of the individual attitudes, beliefs and values, and skills of teachers in the design and implementation of health promotion programs[54].

Here again, as discussed in the previous section, the didactic/unfriendly and shy approaches taken by teachers in Schools Two and Three resulted in student disinterest in teacher-facilitated sex education programs. Participatory approaches as employed by teachers in School One resulted in sustained student interest in sex education interventions by allowing free flow of sexual health-related information between students and teachers.

Ethical considerations

Ethical approval was obtained from the University College London Institute of Education, with additional approval from the Municipal Education Office of the KEEA Municipality for the conduct of interviews. Informed consent was obtained from interviewees before interviews were conducted and recorded. In the absence of parents, teachers were engaged to sign for students who were between the ages of 14 to 16 years and were therefore considered minors. All participants including students were properly informed of the purpose of the study, while the anonymity of their responses was assured.

Conclusion

This study examined teacher attitudes and approaches to teaching sex education, and student responses to the teacher-facilitated sex education programs. Findings suggest that students underwent training sessions in sex education through classroom-based learning, and extra-curricular activities such as school health clubs, talks by nurses, and also talks by teachers during early morning school worship. Findings also show that although teachers in all schools underwent the same level of training for sex education, they exhibited different attitudes to teaching (such as participatory, didactic, and shy approaches in Schools One, Two, and Three respectively). Again, teachers in School One were identified as incorporating sex education more in the curriculum in comparison to those in Schools Two and Three which were furthest geographically from the Municipal Education office. Teachers also faced challenges with inadequate teaching and learning materials as well as competition for space on the school timetable for sex education sessions. Further analysis using the HPS framework showed that the level of sex education implementation reduced with an increase in geographical distance of schools from the Municipal Education authority. However, there is not enough evidence to stand in agreement with local research which suggests the role of poor Government funding in sex education implementation in Ghana. This requires further research. Perceived negative attitudes of teachers in terms of didactic/unfriendly and shy approaches to teaching in Schools Two and Three, and inadequate school support (such as low levels of inclusion of sex education in the curriculum, inappropriate teaching, and learning aids and time constraints) resulted in student disinterest in teacher-facilitated sex education programs.

Equipping teachers to efficiently implement sex education programs is therefore highly important[55]. Pre-service and In-service training programs should consider the individual attitudes, beliefs, and skills of teachers in the context of adequate and supportive school environments to sustain student interest in sex education programs.

Limitations

Some limitations were identified under the study. The larger study set out to investigate moves towards CSE in a predominantly abstinence-based sex education intervention, the e-SHEP program. This limits the potential to identify comprehensive modes of sex education for evaluation. However, e-SHEP is characterized by international recommendations on CSE such as participatory approaches to sex education and assertiveness. By inference, e-SHEP may be different from the

mainstream School Health Education Program which is the main platform for implementing the Central Government's agenda of abstinence education in other parts of Ghana[19]. In addition, the structure for sex education in the Municipality allowed for condom education programs which is a CSE feature, thereby making it possible to evaluate any pedagogical approaches toward CSE in this study.

The relatively small size of the participants also presents challenges to a variety of perspectives for data collection. This limitation is lessened by the selection of participants who play strategic roles in sex education implementation in basic schools. These include student peer counsellors for sex education, school-based coordinators who are teachers as well as coordinators of sex education in basic schools, headteachers who act as administrative heads in basic schools, and Municipal School health Education Coordinators who plan and coordinate all training activities for sex education in basic schools.

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Conflicts of interest

The author declares no conflict of interest.

Contribution of authors

Author A solely contributed to the conception, write up and final editing of the manuscript.

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