

POPULATION AND HEALTH RESEARCH INSTITUTE & AFRICAN POPULATION AND HEALTH RESEARCH CENTER

**The Implementation and Effectiveness of
Sexuality Education Programs in Schools in
Kinshasa, Democratic Republic of Congo**



African Population and
Health Research Center



PHERI

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Acronyms

AU	African Union
AYSS	Adolescent and youth school-based survey
APHRC	African Population and Health Research Center
CI	Confidence interval
CSE	Comprehensive sexuality education
UNDESA	United Nations Department of Economic and Social Affairs
DRC	Democratic Republic of Congo
ECC	Ecoles Conventiennées Catholiques/Catholic-managed schools
ECI	Ecoles Conventiennées Islamiques/Muslim-managed schools
ECK	Ecoles Conventiennées Kimbanguistes/Kimbanguist-managed schools
ECP	Ecoles Conventiennées Protestantes/Protestant-managed schools
ECS	Ecoles Conventiennées Salutistes/Salvation-managed schools
ENC	Ecoles Non-Conventiennées/State owned or Government-managed schools
EP	Ecoles Privées/Private schools
FFA	Framework for Action
FGD	Focus group discussion
FGM	Female genital mutilation
FP	Family planning
ICPDAP	International Conference on Population and Development Action Plan
KIIs	Key informant interviews
HBM	Health Belief Model
M&E	Monitoring and evaluation
MAS	Ministère des Affaires Sociales
MDG	Millennium Development Goals
MEPSP	Ministère de l'Enseignement Primaire, Secondaire et Professionnel
MESU	Ministère de l'Enseignement Supérieur et Universitaire
MFPMA	Ministère de la Formation professionnelle, des métiers et de l'artisanat
MPSMRM	Ministère du Plan et Suivi de la Mise en œuvre de la Révolution de la Modernité

MSP	Ministère de la Santé Publique
NGO	Non-governmental organization
PET	Participatory educational talks
PHERI	Population and Health Research Institute
RH	Reproductive health
SCEV	Le Service Central Education à la Vie (“Catholic Program”)
SDG	Sustainable Development Goals
SEC	Sexuality education course
SRH	Sexual and reproductive health
SRHR	Sexual and reproductive health and rights
SSA	sub-Saharan Africa
STDs	Sexually transmitted diseases
STIs	Sexually transmitted infections
TEC	Technical committee
UDHR	Universal Declaration of Human Rights
UNFPA	United Nations Population Fund
UNPD	United Nations Population Division

Executive Summary

Background

The Democratic Republic of Congo's (DRC) youth (aged 10-24), consisting of 31% of the country's population, presents a powerful opportunity for accelerated economic growth and innovation. However, as in many sub-Saharan African (SSA) countries, young people in DRC generally face several sexual and reproductive health (SRH) challenges, such as high rates of early childbearing and marriage for girls, early sexual debut, lack of comprehensive contraceptive knowledge, and multiple concurrent sexual partnerships, among others.

In 2013, 17% of adolescent boys aged 15-19 years and 7% of adolescent girls aged 15-19 years had had at least two sexual partners. A 2015 study in Kinshasa also showed that 67% of young persons aged 14-19 (76% boys, 60% girls) were sexually active. About 33% of these young people reported symptoms of a sexually transmitted infection (STI) in the past year. Only 34% of sexually active adolescents (30% girls, 39% boys) reported current use of modern contraception while 50% percent of sexually active girls reported at least one pregnancy and 30% reported at least one abortion. DRC schools have been implementing stand-alone, school-based sexuality education courses to prevent pregnancy and sexually transmitted diseases (STDs) among youth and adolescents since 1970. This study aims to describe the implementation of these programs in Kinshasa. It also identifies differences in outcomes between the national sexuality education curriculum and other existing curricula.

Data and methods

This is a quasi-experimental study on a representative sample of students from secondary schools in the Kinshasa administrative province. It combines the assessment of existing interventions (sexuality education courses [SECs/CSE]) and a diagnosis study. This quasi-experimental research compares students according to the type of program taught in their schools (government or others). It employs both quantitative and qualitative methods and relies on data derived from these two methods. Analyses are based on three types of variables: independent, such as exposure to school-based SECs; dependent, including sexual and reproductive health (SRH) outcomes such as knowledge, perceptions and behavior; and intervening variables related to SEC implementation. Quantitative data includes information from 192 schools: 5,147 students, 161 principals and 176 teachers. Qualitative data includes 39 key informant interviews (KIIs) and 12 focus group discussions (FGDs): six of these with students (male and female) and six with parents (mothers and fathers). Quantitative data analysis methods encompass

chi-square and analysis of proportion, whereas qualitative data analysis consists of content and thematic analyses.

Key findings

Of the 192 schools surveyed, 94% implemented a comprehensive sexuality education course (CSE), although it was not taught systematically in all classes. Furthermore, the curriculum, as well as number of lessons per week, varied from school to school and class to class. The two main types of curricula implemented are the government program launched in 2014 and *Le Service Central Education à la Vie* (SCEV), colloquially known as the ‘Catholic program’ which was started in 1970, and has been revised several times (in 2005, 2009 and 2015). Furthermore, some schools have their own programs. The government and SCEV curriculum contents are consistent with the United Nations Population Fund (UNFPA) Framework for Action (FFA), the International Conference on Population and Development Action Plan (ICPDAP), the Universal Declaration of Human Rights (UDHR), the Millennium Development Goals (MDGs), and the Sustainable Development Goals (SDGs). More than 60% of teachers used the SCEV program manuals, regardless of the curriculum implemented in their schools. SECs/CSE are the first source of knowledge on condoms for more than half of the participants in the SCEV curriculum. However, findings also show that not being exposed to CSE during the survey is not necessarily associated with poor knowledge. Three reasons might explain these findings. First, almost all students were exposed at some time to SECs/CSE: more than 30% of students reported learning about modern contraception, condoms and traditional methods for the first time during a SEC or CSE session. Second, CSE/SECs are not a unique source of information on SRH: media and friends among other sources also provide knowledge on SRH. Finally, students may have moved from one program to another during the course of their school lives.

Principal barriers to CSE/SECs include religious beliefs, poor training of teachers, and lack of manuals and other resources (financial and logistical). Students enrolled in schools that implemented the SCEV or other CSE programs were more likely to report potential negative influences of sexuality education on religious beliefs. In other words, religious beliefs and traditions undermine sexuality education. The proportion of teachers who felt sexuality education conflicts with religious values varies from 10% among those teaching other CSE programs to more than 36% among those using the SCEV and government programs. One in four teachers (25%) using the SCEV or another CSE program thought that sexuality education violates traditions compared to 32% observed among teachers using the government curriculum.

Recommendations

The findings highlight opportunities to address CSE implementation in Kinshasa. First, there is a need for an effective monitoring and evaluation (M&E) system of the course implementation in Kinshasa. A mapping study could serve as a baseline to support the M&E system, which would ensure effectiveness of CSE implementation in all schools. Second, the government should organize a ‘Sexuality and Family Studies’ specialization at teacher-training colleges and universities because CSE courses are a stand-alone unit entitled *Education à la vie* or *Education à la vie familiale et population*. Meanwhile, government, funders and stakeholders could conduct teacher training through summer schools/short course programs of 30-45 days each year. Third, the government should develop and make available training support that includes manuals and other materials. Furthermore, the Government and SCEV should harmonize existing curricula at all levels to have a unique Family Life Course, which will see the same manuals and tools being used in all schools. Study findings also suggest the need for continuous dialogue between parents, schools and other stakeholders as religious beliefs and traditions were identified as barriers to sexuality education. The government and partners should provide financial resources to support this activity (Family Life Course/Sexuality Education module), as well as promote intervention and evaluation studies using a longitudinal framework to generate evidence and document best practices.

Chapter One: Background

1.1 Rationale

Sub-Saharan Africa's 240 million young people (15-24 years) represent both an opportunity and a barrier to accelerated economic growth and poverty reduction. Generally, young people in the region face several sexual and reproductive health (SRH) challenges: high rates of early childbearing and marriage for girls, early sexual debut, lack of comprehensive contraceptive knowledge, multiple sexual partnerships and increased risk of maternal mortality (Population Reference Bureau, 2018). In 2013, four out of every five (80%) governments in Africa viewed adolescent fertility as a major concern in their country, compared with only 40% of European governments (UNPD, 2013). The full realization of sexual and reproductive health and rights (SRHR) of people aged 10-24 can facilitate gains in their health, well-being, and educational attainment. The African Union Agenda 2063 makes several calls for investment in youth and women to realize its vision of "an Africa where development is people-driven, unleashing the potential of its youth and women" (African Union, 2017). Research shows that comprehensive school-based sexuality education offers an important tool for young people to avoid negative reproductive health outcomes, including STIs/HIV, unwanted pregnancies, and unsafe abortions (Fonner *et al.*, 2014; Nsakala *et al.*, 2014; Vivancos *et al.*, 2013; Kirby, 2011; Agha & Van Rossem, 2004).

With 20% of its population aged 15-24, the DRC is no exception to the challenges facing young people in sub-Saharan Africa (SSA). In the DRC, the proportion of adolescent girls who gave birth increased from 23.8% in 2007 to 27.2% in 2013 (MPSMRM, MSP & ICF International, 2014; Ministère du Plan et Macro International, 2008). In 2013, 17% of young men aged 15-19 and 7% of young women aged 15-19 had at least two sexual partners (MPSMRM, MSP & ICF International, 2014). A 2015 study in Kinshasa (Pathfinder International, 2016) also showed that 67% of young people aged 14-19 (76% boys; 60% girls) were sexually active. About 33% of these young people reported STI symptoms in the past year. Only 34% of sexually active adolescents (30% girls; 39% boys) reported current use of modern contraception. Half the girls who were sexually active reported at least one pregnancy, 30% of whom had an abortion.

In 1970, the DRC initiated a stand-alone, school-based sexuality education course to prevent pregnancy and STDs among youth and adolescents (Emina J. , 2014). The course, which was subsequently revised several times (2005, 2009 and 2015), promotes an integrated education — physical, spiritual and mental or intellectual — based on human dignity. In 2014, the DRC government launched

the Family Life and Population course, which includes a sexuality education module. However, there is a lack of systematically collected evidence to assess effectiveness of school-based initiatives on improved critical thinking skills, SRH knowledge, safe behavior and use of SRH services in Kinshasa. Furthermore, little is known about the proportion of schools implementing the new program. The current study aimed to fill this gap.

1.2 Study goal and objectives

The ultimate goal of this study is to reduce unintended pregnancy rates and promote general SRH among young people. In the short term, the study aims to provide evidence promoting implementation of school-based sexuality education and improve the quality of school-based comprehensive sexuality education in DRC. The study's specific objectives include:

- Documentation of school-based sexuality education programs in Kinshasa;
- Description of school-based sexuality education program implementation in Kinshasa;
- Identification of outcome differences between the national sexuality education program and other programs; and
- Identification of factors and barriers influencing the effectiveness of school-based sexuality education.

1.3 Primary and secondary education in the Democratic Republic of Congo

DRC's education system is governed by four government ministries: the Ministère de l'Enseignement Primaire, Secondaire et Professionnel/Primary, Secondary and Professional Education (MEPSP); the Ministère de la Formation professionnelle, des métiers et de l'artisanat (MFPMA)/Vocational Training, Trade and Crafts; the Ministère de l'Enseignement Supérieur et Universitaire (MESU)/Higher Education and University; and, the Ministère des Affaires Sociales (MAS)/ Ministry of Social Affairs. The education system includes primary, secondary, and higher education. Primary education lasts six years and leads to a *certificat d'études primaires*, which is necessary to proceed to the next level. Secondary education, which may be general or technical, takes between five to six years, depending on the cycle (long or short). Secondary education programs include the lower level, which is a two-year program for children aged 12-14; and the upper level, which is the third to sixth year of secondary for young people aged 14-19. Students completing six years, or the long cycle, receive a *Diplôme d'État/National Secondary school*

Diploma and are eligible for admission into higher education, including college (three to five years) and university (five to seven years), depending on the course they are studying. This study only covered young people aged 15-19, attending the middle and upper levels of secondary school.

DRC's national education system consists of two categories of schools: public and private. 'Public' includes schools managed directly by the state (state-owned or government schools) and those managed by faith-based organizations or subsidized schools called *écoles conventionnées*. This category includes Catholic, Protestant, Kimbanguist, Islamic, Salvation Army schools, among others. At the national, provincial and local levels, each of these religious organizations has school management services called 'coordination'. All public schools are financially supported by the state, especially with regard to teachers' salaries. In this study, school ownership or management comprises five categories: state-owned/government schools; Catholic; Protestant; private and others (unclassified).

Table 1 presents the distribution of secondary schools in Kinshasa. These details informed the sampling process.

Table 1: Distribution of secondary schools by municipality and school management/ownership in Kinshasa

CLUSTER/ District	Commune	STRATA: TYPE OF SCHOOL MANAGEMENT										Total	
		PUBLIC SECTOR						Total	Private	Total	Private		
		Govt.*	Catholic	Pro- test.**	Kimb.***	Islamic	Salva- tion						Brother- hood
Funa	Bandalungwa	6	3	2	1	0	0	0	0	1	13	26	39
	Bumbu	7	2	4	1	0	0	0	0	1	15	43	58
	Kalamu	7	9	4	2	0	2	0	0	3	27	64	91
	Kasa-Vubu	6	5	4	3	0	0	0	0	0	18	19	37
	Makala	0	1	8	1	0	1	0	0	1	12	26	38
	Ngiri-Ngiri	3	2	0	2	1	0	0	0	0	8	14	22
	Selembao	4	3	11	2	1	2	0	0	1	24	101	125
Total	33	25	33	12	2	5	0	7	117	293	410		
Lukunga	Barumbu	1	5	2	0	0	3	0	0	0	11	10	21
	Gombe	9	12	3	1	0	1	0	0	26	22	48	
	Kinshasa	1	2	7	0	0	1	1	0	12	22	34	
	Kintambo	2	3	4	0	0	0	0	0	9	7	16	
	Lingwala	1	1	2	1	0	0	0	0	5	13	18	
	Mont-Nga-fula	1	21	18	4	1	3	2	3	53	95	148	
	Ngaliema	11	21	45	6	0	4	4	8	99	167	266	
Total	26	65	81	12	1	12	7	11	215	336	551		

CLUSTER/ District	Commune	STRATA: TYPE OF SCHOOL MANAGEMENT										Total		
		PUBLIC SECTOR												
		Govt.*	Catholic	Pro- test.**	Kimb.***	Islamic	Salva- tion	Brother- hood	Others	Total	Private			
Mont-Amba	Kisenso	3	4	14	3	0	3	0	0	0	0	27	40	67
	Lemba	12	11	16	1	0	0	0	0	1	1	41	67	108
	Limete	7	8	10	2	1	0	0	1	1	1	30	92	122
	Matete	4	6	5	1	2	1	1	2	3	3	24	59	83
	Ngaba	0	0	4	0	0	0	0	0	0	0	4	31	35
	Total	26	29	49	7	3	4	3	3	5	126	289	415	
Tshangu	Kimbanseke	14	14	55	8	7	3	2	2	6	109	131	240	
	Maluku	13	9	17	2	0	3	0	0	1	45	13	58	
	Masina	10	9	23	1	0	2	0	0	5	50	115	165	
	Ndjiji	10	8	16	1	3	3	0	0	2	43	57	100	
	Nsele	17	21	28	4	1	2	1	2	2	76	116	192	
	Total	64	61	139	16	11	13	3	16	323	432	755		
Total		149	180	302	47	17	34	13	39	781	1350	2131		

Source: [Direction de la stratégie des statistiques et de la planification](#)

* Government; ** Protestant; *** Kimbanguist

1.4 Scope of the report

This report provides a snapshot on the implementation of the sexuality education modules in Kinshasa's secondary schools as well as students', teachers' and principals' perceptions of the courses. Data from official documents, KIIs and school-based surveys are used to examine implementation of sexuality education programs. This report summarizes key findings, including the course content; how the sexuality education course is taught and challenges faced. The information presented provides DRC policy-makers and other stakeholders with a better understanding of sexuality education and will ultimately help improve the quality and effectiveness of such education.

The first section of this report covers the design and methodology adopted for this study, which relies on quantitative and qualitative data. Quantitative data includes information from 192 schools: 5,147 students, 161 principals, and 176 teachers. Qualitative data involves 39 KIIs and 12 FGDs, six with students (male and female) and six with parents (fathers and mothers). Quantitative data analysis methods encompass chi-square and analysis of proportion, whereas qualitative data analysis consists of content and thematic analyses.

The second section describes CSE implementation in Kinshasa. KIIs and content analysis of schools revealed the co-existence of several curricula on the ground. Although compulsory, the CSE courses are not systematically taught in all schools and/or classes. Furthermore, the number of lessons per week vary from school to school and class to class. Although most schools are reportedly implementing other programs or the government program, 62% of teachers used the SCEV manuals. The third section focuses on perceived benefits and risk of implementing CSE. The analyses use the school-based questionnaires for teachers and students. The main potential benefits of CSE reported are prevention of unwanted pregnancies and STIs such as HIV/AIDS. Sections five and six analyze students' SRH knowledge and behavior by type of CSE program. The majority of students know that HIV is transmitted through unprotected sexual intercourse and shared use of infected needles. However, less than 1% know the four main ways of HIV transmission: mother-to-child transmission, blood transfusion, sexual intercourse, and infected needles.

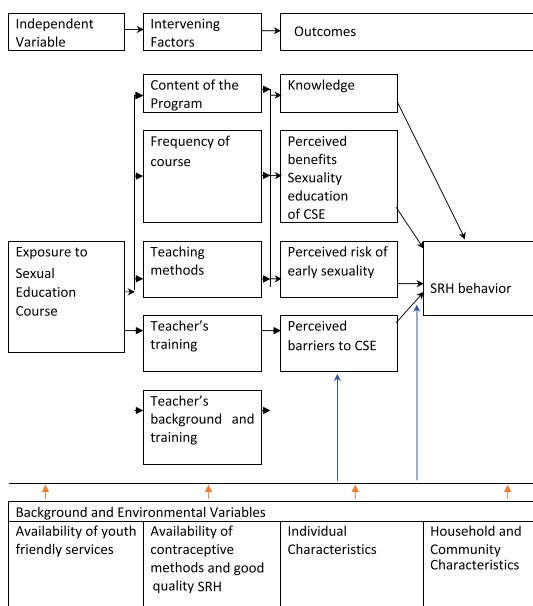
Chapter Two: Study Design And Methodology

2.1 Study design

This is a quasi-experimental study on a representative sample of students from secondary schools in the Kinshasa educational province. It combines the assessment of the existing CSE program and diagnostic study. This quasi-experimental research aims to compare students according to the type of SEC/ CSE in their schools (government or other), and employs both quantitative and qualitative methods. Quantitative data includes primary data (structured interviews with students, teachers and principals in 192 surveyed schools), whereas qualitative data contained primary information from FGDs and KIIs, with key stakeholders such as officials from the ministries of Education and Health working on sexuality education and adolescents' SRH; United Nations Population Fund (UNFPA), WHO, UNICEF, UNESCO, Médecins du Monde, Save the Children, Congolese Association of Parents, and others.

Figure 1 summarizes the study's conceptual framework, adapted from the Health Belief Model (HBM) that originated in the 1950s (Strecher et al., 1997; Champion & Skinner, 2008; Hall, 2012) and the risk behavior model developed by Jessor (1991), which is used in understanding and predicting health behavior.

Figure 1: Study conceptual framework



The conceptual framework encompasses four components: independent variables, intervening variables, background and environmental variables, and the outcome variables.

This study assumes that the effectiveness of the sexuality education course depends on the intervening factors, including its comprehensiveness, teaching methods, course frequency and the teacher's qualifications as well as compliance to national policy. In addition, adolescents' socioeconomic background and social environment might moderate the influences of sexuality education on their knowledge, attitudes, perception and/or sexual behavior. It is worth mentioning that the quality of teaching varies by school location (residential neighborhood, intermediate urbanized or informal settlements), as well as by school affiliation (state-owned, church-owned or private).

Independent variables

School-based sexuality education programs are the independent variable. This is a categorical variable, with four groups: "no sexuality education course", "the SCEV program (Catholic)", "the government program" and "other non-specified program".

Intervening variables

Intervening variables follow the independent variable but precede the dependent variable in a causal sequence. In this case, they include teacher' training, teaching materials used, and topics taught.

Outcome variables

This study used several indicators from the following four SRH components: knowledge (HIV transmission and its prevention, and contraception); perceived benefits of sexuality education; perceived barriers to sexuality education; and sexual behavior.

SRH

One of the objectives of CSE is to provide young people aged 15-24 with accurate knowledge of SRH topics for informed decision-making, even though they might not act on that knowledge. Accurate knowledge of the following topics allows measurement of adolescent and youth SRH: transmission and prevention of HIV/STIs; and pregnancy prevention methods.

Perceived benefits of sexuality education

Perceived benefits cover youths' perceptions of the effectiveness, feasibility and other advantages of sexuality education. This concept includes improving knowledge on how to prevent HIV transmission and unwanted pregnancies, knowledge of the body, and how to resist sexual pressures.

Perceived threats/risks and barriers

This concept covers potential barriers to sexuality education, including religious beliefs and traditions which associate the sexuality education course with promotion of prostitution and the risk of early sexual intercourse.

Sexual behavior

Measures include: sexual intercourse experience, systematic use of condoms, pregnancies, abortions, STIs, HIV-testing, knowledge of personal and partner's HIV status. Data collection tools capture information on pregnancy (experience), abortion, STIs and HIV testing.

Table 2: Indicators of outcome variables

Outcome	Indicators	Questionnaire target
Knowledge	<p><i>Means to contract HIV</i></p> <ul style="list-style-type: none"> • Unprotected sex with someone who has HIV • Injecting using an infected needle • From mosquito bites • Transmission from mother to child • Shaking hands with an infected person • Blood transfusion from an infected person • Bad omen/curse/witchcraft <p><i>Means to avoid HIV</i></p> <ul style="list-style-type: none"> • Abstinence • Systematic condom use • Having only one sexual partner <p><i>Means to avoid pregnancy</i></p> <ul style="list-style-type: none"> • Oral contraceptive pill • Condoms • Injectables (Depo-Provera) • Intra-uterine devices (IUDs, coils) • Implants (Jadelle, Implanon) • Emergency contraceptives • Female sterilization • Male sterilization (vasectomy) • Withdrawal • Rhythm (having sex only on 'safe' days) 	Students
Perceived benefits of sexuality education	<p>Prevent unwanted pregnancy</p> <p>Prevent HIV/AIDS</p> <p>Resist pressure</p> <p>Body knowledge</p>	Students and teachers
Perceived	<p>Religious beliefs</p> <p>Traditions</p>	

Outcome	Indicators	Questionnaire target
barriers to sexual education	Not appropriate for youth/adolescents Encourage premarital sexuality	Students
Behavior	Ever had sex Ever suffered from STIs Pregnancy experience Experienced abortion Ever performed HIV test Know HIV status	Students
	Know HIV status of partner Systematic use of condom Ever forced/been forced Convinced to have sex Consensual sex Planned sexual intercourse Unplanned sexual intercourse	

Background and environmental factors

Previous studies revealed that background variables such as gender, age, living arrangements, and religion indirectly or directly influence adolescent and youth SRH outcomes (Emina, 2005; Calvès, 1996; Jessor, 1991). In this study, background factors include individual's socioeconomic characteristics (*e.g.* age, sex, marital status, religion) and youth club membership.

2.2 Data sources

This study used secondary and primary data sources: quantitative and qualitative data. Secondary data includes the life course teaching manuals, program reports, and literature. Information from these sources supports description of school-based sexuality education contents by type of program (government or SCEV/Catholic-based) and the frequency of course per week.

Primary data encompasses quantitative data from the school-based survey (of principals, teachers, and students) as well as qualitative data from KIIs and FGDs with students and their parents.

2.2.1 Family life course documents

Documents analyzed included the 12 manuals of the Family Life Course program developed by SCEV in 2015 and two documents listing themes for the Family Life and Population course launched by the government in 2014. The SCEV manuals describe the contents of Life Course Education from the first year of primary school to the last year of secondary school.

2.2.2 School-based quantitative survey

The school-based survey is the main primary data source. This survey has three components:

- Principals or designated delegate (director of studies);
- Teachers of the Family Life Education course component; and
- Students.

Data collection relied on self-administered questionnaires supervised by trained fieldworkers. This approach has lower response bias and refusal because it ensures privacy in comparison to face-to-face interviews. Furthermore, this strategy minimizes the number of data collectors and simultaneously covers large numbers of schools and students. Participants were able to complete the anonymous questionnaires within one to two hours.

The questionnaires were adapted from the Kenya study (Sidze, et al., 2017) and were designed to capture all information included in the conceptual framework. Appendices A1-A3 present the students', teachers', and principals' questionnaires. The student questionnaire contained nine sections: education details, background information (age, sex, living arrangements, parents' survival, class, participation in associations and other youth collective activities), exposure to Family Life Course, course curriculum, teaching methods, out-of-school activities, opinions, SRH knowledge, attitudes toward SRH, and SRH behavior. The teacher's questionnaire had seven sections: background, sexuality education program, curriculum, opinions, teaching methods, teacher training, and attitudes. The principal's questionnaire had five sections: background, sexuality education programs, curriculum, teacher training, and attitudes.

The school-based survey used a two-stage cluster sample, which is probably the most commonly used sample design in educational research (Ross, 2005). The two-stage cluster design allows analyses to be conducted at more than one level of data aggregation: (a) between-students level; (b) between-school level; or (c) both levels simultaneously using 'multilevel analysis' methods. Estimation

of the sample size relies on the sample design table for two-stage cluster samples to obtain 95 percent confidence limits of $p \pm 5\%$ (Ross, 2005). Using an estimated intra-class correlation of 0.20, the sample size was estimated at 200 schools (40 schools per stratum). Indeed, the DRC's schools belong to five strata (owners): Catholic-managed schools (ECC), Protestant-managed schools (ECP), government-managed (ENC), private schools (EP), and other schools (e.g. Kimbanguist, Salvation, Islamic, Methodists). Considering the number of schools per district from the Ministry of Education database, we used a proportional approach to consider the socioeconomic and geographical variability of Kinshasa, which has four districts: Funa, Lukunga, Mont Amba and Tshangu. Table 3 displays distribution of the sample per school ownership and district.

Table 3: *Distribution of the estimated sample by school ownership/management and district*

District	School management					Total	
	Government	Catholic	Protestant	Private	Other	Schools	Students
Funa	9	6	4	9	7	35	1,750
Lukunga	7	14	11	10	11	53	2,650
Mont Amba	7	6	7	8	6	34	1,700
Tshangu	17	14	18	13	16	78	3,900
TOTAL	40	40	40	40	40	200	10,000

In total, the study targeted 200 schools, teachers and principals (10,000 students, 50 students per school). We selected schools at the first stage of sampling and followed student selection within schools at the second stage. The 200 schools representing government (state-owned), church-managed or private, and located in different socioeconomic neighborhoods (residential, intermediate urbanized or informal settlements), were selected randomly. In each selected school, we randomly selected 50 students aged 15-19 who were at least in the third class of secondary school. All principals and teachers of the Family Life (sexuality education) course were eligible.

Figure 2a shows the coverage rates for the quantitative survey. Of the 200 schools targeted, the survey covered 194 schools, yielding a coverage rate of 97%. This coverage ranges from 80% for schools managed by non-governmental institutions to more than 100% for government and Catholic-managed schools. The completion is above 100% (government and Catholic schools) for the government and Catholic schools due to database misclassification. Some schools selected from the list were actually managed by the Catholic Church or by the government. Consequently, the coverage rate in the category ‘Other’ is low.

Figure 2a: Survey completion rates

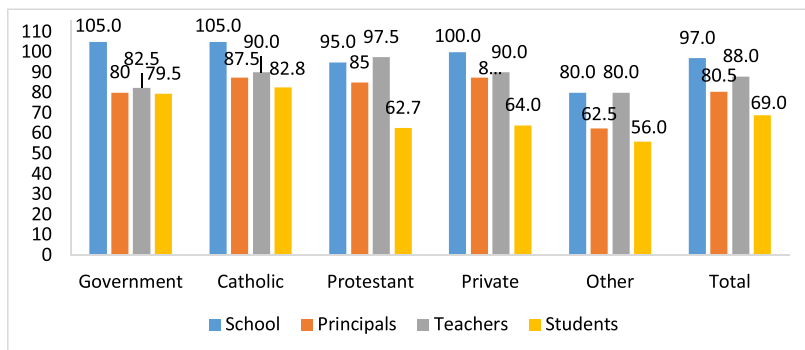
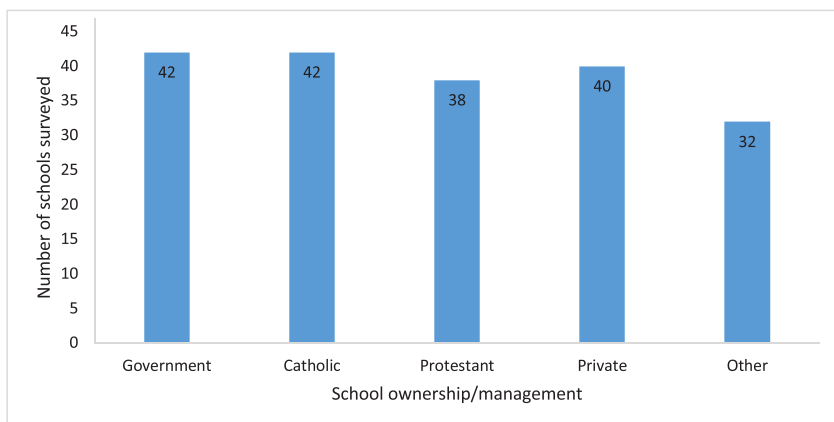


Figure 2b presents the actual number of schools surveyed. However, of the 194 schools surveyed, the students’ sample did not cover two schools which had only the first two classes of secondary school. As students under the age of 15 and/or attending classes below the third class of secondary school were not eligible for the study, our analyses was based on 192 schools.

Figure 2b: Number of schools surveyed



The lowest coverage rates observed among students range from 56% (other schools) to 83% (Catholic schools). Some schools did not organize the third to sixth classes of secondary school.

Of 200 principals targeted, 161 principals or their representatives responded to the questionnaires, yielding a response rate of 80%. Table 4 reports socioeconomic characteristics of surveyed principals or their representatives.

The majority of principals (91%) were male, aged 40-59 (64%), and had completed college or university studies. The profile of principals or their representatives are similar regardless of school ownership. However, the proportion of female principals is higher (14%) in private schools compared with others (less than 10%). The percentage of principals younger than 40 is low in schools financed by the government, including government-managed schools, Catholic and protestant-managed schools (less than 10%) when compared with private (36%) and other schools (17%).

Table 4: Description of principals/delegates surveyed

Background	School ownership/management					Total	Chi-square	P-value
Characteristics	Government	Catholic	Protestant	Private	Other			
Gender								
Male	93.8	91.4	91.2	85.7	92.0	90.7	1.463	0.833
Female	6.3	8.6	8.8	14.3	8.0	9.3		
Age								
<40	6.9	9.4	9.7	36.4	16.7	16.1		
40-49	17.2	28.1	32.3	18.2	25.0	24.2	22.237	0.035
50-59	51.7	40.6	29.0	42.4	37.5	40.3		
60+	24.1	21.9	29.0	3.0	20.8	19.5		
Education								
Secondary	9.4	8.6	8.8	5.7	4.0	7.5	0.913	0.923
College/University	90.6	91.4	91.2	94.3	96.0	92.6		
Training-Subject								
Sciences	30.0	18.8	22.6	28.6	32.0	26.1		
Literature & Human sciences	33.3	43.8	32.3	37.1	40.0	37.3	17.290	0.367
Psychology & Education	6.7	15.6	9.7	11.4	8.0	10.5		
Economy & social sciences	6.7	18.8	22.6	17.1	20.0	17.0		
Other	23.3	3.1	12.9	5.7	0.0	9.2		
District								
Funa	28.1	8.6	5.9	14.3	8.0	13.0		
Lukungu	9.4	31.4	35.3	34.3	40.0	29.8	15.415	0.22
Mont Amba	21.9	17.1	14.7	11.4	16.0	16.2		
Tshangu	40.6	42.9	44.1	40.0	36.0	41.0		
Total (%)	19.9	21.7	21.1	21.7	15.5	100		
N	32	35	34	35	25	161		

The proportion of women teaching sexuality education is high in Catholic schools (29%) and Protestant schools (33%) compared with government-managed (18%),

private (12%) or other-owned (6%) schools. It is also noteworthy that most of the Catholic teachers are 40 years or older (about 80%). All CSE course teachers are Christians.

Table 5: Description of teachers surveyed

Background	School ownership/management					Total	Chi-square	P-value
	Government	Catholic	Protestant	Private	Other			
Gender								
Male	81.8	71.4	66.7	87.9	93.6	79.8	10.414	0.034
Female	18.2	28.6	33.3	12.1	6.5	20.2		
Age								
20-29	9.1	8.8	8.1	18.2	28.6	13.9	19.859	0.227
30-34	36.4	8.8	35.1	27.3	28.6	27.3		
40-49	21.2	41.2	21.6	18.2	21.4	24.9		
50-59	21.2	23.5	21.6	24.2	14.3	21.2		
60+	12.1	17.7	13.5	12.1	7.1	12.7		
Religion								
Catholic	40.6	44.1	59.5	36.1	28.1	42.1	27.919	0.006
Protestant	15.6	29.4	29.7	22.2	43.8	28.1		
Other Christians	43.8	26.5	10.8	33.3	28.1	28.1		
No Christian	0.0	0.0	0.0	8.3	0.0	1.8		
Education								
Secondary	12.1	25.0	12.8	19.4	18.8	17.6	4.598	0.800
College/university	81.8	63.9	71.8	69.4	71.9	71.6		
ND	6.1	11.1	15.4	11.1	9.4	10.8		
District								
Funa	28.1	8.6	5.9	14.3	8.0	13.0	15.415	0.220
Lukungu	9.4	31.4	35.3	34.3	40.0	29.8		
Mont Amba	21.9	17.1	14.7	11.4	16.0	16.v2		
Tshangu	40.6	42.9	44.1	40.0	36.0	41.0		
Total (%)	18.8	20.5	22.2	20.5	18.2	100		
N	33	36	39	36	32	176		

Out of 6,896 students surveyed, analyses were based on 5,147 students aged 15-19 and attending the third to sixth class of secondary school. Table 6 reports the distribution of students by socioeconomic characteristics and school ownership. Although the profiles of principals and CSE/SEC teachers did not differ by school ownership, Table 5 shows significant socioeconomic differences between students by school ownership.

Most students surveyed were female (56%) compared with male (44%). Changing gender ratios at primary and secondary schools, especially in urban settings, as well as girls' availability to participate in the study, might explain these figures. In 2013, the net secondary school attendance in Kinshasa was estimated at 67% for girls and 64% for boys (MSP et ICF International, 2014). This gender difference is small in government-managed schools (51% versus 49%). Regardless of the school ownership or management, most students were 16-18 years old (66%). Less than 10% of surveyed students were 19 years, particularly in Catholic-managed schools, where only 4% were aged 19. The majority of participants were attending the fourth or the fifth class of secondary school. Enrolled participants attending the third class represented 25%, whereas those attending the last class of secondary school (sixth) was estimated at 9%.

Table 6: Characteristics of students surveyed

	School ownership/management					Total	Chi-square	P-value
	Government	Catholic	Protestant	Private	Other			
Gender								
Male	48.7	44.7	41.6	43.7	40.8	44.4	15.532	0.004
Female	51.3	55.3	58.4	56.3	59.2	55.6		
Age								
15	21.8	29.7	26.0	25.9	26.0	26.0		
16	26.1	28.9	27.4	26.3	27.2	27.3		
17	26.9	25.5	23.9	22.2	22.4	24.5	65.008	0.000
18	16.2	11.4	14.2	16.2	15.1	14.4		
19	9.0	4.5	8.5	9.4	9.4	7.8		
Living arrangement								
Biparental	57.0	62.0	57.9	55.8	58.3	58.5		
One parent	21.3	19.1	18.8	20.2	16.6	19.5	32.087	0.001

Other relative	18.4	16.3	20.0	21.0	23.8	19.3		
Others	3.2	2.7	3.3	3.0	1.3	2.8		
Class attend- ed								
3	16.0	18.0	31.1	29.3	35.2	24.7		
4	34.7	46.1	25.7	25.9	36.6	34.2	293.595	0.000
5	35.0	33.4	35.3	32.0	21.7	32.4		
6	14.3	2.4	8.0	12.8	6.4	8.7		
District								
Funa	29.5	15.8	12.6	25.4	10.1	19.5		
Lukungu	17.0	27.3	37.8	24.9	40.6	28.1	303.576	0.000
Mont Amba	16.7	23.0	18.1	13.4	20.0	18.4		
Tshangu	36.8	33.9	31.6	36.3	29.3	34.0		
Total	1,177	1,391	996	979	604	5,147		
%	22.9	27.0	19.4	19.0	11.7	100		

2.2.3 Qualitative surveys

Qualitative data includes 12 FGDs with students and their parents (three with male students, three with female students, three with mothers and three with fathers); and 39 KIIs with six religious leaders, five teachers of sexuality education, seven principals, seven representatives of school owners, the government sexuality education program director, the SCEV program director, and 12 partner institutions working on sexuality education, including youth associations, United Nations agencies, and other local institutions. FGDs and KIIs provided an opportunity to gauge stakeholder opinions about the usefulness of CSE and challenges stakeholders faced in effective implementation. Appendices A4-A9 show the topics covered during the KIIs and FGDs. Discussion points included: content and importance of sexuality education; the best way to implement the course; potential barriers and strategies to address them; how to narrow the gap between knowledge and sexual behavior; and the relationship between schools, parents and religion to improve adolescents' SRH. Among the 39 KII participants, six were women, three hold medical degrees, and three were specialists in social sciences.

2.3 Data analysis methods

The study relied on a methodology that assessed the association between exposure to school-based SECs and adolescents' sexual and RH-specific outcomes.

2.3.1 Data analysis techniques

Quantitative data analysis included chi-square test using Stata15 (StataCorp, 2015). The chi-square test assesses the relationship between two nominal (categorical) variables. The frequency of the dependent variable is compared with different values of the independent variable. All statistical analyses are interpreted at 95% confidence interval (CI) or p-value <0.05.

The qualitative component of the study used thematic analysis to examine program content, FGDs, and KIIs, including inductive and deductive coding techniques. Data reduction consisted of coding the most central themes, followed by a systematic analysis of related themes using coding matrices to identify relationships. To reduce threats to validity, data analysis strategies encompassed a triangulation approach consisting of a comparison of findings from different data sources (qualitative and quantitative) to evaluate the extent to which evidence converges. This strategy allows for identifying consistencies and/or inconsistencies within the underlying theoretical models and evidence from literature.

2.3.2 Data analysis strategies

Data analysis rests on three strategies: bivariate analysis of the association between the independent variable and each selected intervening variable; bivariate analysis of the relationships between the independent variable and each selected outcome variables; and triangulation, which explores the plausibility hypothesis. We assumed that differences in students' SRH outcomes could be explained by information from qualitative surveys and teachers' surveys.

2.4 Ethical considerations

The ethical considerations of this study had five steps. First, the technical committee, including stakeholders (scientists, academics and professional) working on adolescents' SRH and/or education in the DRC, approved the protocol on May 4, 2017. Second, the National Ethical Committee at the Protestant University of Kinshasa's medical school approved the protocol and data collection

tools on May 9, 2017 (Ref: CEUPC 0039). Third, the central Ministry of Primary, Secondary and Professional Education; and the Provincial (Kinshasa) Ministry of Education and Gender provided administrative authorization prior to field activities. Fourth, the team received authorizations from those responsible for education in each district and the school ownership coordination (government, Catholic, Protestant, private, others). Last, in each selected school, the principal authorized the study in collaboration with the parents' committee.

In addition to these processes, prior to data collection, we requested informed verbal consent from all respondents. Potential participants had the full right to participate or decline without losing any benefits or rights. Individuals choosing to participate were free to withdraw from the study at any point and not answer questions if they felt uncomfortable. Individual privacy was strictly maintained during data collection. Research assistants and data collectors were properly trained to respect participants' privacy and the right to immediately end the study if privacy was violated. Confidentiality was maintained at each step of data collection and data analysis. There were no identifiers to link data with individuals. All surveys were secured with access given to the research team only.

2.5. Study limitations

This study faces three major limitations. First, it only targets in-school adolescents. Although school-based programs can be cost-effective, a large number of adolescents miss out on this opportunity as they have dropped out. Further, the quantitative surveys relied on self-reporting, which creates the potential for social desirability and recall bias. Additionally, findings from this study could not establish causality between sexuality education programs and SRH knowledge, attitudes and behavior among adolescents. Indeed, we cannot measure the net effect due to several confounding factors, such as family and social environment, peer influence, and schooling process dynamics. Some students who reported not participating in CSE/SEC might have attended a course in the past. Students also might have moved from one program to another during their school lives.

Box 1: Summary

This section covers the data and methods used in this study, which relies on quantitative and qualitative data. Analyses are based on three types of variables: (1) independent variables: exposure to school-based SECs; (2) dependent variables: SRH outcomes (knowledge, perception and behavior); and (3) intervening variables related to the implementation of SECs. Quantitative data includes information from 192 schools: 5,147 students, 161 principals and 176 teachers. Qualitative data involved 39 KIIs and 12 FGDs, six with students (three males and three female) and six with parents (fathers and mothers). Quantitative data analysis methods encompass chi-square and proportion analyses, whereas qualitative data analysis consisted of content and thematic analyses.

Chapter Three: Sexuality Education In Kinshasa

The right to comprehensive and non-discriminatory sexuality education is based on the Convention on the Rights of the Child, the action plan of the International Conference on Population and Development, the International Covenant on Civil and Political Rights and the Convention on the Elimination of All Forms of Discrimination against Women (United Nations, 1994; Temin & Levine, 2009).

In DRC, a sexuality education module is part of the Family Life course, developed in 1970 by Catholic schools to promote integrated education — physical, spiritual and mental/intellectual — based on human dignity. In 1989, the Ministry of Primary and Secondary Education created the National Commission for Education and Family Life course to develop the curriculum, produce manuals and materials, and train teachers nationwide. In 2014, the government launched a program developed in collaboration with SCEV and other stakeholders with support from UNESCO, UNICEF and UNFPA. The program advocates interactive methods and consideration of adolescents' specific needs, which promotes a gendered approach as a teaching method. In turn, SCEV launched a new program in 2015. This section summarizes the content of the two programs (2014 government program and 2015 SCEV program) by class at secondary level. It also assesses the compliance to the national guidelines of the implementation using the school-based survey conducted in May 2017.

3.1 Content of sexuality education

The two programs include topics covering several fields such as morality, ethics, environment, biology, hygiene, human rights, aesthetics, integrity, psychology, sociology, sexuality and religion. They aim to equip adolescents and young people with the following:

- Self-identification in relation to the environment and others;
- Acceptability and tolerance;
- Improve knowledge and understanding as well as avoid misinformation;
- Clarify and strengthen positive values and attitudes;
- Enhance skills to make informed decisions and act upon them;
- Improve perceptions about peer groups and social norms;
- Increase communication with parents or other trusted adults;
- Explain and clarify feelings, values and attitudes;
- Promote and sustain risk-reducing behavior;
- Self-protection and protection of others against diseases, STDs, HIV/AIDS and sexual violence;

- Time management skills;
- Sensitivity to the beautiful in nature and art;
- Enjoyment of rights and fulfilment of their duties;
- Ability to critique the different messages from the media;
- Protection of life;
- Maintenance of harmonious relations with family and community members;
- Willingness to assume and live their sexuality responsibly; and
- Promote respect for gender in all situations and circumstances in life.

The programs advocate interactive methods and consideration of adolescents' specific needs which considers the gender approach as a teaching method (Nsakala et al., 2014). Box 2 summarizes themes discussed in class (EPSP, 2013; SCEV, 2014).

Box 2: Education and family life course themes in DRC

• Family and school	• Relationship with others	• Communication	• Media and self-image
• Fight against stigma and discrimination	• Being a boy or a girl	• Violence against children	• Gender and Sexuality
• Childhood diseases	• My specificities	• Child labor	• Love and sexuality
• STI/HIV/AIDS	• My image	• Anatomy and physiology of genital organs	• Sexuality and media
• Fight against sexual abuse	• Sex and gender	• Personality	• Long-term engagement
• Time and goods management	• Hosting arrangements and principles	• Tolerance	• Reproduction
• Environment	• My Body	• Social construction of gender	• Family planning
• Rights and duties	• My identity	• Love and friendship	• Gender issues in legal texts
• Child and the media	• Puberty and adolescence	• Abuse and exploitation of minors	• Gender and media
• Living beings	• Human sexuality	• Cohabitation	• HIV and gender

Source: SCEV (2014); EPSP (2013)

Table 7 depicts the course content and values students are expected to acquire in the 2015 SCEV and the 2014 government programs. The two programs implemented in the DRC are comprehensive, including major SRH issues such as homosexuality, family planning, STD/HIV/AIDS, risky behavior, unintended pregnancy and abortion, gender issues, and human rights. They not only promote tolerance and explain aspects of human sexuality, freedom and responsibilities in life choices, they also combat discrimination, stigmatization and sexual violence. The design considered student age. The DRC CSE/SEC programs (government and SCEV) are suitable for children and adolescents and are based on developing cognitive, emotional and behavioral capacities typical for the age or age group.

Table 7: SCEV and government life education content

Grade / Age	SCEV program	Government Program
I (12-13)	<ul style="list-style-type: none"> • Introduction to life skills education: definitions, importance of life, history of the course • Love, friendship and relationship between boys and girls: definitions, characteristics and types • Factors of youth development • Human sexuality: definitions, difference between sexuality and genitalia, human genitalia versus animal genitalia, youth attitudes to sexual solicitations, social role of human and social role of women • Coquetry • Knowing how to live • Male and female image • Anatomy and physiology of male and female genital organs • Dialogue and communication in Family • STI/HIV: classification, HIV/AIDS phases, prevention means 	<ul style="list-style-type: none"> • Puberty and body changes: Gender and sex (menstruation, human sexuality) • Friendship management to avoid early sex and risk behavior • Management of media information on sexual behavior • Peer and social network influence on sexual behavior • Early union and pregnancies • Sexual violence and abuse (rape, genital mutilation, incest) • Management of sex drive and self-control • Stigmatization and discrimination, including gender issues • Children's rights • STI/HIV/AIDS (risk factors, vulnerability, transmission mode, support to people living with HIV)

Grade / Age	SCEV program	Government Program
II (13-14)	<ul style="list-style-type: none"> • Friendship: definition, male-female friendship (advantages and challenges) • Human sexuality: rights, role, abstinence • Human maturation: body maturation, puberty, spirit and emotional maturation • Life hygiene and health • Human values: definition, importance, values scales and God place in the life • STI/HIV: relationships between HIV/AIDS and other STIs, STI/HIV/AIDS at school setting, risky behavior 	<ul style="list-style-type: none"> • Puberty and adolescence • Love and friendship • STI/HIV/AIDS • Gender and sexuality, sexual violence and abuse • Genital organs, menstrual cycles, amenorrhea • Factors promoting sexual arousal and unplanned sexual intercourse • Consequences of early sexual intercourse • Myths, rumors and erroneous beliefs on sexuality • Advantages of chastity and virginity • Deviant behavior: sodomy, fellatio, prostitution, sadism and masochism • Sexist stereotypes, discrimination and stigmatization
III (14-15)	<ul style="list-style-type: none"> • General introduction to Life Skills Education: definition and history • Adolescence: definition, hormonal and physiological changes, anatomy and physiology of genital organs, consequences of sexual intercourse among young (pregnancies, abortions, STI/HIV/AIDS, sterility, school dropout) • Human sexuality: rights, sexual abuse, abstinence, deviant behavior • Hygiene and health • Development of personality: concept, types of personality, personality components. • Culture • Prevention of juvenile/youth delinquency and risky behavior • STI/HIV/AIDS: what must be known; prevention of mother-to-child transmission 	<ul style="list-style-type: none"> • Prejudgments and discriminatory stereotypes; • Love and relationships • STI/HIV/AIDS (modes of transmission, risk behavior and environmental risk, peer influence) • Sexual abuse and violence • Life cycle, genital organs, menstrual cycle, puberty and adolescence • Advantages of chastity and virginity • Deviant behavior: sodomy, fellatio, cunnilingus, prostitution, sadism and masochism • Sexist stereotypes, discrimination and stigmatization

Grade / Age	SCEV program	Government Program
IV (15-16)	<ul style="list-style-type: none"> • Man versus woman image: complementarity between male and female • Development of the personality • Cultural identity • Choice and options of adult life: marital life, consecrated life, youth and money • Culture of peace and citizenship • Youth delinquency and risk behavior: concepts of juvenile delinquency and senile delinquency, types of delinquencies (robbery, rape, alcoholism, smoking, sexual harassment, prostitution); causes of delinquency, solutions to delinquency (dialogue, healthy recreation) • Biodiversity and the protection of the environment • HIV/AIDS and STIs: history, agent, diagnosis. 	<ul style="list-style-type: none"> • Prejudgments and discriminatory stereotypes • Love and relationships (differences between feelings and love), friendship and deviant risk • STIs/HIV/AIDS (mode of transmission, risk behavior and environmental risk, peer influence) • Sexual abuse and violence • Life cycle, genital organs, menstrual cycle, puberty and adolescence • Advantages of chastity and virginity • Hygiene and body • Deviant behavior: sodomy, fellatio, cunnilingus, prostitution, sadism and masochism • Gender and sex: sexist stereotypes, discrimination and stigmatization • Sexuality and communication • Male sexual problems: oligospermia, azoospermia, premature ejaculation, erection dysfunction • Dysfunction of female genital organs (frigidity, painful menstruation, sterility) • Family planning and fertility: unintended pregnancies, adolescent fertility, and unsafe abortion

Grade / Age	SCEV program	Government Program
V (16-17)	<ul style="list-style-type: none"> • Heredity and intrauterine life: heredity (definition, child sex, blood groups, sickle cell disease), intrauterine life (conception, preterm, stillbirth, abortion) • Virginity and chastity: definition and importance • Pregnant women in the family context: pregnancy, dangerous signs during pregnancy, risky pregnancy, and adolescent childbearing. • Delivery and childbearing: definition, postnatal care • Childcare and child rearing • Maternal, child and infant protection • Engagement: definition, marriage, consecrated life, socio-professional life • Planning and achievement of goals • STIs/HIV: concept, risk behavior, community involvement to combat HIV/AIDS. 	<ul style="list-style-type: none"> • Sexuality and media (pornography, publicity and sexual behavior) • Assume a sexual life with responsibility (sexual orientation and sexual identity) • Friendship, emotional relationship and love; hermaphrodite • Engagement and marriage (type and characteristics) • Divorce and its consequences • STIs/HIV/AIDS (transmission modes, vulnerabilities and risk factors) • Support to people living with HIV • Human reproduction (fecundation, pregnancies, preterm, childbearing; antenatal and postnatal care), family planning; gender and media; HIV and gender
VI (17-18)	<ul style="list-style-type: none"> • Cultural identity and values • Children's rights and human rights • Ethics, globalization and international policy • Biodiversity and environment • Engagement, marital unions, polygamy • Contraception and family planning • Maternal and child health • Unsafe abortion • HIV/AIDS: concept, risk behavior, community involvement to combat HIV/AIDS 	<ul style="list-style-type: none"> • Homophobia, sexual orientation and tolerance • Sexuality education and discrimination • Prostitution • Sexual violence and abuse • Marital unions, polygamy • Couples' and children's education • Happiness • Cyber-crime

STI/HIV/AIDS questions should be discussed from the first class of primary school (ages 6-7) until the end of secondary school (17-18). However, human sexuality is only openly discussed from the fifth class of primary school (ages 10-11). Sexuality education programs should discuss family planning, consequences of early pregnancy and childbearing, and the problems of unsafe abortion. From the fourth year of secondary school, the program should discuss topics related to adult life, such as pregnancy, prenatal and postnatal care, and children's education. In addition, the national and SCEV programs discuss environment, human rights, ethics and morals, sociological and biological issues. In the two

programs, homosexuality and masturbation are considered ‘deviant behavior’ although the programs condemn homophobia. SCEV highlights the importance of marital union and sacerdotal services. There are no clear messages against early marriage, although the program promotes responsibilities in individual and community development.

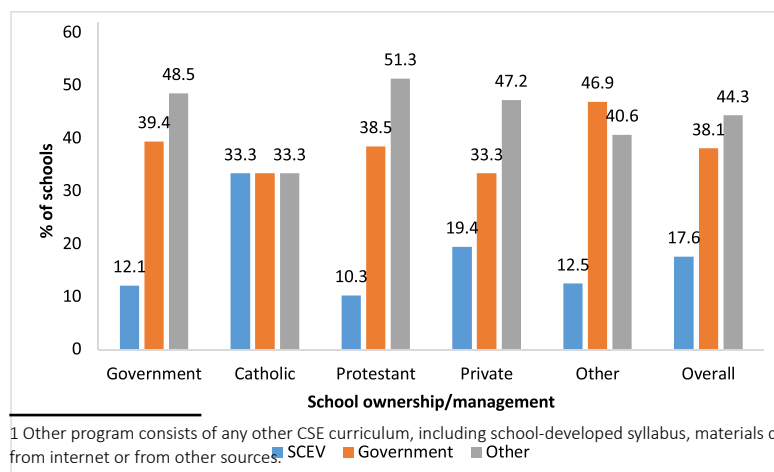
3.2 Compliance in the implementation of sexuality education course

Effective compliance with the program is key to achieving the targeted goals and improving adolescents’ SRH knowledge, perceptions and behavior. The national policy recommends CSE (called Family Life and Population Course) from the first year of primary school to the last year of secondary school. This section assesses compliance in the implementation of the course by type of program.

3.2.1 Implementation of CSE in Kinshasa schools

Of 192 schools surveyed, 94% implemented CSE. However, the curriculum used, classes covered, and lesson frequency varied. Figure 4 reports the distribution of schools by CSE type implemented by school ownership/management: 44% of principals and teachers reported using programs other¹ than those presented in Table 7 (government program or SCEV program). Only 18% of surveyed schools used the SCEV program. The low percentage of schools implementing the SCEV curriculum contrasts with information from KII interviews and the high proportion of teachers using the SCEV manuals.

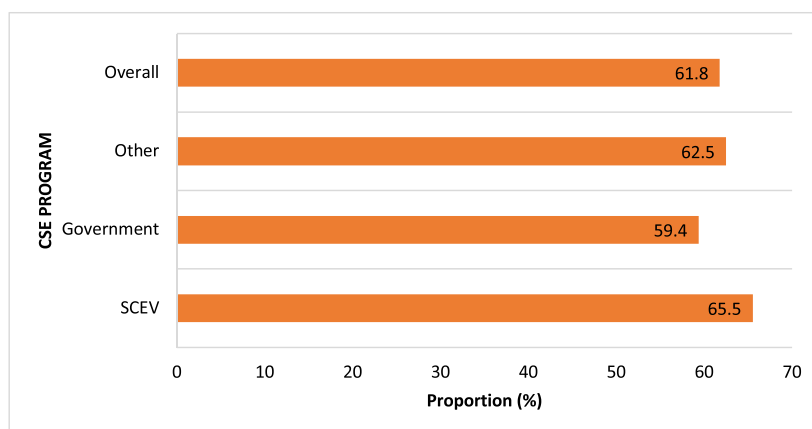
Figure 4: Distribution of schools by type of CSE implemented by school ownership



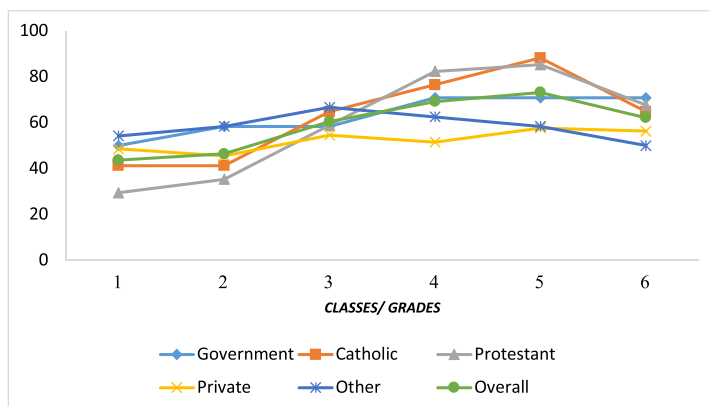
Findings from the KIIs suggested that a large number of teachers received training in the SCEV curriculum. It is likely that some principals and teachers thought this study was an audit from the government and therefore avoided reporting implementation of SCEV.

However, this distribution varies by school management/ownership. The proportion of schools implementing other programs was higher in Protestant-managed schools (51%), followed by government and private schools. The Catholic-managed schools were equally distributed between the three programs (33%). These figures contrast with the manuals used. Indeed, the majority of surveyed teachers (62%) used the SCEV manuals regardless of the CSE program declared; 32% of teachers used a school-developed syllabus, documents downloaded from the internet, or other sources because the government had not yet developed manuals.

Figure 5: Proportion of teachers using SCEV manuals by type of CSE program/curriculum



Findings from the principals' survey revealed that the Family Life Education course is not systematically offered in all classes although the schools reported implementing that course (Figure 6). Less than 50% of schools offered the CSE course in the first and the second classes (grades) of secondary school. This proportion is estimated at 70% for the fourth and the fifth years of secondary school. The proportion of schools offering CSE in these classes (fourth and fifth) is higher in the faith-based managed schools

Figure 6: Classes where CSE is taught by school ownership


In two surveyed schools, the CSE course was offered only in the first and the second classes (grades) of secondary school, although the national policy recommends the course from the first to the last class of secondary school. This finding raises the importance of effective M&E systems in the education system. Looking at the students surveyed, the proportion of students who benefit from CSE courses in 2016-2017 varies from 80% in government-managed schools to 95% in schools managed by the Catholic Church (Table 8).

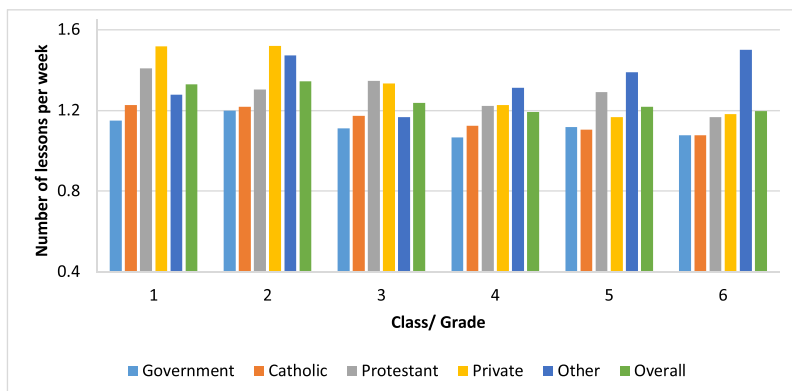
Table 8: Proportion of students who reported CSE course by grade

Grade	School ownership/management									
	Government		Catholic		Protestant		Private		Other	
Class	%	P-value	%	P-value	%	P-value	%	P-value	%	P-value
3	91.4		97.4		93.4		91.0		88.0	
4	86.5	0.000	91.5	0.000	84.0	0.000	86.4	0.000	95.6	0.000
5	74.2		97.8		91.8		81.0		90.7	
6	63.2		100.0		50.0		56.9		37.5	
Total	79.6		94.9		87.0		82.3		88.1	

Analysis by grade/class revealed that the proportion of students who received CSE courses was low among those attending the last class of secondary schools, except in Catholic-managed schools.

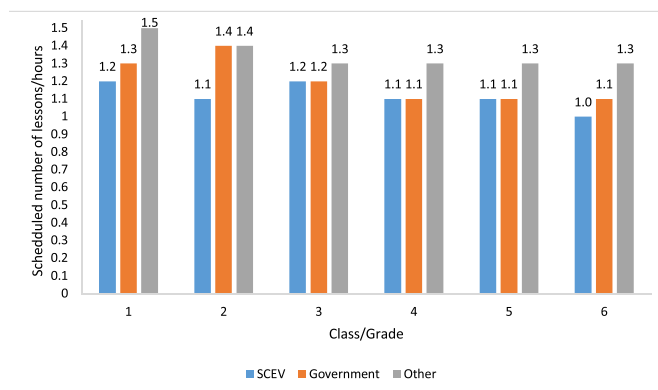
According to teachers, on average, schools dedicated between 1-1.5 hours per week for CSE. This is consistent with the government recommendation of at least one session per week. This number varies slightly by class/grade and school ownership (Figure 7a). The average number of CSE lessons per week is low in the Catholic-managed and government-owned schools compared with other schools.

Figure 7a: Average weekly number of CSE lessons per class/grade and school management/ownership



The number of lessons (hours) dedicated per week to the CSE course was slightly higher in schools using other programs besides the SCEV and government curricula although the difference was not statistically significant.

Figure 7b: Average weekly number of CSE lessons per class/grade and type of program

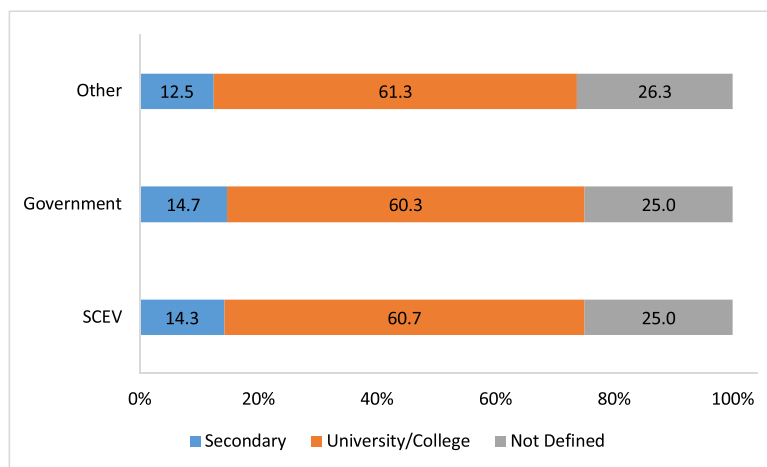


However, findings from qualitative surveys (KII with teachers and FGDs with students) suggest a gap between the time dedicated to CSE and actual teaching time. Often, hours dedicated for CSE are used for other disciplines considered ‘more important’, such as mathematics, French, physics, and the sciences.

3.2.2 Teachers’ training

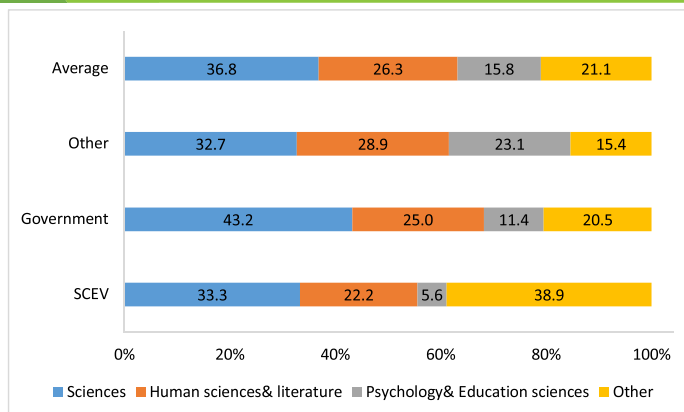
Secondary school teachers in the Democratic Republic of Congo are required to complete three years (Diplôme de Gradu ) or five years (Licence equiv.to Bachelor’s degree) of teachers’ college (Institut Sup rieur P dagogique) at an accredited institution (RDC, 2014). Figure 8a shows that the majority of teachers (60%) regardless of CSE program implemented have at least completed college studies. The ‘not defined’ level of education included teachers who completed priest training and other non-academic training, including language training.

Figure 8a: Highest level of teacher’s education by type of program



Reallocating teachers into their specialties might improve their teaching abilities and increase student learning (Fryer Jr, 2018). Unfortunately, the DRC education system does not organize formal training on “Family Life Course”, including sexuality education at teacher training colleges. Figure 8b shows heterogeneity in teachers’ profiles. Overall, more than 30% of teachers were trained in sciences, including health sciences, biology and mathematics. More than 25% were trained in human sciences, whereas one out of every five teachers had a background in human sciences or literature.

Figure 8b: Teacher specialization by type of program



Since sexuality education is a module of a stand-alone subject in schools, specialized pre-service training is recommended, particularly because DRC does not train sexuality and family specialists at the training colleges or universities. Table 9 illustrates the proportion of teachers who received pre-service and in-service training and those who were monitored. The majority of teachers received five days' pre-service and in-service training, on average. While the proportion of teachers who received pre-service training is higher in schools implementing the SCEV program (71%) compared with the others, the 2016-2017 academic year saw had the lowest proportion of teachers participate in training.

Table 9: Proportion of teachers who received training and were monitored

	SCEV	Government	Other	Total	Chi-square	P-value
Ever been trained						
Received pre-service training	71.4	64.1	65.7	66.0	0.478	0.787
Received training the current academic year	81.0	84.8	82.6	83.2	0.170	0.919
Have been monitored						
Have been monitored – Class observation this year	82.6	79.2	77.4	79.0	0.268	0.875
Have been monitored – Oral assessment	31.3	37.0	36.4	35.9	0.177	0.915
Have been monitored – Written assessment	42.9	47.9	34.0	41.0	2.065	0.356

Table 9 also presents the proportion of monitored teachers and assessment type. Although the majority of teachers were monitored, in most cases, 'monitoring'

was class observation (79%). Only 36% and 41% of teachers reported oral and written assessments, respectively.

Table 10 presents topics on which teachers of CSE received training. They included physiology of sexuality and reproduction (puberty, reproduction organs, and menstruation), contraceptive methods and HIV/AIDS/STIs.

Table 10: Topics in which teachers received training

Topics taught	SCEV	Government	Other	Overall	Chi-square	P-value
Puberty/physical changes in body	94.4	80.7	86.5	86.1	1.817	0.403
Reproductive organs	88.2	80.0	73.0	78.6	1.668	0.434
Menstruation	93.8	86.2	75.0	82.7	3.109	0.211
Sexual behavior	83.3	82.8	80.6	81.9	0.083	0.959
Equality between men and women	76.5	73.1	72.2	73.4	0.109	0.947
Pregnancy and childbirth	77.8	80.0	73.0	76.5	0.476	0.788
Abortion	76.5	75.9	77.1	76.5	0.015	0.993
Contraceptive methods	75.0	84.6	57.9	70.0	5.487	0.064
How to use contraceptive methods	79.0	88.9	52.8	70.7	10.525	0.005
Where to get contraceptive methods	40.0	73.1	57.6	59.5	4.405	0.111
Sex in exchange for money or gifts	53.3	69.6	57.1	60.3	1.274	0.529
HIV/AIDS	88.9	86.7	78.4	83.5	1.304	0.521
Other STIs	70.6	85.7	70.3	75.6	2.355	0.308
Where to access STI/HIV services	52.9	61.5	56.8	57.5	0.327	0.849
Communicating within relationships	50.0	62.5	68.6	62.7	1.619	0.445
Decision-making skills	53.3	52.2	60.6	56.3	0.462	0.794
Prevention of violence/sexual abuse	56.3	72.0	64.9	65.4	1.078	0.583
Sexual orientation (homosexuality)	76.5	79.2	66.7	72.7	1.289	0.525
Sexual and reproductive rights	50.0	76.9	60.0	63.6	3.469	0.176
Say 'no' to sex/abstinence/chilling	70.6	73.1	71.4	71.8	0.036	0.982

Moral issues related to sexuality	76.5	59.3	65.7	65.8	1.374	0.503
Female Genital Mutilations (FGM)	43.8	48.0	54.3	50.0	0.547	0.761

Table 10 also reports a lower proportion of teachers who received training on FGM (50%), decision-making skills (56%), how to get an HIV test (57%) compared with other topics. The difference between teachers by program implemented is significant only in regards to the “how to use modern contraception” topic. The proportion of teachers who received training on this topic was low among those using other CSE programs (53%), compared with those implementing the government (80%) and SCEV programs (79%). Many teachers expressed the need for support in teaching most topics they were already teaching (Table 11).

Table 11: Topics for which teachers need support

Topics taught	SCEV	Government	Other	Overall	Chi-square	P-value
Puberty/physical changes in body	37.0	46.3	50.0	46.2	1.273	0.529
Reproductive organs	40.7	44.4	40.3	42.0	0.222	0.895
Menstruation	25.9	38.9	38.7	36.4	1.567	0.457
Sexual behavior	44.4	46.3	43.6	44.8	0.089	0.956
Equality between men and women	44.4	37.0	35.5	37.8	0.662	0.718
Pregnancy and childbirth	48.2	48.2	45.2	46.9	0.126	0.939
Abortion	44.4	38.9	35.5	38.5	0.645	0.724
Contraceptive methods	51.9	57.4	53.2	54.6	0.301	0.860
How to use contraceptive methods	48.2	46.3	35.5	42.0	1.909	0.385
Where to get contraceptive methods	33.3	35.2	35.5	35.0	0.040	0.980
Sex in exchange for money or gifts	44.4	31.5	38.7	37.1	1.424	0.491
HIV/AIDS	66.7	51.9	53.2	55.2	1.778	0.411
Other STIs	59.3	41.5	37.1	43.0	3.843	0.146
Where to access STI/HIV services	51.9	42.6	30.7	39.2	3.979	0.137
Communicating within relationships	48.2	40.7	38.7	41.3	0.701	0.704

Decision-making skills	48.2	41.5	32.3	38.7	2.276	0.320
Prevention of violence/sexual abuse	53.9	36.2	40.0	41.4	2.239	0.326
Sexual orientation (homosexuality)	42.3	27.7	16.7	25.6	6.435	0.040
Sexual and reproductive rights	50.0	36.2	40.0	40.6	1.344	0.511
Say 'no' to sex/abstinence	57.7	31.9	25.0	33.8	8.780	0.012
Moral issues related to sexuality	50.0	36.2	33.3	37.6	2.211	0.331
FGM	46.2	38.3	30.0	36.1	2.206	0.332

More than 50% of teachers reported they need support in teaching contraceptive methods and HIV/AIDS, whereas 26% need support in teaching sexual orientation topics. There are no significant differences between teachers regarding topics where support is needed, unless one considers 'sexual orientation' and 'where to obtain modern contraceptive methods'. The proportion of teachers needing to improve their knowledge on sexual orientation is high among those implementing the SCEV program (42%), while a low proportion is observed among teachers using other CSE programs (17%). By contrast, the proportion of teachers who need support in teaching on "where to obtain modern contraception" is low among those implementing the SCEV program (33%), compared with others (35%). The need for support in teaching 'where to obtain modern contraception' is consistent with the low proportion of students who reported the coverage of this topic (Table 11) by their teachers and the low percentage of teachers who reported participation in a training activity.

3.2.3 Topics covered and teaching methods

The 2014 National and 2015 SCEV programs provide guidance for CSE per class/grade in DRC. In addition, SCEV developed manuals and tools to support training. This section compares topics covered and materials used by type of program implemented. Analysis is based on the surveys of teachers and students.

Teachers' surveys revealed that most sexuality education messages focused on condom use (77%), abstinence (61%) and period abstinence (58%) (Table 12). The least-explored topics were diaphragms, foams, and emergency contraception.

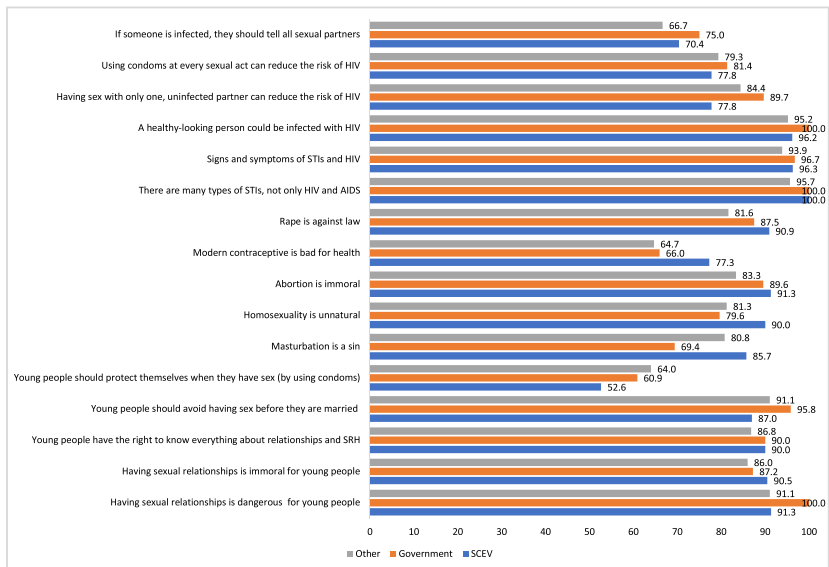
Table 12: Topics covered by type of program

Topics taught	SCEV	Government	Other	Over-all	Chi-square	P-value
Condoms	81.8	85.4	68.3	76.9	4.742	0.093
Oral contraceptive pill	22.7	33.3	28.3	29.2	0.864	0.649
Injectables (Depo-Provera)	18.2	27.1	20.0	22.3	1.032	0.597
IUD (Coil)	27.3	25.0	15.0	20.8	2.301	0.316
Emergency contraception (E-pill)	13.6	12.5	10.0	11.5	0.278	0.870
Male/female sterilization	27.3	27.1	23.3	25.4	0.248	0.883
Foam, gels or suppositories	13.6	10.4	8.3	10.0	0.518	0.772
Sponge, diaphragm or cervical cap	4.6	10.4	8.3	8.5	0.674	0.714
Periodic abstinence/rhythm	72.7	52.1	56.7	57.7	2.682	0.262
Withdrawal	27.3	18.8	28.3	24.6	1.421	0.491
Abstinence/"chilling"	54.6	70.8	55.0	60.8	3.234	0.198
Other traditional methods	31.8	29.8	13.3	22.5	5.421	0.066

There are no statistical differences regarding topics covered by type of program implemented.

Figure 9 reports consistency between key messages delivered and content of programs summarized in Box 2 and Table 7. A large majority of teachers emphasized messages highlighting the danger and/or inappropriateness of sexual intercourse for young people especially those who are unmarried (Figure 9). Teachers also strongly underscored messages on STIs/HIV symptoms and modes of transmission.

Figure 9: Key messages delivered



Furthermore, although a large majority of teachers reported teaching modern contraceptive methods, at the same time they strongly emphasized in lectures that modern contraceptives were bad for health. Teachers also emphasized that rape was against the law, abortion was immoral, and homosexuality was unnatural.

From the students’ perspectives (Table 13), a number of topics related to improvement of SRH were covered. More than 50% of students reported that they received lessons on the physiology of reproduction, abortion, STIs/HIV/AIDS, and gender issues. However, far less than half of students reported messages about how to use modern contraception (32%) and where to obtain modern contraception (22%).

Analysis by CSE program revealed differences in the proportion of students reporting topics during the lessons. Students enrolled in schools implementing the SCEV program reported high coverage of several topics compared with those using other programs (government and school specific programs) including: puberty/physical changes in body; reproductive organs; menstruation; pregnancy and childbirth; abortion; sex in exchange for money or gifts; HIV/AIDS; other STIs; decision-making skills; prevention of violence/sexual abuse; sexual orientation (homosexuality); and ‘say “no” to sex’/abstinence/chilling (Table 13).

Table 13: Topics covered by type program, students' perspectives

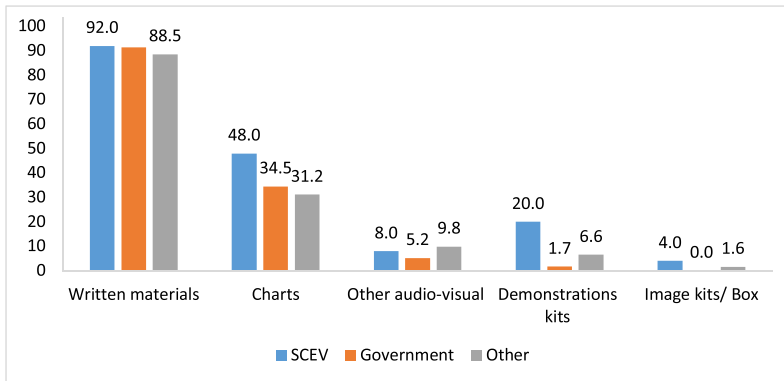
Topics taught	SCEV	Government	Other	Overall	Chi-square	P-value
Puberty/physical changes in body	85.3	87.9	84.8	86.3	7.222	0.027
Reproductive organs	77.8	70.1	66.1	71.4	41.367	0.000
Menstruation	61.6	57.4	57.7	58.7	6.064	0.048
Sexual behavior	62.9	61.1	59.5	61.2	2.864	0.239
Equality between men and women	63.0	61.7	59.1	61.4	3.850	0.146
Pregnancy and childbirth	58.2	46.8	46.2	50.1	46.632	0.000
Abortion	60.6	45.6	50.5	51.4	66.977	0.000
How to use contraceptive methods	33.6	31.7	31.6	32.2	1.524	0.467
Where to get contraceptive methods	26.2	27.0	24.9	26.2	1.399	0.497
Sex in exchange for money or gifts	46.2	41.9	38.1	42.2	14.960	0.001
HIV/AIDS	83.7	74.4	74.7	77.3	41.341	0.000
Other STIs	75.2	67.0	70.4	70.3	23.080	0.000
Where to access STI/HIV services	45.7	45.6	46.8	45.9	0.408	0.815
Communicating within relationships	39.3	37.7	37.7	38.2	0.935	0.627
Decision-making skills	32.2	31.1	25.7	30.0	12.622	0.002
Prevention of violence/sexual abuse	48.4	44.5	43.9	45.5	5.922	0.052
Sexual orientation (homosexuality)	54.8	46.7	47.5	49.4	20.661	0.000
Sexual and reproductive rights	43.7	43.9	39.6	42.7	5.509	0.064
Say 'no' to sex/abstinence/chilling	42.7	39.2	36.3	39.5	9.505	0.009
Moral issues related to sexuality	46.4	44.4	38.0	43.4	17.521	0.000
FGM	45.4	43.7	43.0	44.0	4.158	0.385

Table 13 does not show any difference regarding the coverage of some topics, such as how to use and where to obtain modern contraception, sexual and reproductive rights, and female genital mutilation (FGM).

Teaching support

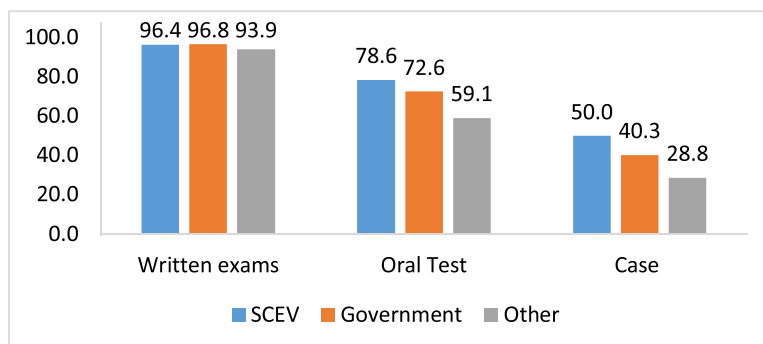
Teaching materials are a key factor in enabling effective instruction (Education Development Trust, 2014). They play a large role in making knowledge accessible to learners and encourage students to engage with knowledge in different ways. Figure 10a shows the teaching supports used during CSE in Kinshasa. More than 88% of teachers reported using written materials as textbooks, manuals, and syllabi regardless of the program type implemented. The proportion of teachers who employed charts during CSE varies from 31% in schools implementing other CSE programs to 48% in schools using the SCEV program. One out of five teachers using SCEV used demonstration kits. Use of audio-visual and image kit materials is rare, regardless of the program implemented.

Figure 10a: Teaching support materials



Classroom assessments or evaluations are methods that help gauge student understanding. They provide information that can be used to modify and improve course content, adjust teaching methods, improve student learning and/or assess the student learning outcomes for class progression. Evaluations are the strategies, techniques, tools and instruments for collecting information to determine the extent to which students demonstrate desired learning outcomes. Several methods should be used to assess student learning outcomes. Figure 10b displays the distribution of teachers by type of evaluation used.

Teachers reported using several types of evaluations. The majority of teachers used written (more than 94%) and oral exams (59%-79%) to assess learning outcomes. Oral examinations were higher in schools implementing the SCEV program (79% and 50% respectively) and lower in schools using other CSE curricula (59% and 29%).

Figure 10b: Evaluation methods

In summary, the sexuality education programs (government and SCEV) are comprehensive and suitable for children and adolescents. The programs' contents are consistent with the UNFPA Framework for Action (FFA) (Temin & Levine, 2009; UNFPA, 2009), the International Conference on Population and Development Action Plan (ICPDAP), the Human Rights Declaration, the MDGs and the SDGs. The curricula focus on four key areas: (1) a supportive policy environment; (2) gender-sensitive, life-skills-based SRH education in schools and community settings; (3) universal access to SRH services; and (4) young people's leadership and participation. They are based on developing age-appropriate cognitive, emotional and behavioral capacities, although there are gaps in compliance with implementation. Some topics, especially HIV/AIDS/STIs, are more developed and more frequently discussed than others, such as FP- related topics. Although most teachers reported receiving pre-service and in-service training, they expressed a need for more training, even on topics taught. These findings are consistent with summaries of teachers' KIIs and students' FGDs.

Indeed, students and stakeholders reported lack of: trained teachers, manuals (for the national program), and motivation, as well as financial challenges in producing training materials. Likewise, teachers mentioned training needs and materials as major barriers to CSE implementation. It is worth mentioning that DRC training colleges do not train sexuality or family studies' professionals. SCEV and the National Directorate of Family Life Education Program organize pre-service and in-service trainings for the teachers. One teacher reported:

“J'utilise un document que j'ai acheté au marché pour enseigner ce cours.” [“I am using a document I bought on the street to teach this course.”]

Furthermore, students' FGDs revealed that most teachers are less equipped and sometimes too “immature” (unequipped) to facilitate the course. Often courses are based on written support, whereas audio-visual and demonstration kits are considered effective teaching supports. Hours scheduled for CSE courses are often used by other teachers to complete other subjects of the curriculum or cover ‘more important’ subjects.

Box 3: Summary

This section focused on CSE implementation in Kinshasa. Content analysis of schools' manuals and curricula as well as KII revealed the co-existence of several curricula on the ground. Although compulsory, CSE courses are not systematically taught in all schools and/or classes. Furthermore, the number of lessons per week depends on schools and classes. Most schools reported implementing other programs or the government program, but more than 60% of teachers used the SCEV manuals. Findings also show the contents of the SCEV and the government program are comprehensive and age-appropriate. Findings from teachers' KIIs and students' FGDs reveal the need for teacher training and materials, regardless of the type of program implemented.

Chapter Four: Perceived Benefits and Risks of CSE

Perception and behavior are inextricably linked as people modify their behavior based on their perceptions. Sexual and reproductive health-related behaviors are also influenced by the perceived benefits of taking action (Strecher et al, 1997; Hall, 2012). Comprehensive Sexuality Education (CSE) is still a controversial subject in African countries. This section describes the relationship between CSE programs and perceptions of students and teachers on the benefits and risks of CSE. Perceived benefits of CSE refer to assessments of the value or efficacy of attending CSE courses to improve students' SRH outcomes and well-being. In contrast, perceived risks of CSE refer to threats and hazards resulting from CSE implementation. We assume that perceived benefits drive people's intentions to apply knowledge acquired from CSE, while perceived risks constitute a barrier against its implementation, the learning process, and behavior change.

4.1 Perceived benefits of CSE

The perceived benefits cover perceptions on effectiveness, feasibility, and other advantages of sexuality education. This concept includes improving knowledge on how to prevent HIV transmission and unwanted pregnancies, knowledge of the body, and how to resist sexual pressures (Hall, 2012). The study analyzes teachers' and students' perspectives on the perceived CSE benefits.

4.1.1 Teachers' perceived benefits

Table 14 summarizes teachers' beliefs about benefits of CSE for students. Most teachers reported that CSE builds adolescents' capacity to adopt safe sexual behavior (85%) and improve SRH knowledge (83%). This includes knowledge to prevent STI/HIV/AIDS (68%) and unwanted pregnancies (81%), the use of SRH services (74%), and modern contraception (71%). About 70% of teachers think the CSE course is relevant because parents do not discuss SRH matters with their children.

Table 14: Perceived benefits of CSE by type of programs: Teachers' perspectives

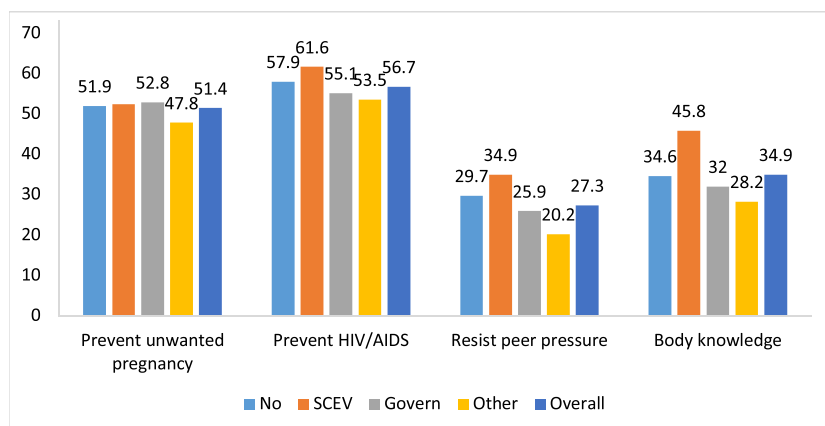
	SCEV	Gov- ern- ment	Oth- er	Over- all	Chi-square	P-val- ue
Build capacity of young on safe sexuality behavior	85.2	90.5	91.8	90.1	0.9365	0.626
Build capacity on how to use modern contraception	71.4	74.6	78.1	75.5	0.5165	0.772
Show how to access SRH services	74.1	61.7	71.0	67.8	1.8052	0.406

Improve knowledge	83.3	88.9	75.4	82.1	4.1381	0.126
Influence on positive opinions	36.7	38.1	34.8	36.4	0.157	0.924
Decision making process	66.7	74.6	63.8	68.5	1.8509	0.396
Self-esteem	46.7	50.8	31.9	42.0	5.1674	0.075
Respond to students' curiosity	13.3	4.8	1.5	5.0	6.2573	0.044
These topics are just as important as other subjects	61.5	66.7	58.1	62.2	0.9645	0.617
Parents don't teach their children	69.2	70.0	67.7	68.9	0.074	0.964
Knowledge on how to prevent unwanted pregnancies	80.8	80.0	61.3	72.3	6.4596	0.04
HIV/AIDS or other STI-related knowledge	61.5	76.7	62.9	68.2	3.3195	0.19
Students need to learn how to resist pressure	50.0	60.0	45.2	52.0	2.7419	0.254
Students need to understand how their bodies works	73.1	78.3	69.4	73.7	1.2719	0.529

Although CSE in the DRC also aims to build students' capacity in other life skills, less than half of the teachers surveyed reported CSE benefits on adolescents' self-esteem (42%) and how to build positive opinion (36%). Analysis by program type shows significant differences if one considers perceived benefits of CSE in improving knowledge on how to prevent unwanted pregnancies and/or response to student curiosity. The proportion of teachers who mentioned improving knowledge on pregnancy prevention ranges from 61% in schools implementing other programs to 80% in schools using the SCEV and government programs.

4.1.2 Students' perceived benefits

Figure 11 summarizes the perceived benefits of CSE reported by students according to program type. Unwanted pregnancy and STI/HIV/AIDS prevention are the most commonly perceived benefits of CSE for students. More than half of the students cited unwanted pregnancy prevention, except for students enrolled in schools implementing other CSE programs. The proportion of students who named STI/HIV/AIDS prevention as a perceived benefit of CSE varied from 54% among students enrolled in schools using other CSE programs to 62% observed among students in schools implementing the SCEV program.

Figure 11: Perceived benefits of CSE by type of program: Students' perspectives

By contrast, only 27% of students reported perceived benefits of CSE in equipping adolescents to resist peer pressure. This proportion varies from 20% reported by students participating in other CSE programs to 35% stated by students enrolled in schools using the SCEV program. Likewise, only 35% of surveyed students reported improving knowledge of the body as a CSE benefit. Nevertheless, students using the SCEV program were more likely (46%) to cite the benefits of CSE in improving body knowledge compared to others.

4.2 Perceived risks/threats of CSE

The concept of perceived risk or threat covers potential barriers to sexuality education, including religion, cultural traditions and misinterpretation of benefits.

4.2.1 Teachers' perceived risks/barriers

Teachers think that religious beliefs, traditions, student age and low levels of parental involvement could constitute barriers to CSE. The proportion of teachers who think that the sexuality education program undermines religious values varies from 10% among those teaching other CSE programs to more than 36% among those using the SCEV and government programs. One in four teachers using SCEV or other CSE programs believe sexuality education violates traditions, compared with 32% observed among teachers implementing the government program.

Figure 12a: Teachers' perceived risks/barriers to CSE

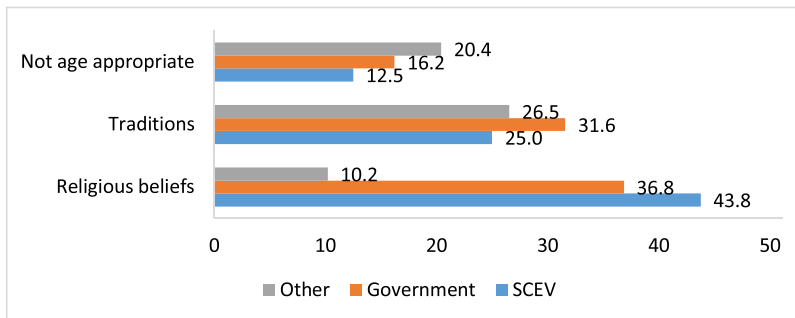


Figure 12a shows that 12% of teachers implementing the SCEV program thought that content in the sexuality education module is not appropriate for adolescents and young people. This proportion is estimated at 16% among teachers implementing the government program and 20% among those using other CSE programs.

4.2.2 Students' perceived risks

Similar to teachers, some students thought that sexuality education violates religious values and traditions, encourages premarital sex, and provides inappropriate information for young people (Figure 12b).

Figure 12b: Students' perceived risks/threats to CSE

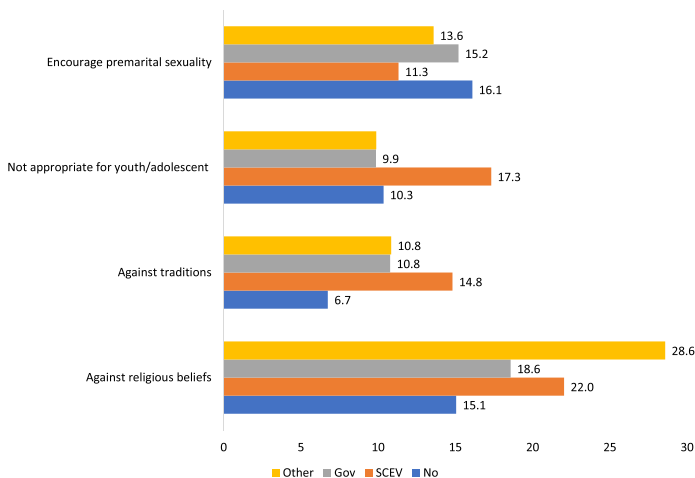


Figure 12b shows differences between students by type of CSE programs. Students enrolled in schools implementing other CSE programs or the SCEV program were more likely to report potential negative influences of sexuality education on religious beliefs. Students enrolled in schools using the SCEV program were also more likely than others to report that sexuality education violates traditions and provides age-inappropriate information.

Box 4: Summary

This section reports on the perceived benefits and risks of implementing CSE. Analyses relied on school-based questionnaires of teachers and students. The main potential benefits of CSE are prevention of unwanted pregnancies and STI/HIV/AIDS. The proportion of participants (students and teachers) who reported barriers or risks was below 50%. Religious beliefs were reported as the main barriers of CSE programs.

Chapter Five: SRH Knowledge and Perceptions

One of the objectives of CSE is to equip adolescents and youth with age appropriate knowledge about the changes during puberty, sexuality, STI transmission and prevention, as well as how to prevent unwanted pregnancies. This section assesses differences in HIV and family planning knowledge following exposure to CSE among students in Kinshasa.

5.1 Knowledge of means of HIV transmission

There are four ways to contract HIV: sexual intercourse between an infected partner and a non-infected partner; injecting with an HIV-infected needle; mother-to-child transmission *in utero*, during childbirth, or when breastfeeding; and blood transfusion from an infected person. Table 15 reports the proportion of students who knew how HIV is transmitted.

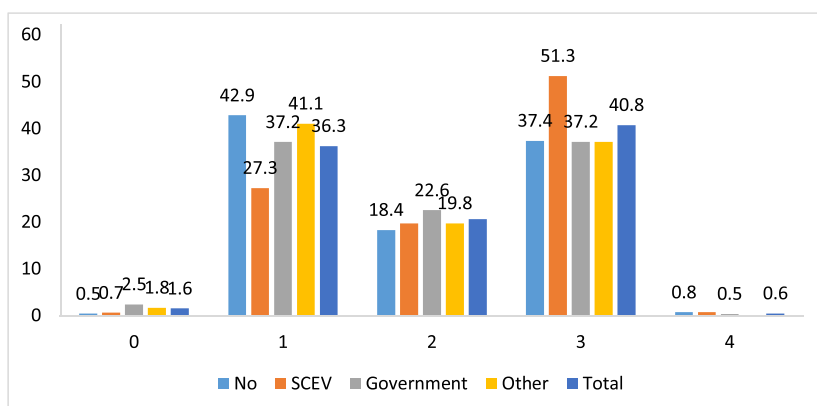
Table 15: Proportion of students with HIV-related knowledge

	No	SCEV	Govern	Oth- er	Overall	Chi-sq	P-value
Means to get HIV							
Having unprotected sex with someone who has HIV	87.9	92.4	89.5	88.8	89.9	13.215	0.004
Injecting with an HIV infected needle	59.3	70.0	58.2	53.9	60.3	73.245	0.000
From mosquito bites	7.7	6.5	8.8	8.2	7.9	5.340	0.149
Transmission from mother to child	1.2	0.9	0.5	0.3	0.6	6.842	0.077
Shaking hands with an infected person	6.2	4.6	6.1	6.0	5.7	3.852	0.278
Blood [transfusion] from an infected person	46.7	61.4	48.1	49.9	51.7	64.364	0.000
Bad omen/curse/witchcraft	11.0	7.3	10.4	9.7	9.5	10.319	0.016
Means to avoid HIV							
By not having sex at all	43.6	50.8	49.3	47.0	48.4	9.813	0.020
Systematic use of condom	63.4	56.4	56.8	61.5	58.6	14.567	0.002
By having only one sexual partner	35.2	43.7	32.7	33.8	36.1	43.268	0.000
Know where to get HIV test	70.2	64.3	61.1	69.1	65.0	28.270	0.000

Most students (90%) knew that sexual intercourse is one means of HIV transmission. Students enrolled in the SCEV program were more likely to report 'sexual intercourse', compared with those who had not attended a CSE program (88%) while 60% overall knew about injection with an infected needle. Analysis by CSE program implemented shows that the proportion who listed 'injection' varied from 54% among students receiving another curriculum to 70% among those enrolled in schools implementing the SCEV program. Over half the students (52%) knew about the risk of HIV transmission by blood transfusion. Per program, this awareness ranged from 47% (students not exposed to the CSE) to 61% (students participating in SCEV program). However, 99% of students overall were ignorant of mother-to-child transmission.

Table 15 shows that 58% of students knew that consistent condom use is a means of HIV prevention. This proportion is higher (63%) among students not receiving the CSE course and lower among those receiving the SCEV and the government curriculum. Less than 50% of students knew that limiting sexual intercourse to one uninfected partner (36%) can reduce the chances of contracting HIV. Less than 1% of the students knew the four ways of HIV transmission (Figure 13). These findings suggest that exposure to CSE is not necessarily associated with poor knowledge because almost all students were exposed to CSE. Indeed, the course is taught from the first year of primary school.

Figure 13: Number of HIV transmission ways per type of CSE program



Furthermore, 65% of students knew where to receive HIV testing. This proportion varies from 61% (students following the government program) to 70% (not exposed to CSE/SEC).

5.2 Knowledge of family planning methods

Family planning is a priority for the DRC government. Although the national law, through Article 1978 of the Penal Code (1933) initially prohibited the promotion of family planning, the National Council for the Promotion of the Principle of Desirable Births was established in 1973 following a presidential decree. In 2003, the Ministry of Public Health established the National Program for Adolescent Health which was followed by the development of a national program to promote adolescent health in 2009. In addition to the CSE program, DRC developed youth-friendly family planning as part of the National Youth Friendly Reproductive Health Program. In 2013, the government committed to finance family planning, including the provision of contraceptives in 200 health zones (République Démocratique du Congo , 2014). The following year, the country adopted a National Sexual and Reproductive Health Strategic Plan in 2014 to promote FP. Recently, a new law was adopted (Article 81 of Law # 18/035 of 13 December 2018), allowing for the promotion of family planning methods. Table 16a displays the proportion of students who know the different types of FP methods. Overall, condom (67%) and rhythm method (52%) are the most known methods, whereas ‘emergency contraception’ and ‘withdrawal’ are the lesser-known methods (6%).

Regardless of method, Table 16a also shows differences by type of CSE implemented. In most cases, students enrolled in schools implementing the SCEV program had higher proportions of knowledge compared with other students.

Table 16a: *Proportion of students with knowledge on family planning methods*

	No	SCEV	Government	Other	Overall	Chi-square	P-value
Oral contraceptive pill	24.5	31.9	30.6	17.9	27.2	77.406	0.000
Condoms	69.0	70.4	64.8	68.2	67.5	11.770	0.008
Injectables (Depo-Provera)	14.1	15.8	18.8	14.9	16.5	12.427	0.006
Intra-uterine devices (IUDs, coils)	10.3	10.8	12.7	16.8	12.9	23.503	0.000
Implants (Jadelle, Implanon)	7.3	12.0	10.3	9.5	10.2	10.525	0.015
Emergency contraceptives	4.5	7.8	5.7	3.3	5.5	24.159	0.000
Female sterilization	12.4	20.8	14.1	14.7	15.7	32.999	0.000
Male sterilization (vasectomy)	9.8	14.9	10.2	12.2	11.8	18.934	0.000
Withdrawal	9.3	8.4	5.9	3.8	6.4	30.234	0.000

Rhythm (having sex only during 'safe' days)	47.2	55.6	51.1	51.4	51.8	12.717	0.005
Know where to obtain a contraceptive method	53.6	45.3	45.8	51.0	47.8	18.676	0.000
Know where to obtain condom	62.9	53.6	55.0	62.7	57.4	31.256	0.000

Table 16b reveals that 'Sexuality Education Course' and 'Friends' are the first sources of knowledge on Family Planning methods even for students who were not participating in a CSE course during the study period. Other major sources of knowledge include media and siblings.

Table 16b: Distribution of students by first source of knowledge on family planning methods

	No	SCEV	Government	Other	Total	Chi-square	P-value
First source of modern contraception knowledge							
Friends	28.6	25.4	26.8	23.8	26.0	5.3631	0.147
Boy/girlfriends	8.9	6.8	7.7	5.9	7.2	6.0208	0.111
Brother/sisters	9.1	11.3	10.9	12.6	11.2	4.6174	0.202
SEC	34.9	43.2	37.1	42.4	39.6	18.7347	0.000
Media	27.1	25.9	20.2	18.9	22.1	27.0676	0.000
Church	7.6	5.7	7.3	8.2	7.2	5.255	0.154
First source of condom knowledge							
Friends	41.8	38.9	38.6	36.5	38.6	4.7233	0.193
Boy/girlfriends	11.3	8.6	10.5	7.3	9.3	11.7406	0.008
Brother/sisters	10.4	13.6	11.9	13.3	12.5	4.9471	0.176
SEC	37.8	51.0	43.8	49.1	46.2	35.7968	0.000
Media	26.8	25.4	18.0	17.5	20.9	43.4085	0.000
Church	6.2	4.7	4.2	6.0	4.9	5.0357	0.169
First source of traditional contraception							
Friends	30.5	22.7	24.4	24.3	24.7	13.157	0.004
Boy/girlfriends	7.0	5.9	7.4	4.6	6.4	9.654	0.022
Brother/sisters	10.7	10.6	11.0	10.3	10.7	0.361	0.948
SEC	35.3	50.7	43.7	43.8	44.5	38.914	0.000

Media	17.9	16.0	12.8	10.9	14.0	22.296	0.000
Church	3.4	3.4	3.7	3.3	3.5	0.474	0.925

Analysis of findings by type of SEC shows that the proportion of participants who reported a CSE course as their first source of knowledge was systematically high among students receiving the SCEV program. In contrast, the percentage of participants who reported 'media' as their primary source was high among students who were not exposed to a CSE course during the survey.

5.3. Opinions and perceptions

This section describes general opinions and perceptions on adolescents' sexuality. Analyses are based on data from the teachers' and students' surveys.

5.3.1 Teachers' opinions and perceptions

Table 17 reports teachers' opinions on adolescents' sexuality. About 90% of teachers think that young people should not engage in sexual intercourse until marriage.

Table 17: Teachers' opinions on adolescents' sexuality

	SCEV	Government	Other	Overall	Chi-square	P-value
<i>Opinions about virginity</i>						
Young women/girls should remain virgins until marriage	85.7	96.9	93.9	93.7	4.1063	0.128
Young men/boys should remain virgins until marriage	77.8	90.6	89.2	87.8	3.1374	0.208
<i>Contraception and condoms</i>						
Contraceptive methods encourage premarital sex	30.8	50.0	40.6	42.8	2.9743	0.226
Using a condom is a sign of not trusting your partner	52.0	54.1	47.6	51.0	0.5325	0.766
Boys who carry condoms should be expelled from school	57.1	55.0	41.5	49.7	3.0266	0.220
Young people carrying condoms are promiscuous or unfaithful	45.8	69.4	48.4	56.8	6.9456	0.031

<i>Abortion</i>						
Abortion should not be tolerated	63.0	60.3	64.6	62.6	0.2544	0.881
Abortion is a crime	92.9	98.4	92.2	94.8	2.7214	0.256
Masturbation is a deviant behavior	88.5	87.1	81.0	84.8	1.2455	0.536

Almost half of the teachers interviewed had negative opinions about condoms, including associating them with lack of trust or unfaithfulness. The CSE/SEC program difference is only significant if one considers attitudes towards young people carrying condoms- it is not associated with teachers' opinions or perceptions. About 70% of teachers using the government program believed that young people carrying condoms are promiscuous or unfaithful, compared with the less than 50% observed among teachers using the SCEV or other programs. The majority of teachers did not tolerate abortion regardless of circumstance and masturbation was considered deviant behavior.

5.3.2 Students' opinions and perceptions

Table 18 shows significant CSE program differences in general opinions among students on adolescent sexuality, with the exception of contraception and pregnancy. Less than half of the interviewed students had negative opinions on condoms. However, more than 51% of participants enrolled in schools not implementing the government CSE program thought that young people carrying condoms were unfaithful.

Between 38% and 43% of participants thought that availability of modern contraception encourages premarital sexual intercourse. At the same time, more than 50% of students recommend modern contraceptive use to prevent unwanted pregnancy, and half of the students thought that consensual sexual intercourse among adolescents was normal. Table 18 also shows that the majority of students had negative attitudes toward people living with HIV. Indeed, only 37% of surveyed students reported possibly maintaining friendships with HIV-positive people. Less than 25% of those surveyed thought that a man is entitled to beat his partner if she refuses to have sex with him. The same percentage thought that sexual relationships should only be between a man and a woman.

Table 18: General opinions and perceptions: Students' perspectives

	No	SCEV	Gov.	Other	Overall	Chi2	P-value
Negative opinions on condoms							
Young people carrying condoms are promiscuous or unfaithful	52.1	51.2	47.2	51.8	49.9	13.312	0.038
Using a condom is a sign of not trusting your partner	44.0	40.2	42.9	43.8	42.5	13.703	0.033
Negative opinion on contraception							
Contraception encourages premarital sex	42.8	38.3	38.2	41.6	39.6	17.319	0.008
Opinions on premarital sexuality							
Consensual and protected sex with someone you love is a good thing	58.4	49.9	49.3	52.9	51.4	37.640	0.000
Positive opinion on contraception							
It is wise to use a contraceptive to avoid pregnancy	55.4	56.0	52.0	54.4	54.0	7.763	0.256
Attitude toward people living with HIV							
If someone I knew had HIV/AIDS, I would still be his or her friend	36.7	33.2	36.4	40.7	36.6	22.104	0.001
Opinions on gender-based violence							
Man can beat his partner if she refuses to have sex with him	21.8	22.0	24.5	27.3	24.1	13.340	0.038
Opinions on homosexuality							
Sexual relationships should only be between a man and a woman	24.5	20.3	23.8	27.2	23.7	21.641	0.001

In summary, most students know that HIV is transmitted by unprotected sexual intercourse and use of an infected needle. However less than 1% know the four main means of HIV transmission, including from mother-to-child, blood transfusion, sexual intercourse, and infected needles. Condoms are the main modern contraceptive method reported by the majority of students. Most teachers believe that young people should remain virgins until marriage, while adolescents believe that premarital sex is normal. Box 5 summarizes differences between students with reference to their SRH knowledge by type of CSE program.

The proportion of students with knowledge on HIV testing was high among participants enrolled in schools implementing the SCEV program, regardless of the indicator considered. This group also had a high proportion of students reporting abstinence and monogamy as a means to avoid HIV. Participants unexposed to CSE during the study more frequently mentioned systematic use of condoms as an HIV prevention strategy. Furthermore, the group had a high proportion of students who knew where to obtain an HIV test.

Students enrolled in schools implementing the SCEV program were more likely to know seven out of nine modern contraceptives listed; those receiving the government program reported knowledge of 'injectables' and those enrolled in schools teaching other curricula had a high proportion of students with knowledge of IUDs. Analysis of knowledge by the CSE program reported mixed findings. Students enrolled in schools implementing the SCEV seemed to know more about modes of HIV transmission and family planning methods.

Box 5: Type of CSE program with extreme proportion of students with knowledge on SRH

Knowledge	Maxima	Minima
Means to get HIV		
Having unprotected sex with someone who has HIV	SCEV	No CSE & other program
Injecting with an HIV-infected needle	SCEV	Other program
Transmission from mother to child	-	-
Blood [transfusion] from an infected person	SCEV	No CSE
Means to avoid HIV		
By not having sex at all	SCEV	No CSE
Systematic use of condom	No CSE	SCEV
By having only one sexual partner	SCEV	Other program
Know where to get HIV test	No CSE	Government program
Family planning methods		
Oral contraceptive pill	SCEV	Other program
Condoms	SCEV	Government program
	Government program	No CSE
Injectables (Depo-Provera)	Other program	Government & SCEV
Intra-uterine devices (IUDs, coils)	SCEV	No CSE
Implants (Jadelle, Implanon)	SCEV	No CSE
Female sterilization	SCEV	No CSE
Male sterilization (vasectomy)	SCEV	No CSE
Withdrawal	No CSE	Other program
Rhythm (having sex only during the 'safe' days)	SCEV	No CSE
Know where to obtain contraceptives	No CSE	Government & SCEV
Know where to obtain condoms	No CSE & Other	SCEV

CSE/SECs are an important source of knowledge on FP although the proportion of students who received information for the first time from this program remains below 50% on average. CSE/SECs are the first source of knowledge on condoms for more than 50% of students in the SCEV curriculum. Findings also show that lack of exposure to CSE during the survey is not necessarily associated with poor knowledge. Three reasons might justify these findings: almost all students were exposed at some time to SEC (more than 30% of students who did not receive CSE reported hearing about modern contraception, condoms and traditional methods for the first time during a CSE course); CSE courses are not the unique source of SRH information (*i.e.* media and friends provide knowledge); and students also might have moved from one program to another during the course of their education.

Chapter Six: CSE and Sexual Behavior

Early sexual initiation is associated with some unhealthy and risky behaviors, including having unprotected sex on first sexual intercourse, condom misuse or having multiple (concurrent or lifetime) partners (O'Donnell et al., 2001). These could lead to sexually transmitted infections (STIs), teenage pregnancies and dropping out of school. This section assesses: (1) association between current exposure to sexuality education course and sexual intercourse experience; as well as (2) association between current exposure to sexuality education course and the use of preventive methods. Statistical analysis is based on the chi-square test.

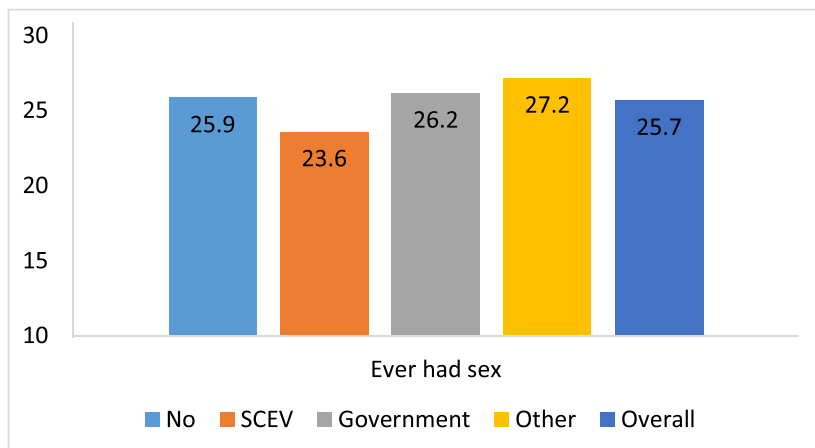
6.1 Sexual experience

Out of 5,147 students surveyed, 4,937 answered the questions on sexual behavior, 46% of whom had a girlfriend or boyfriend. Among adolescent students who reported having a girlfriend or boyfriend, 56% had experienced sexual intercourse. Figure 14 shows gender differences in who initiates sexual intercourse: 73% of adolescent males who reported having a girlfriend had experienced sexual intercourse, whereas the corresponding proportion is estimated at 39% for adolescent females.

Figure 14: Summary of sexual behavior outcomes

	BOYS	GIRLS	TOTAL
Total number of students	2,194	2,743	4,937
	↓ 51.6%	↓ 41.5%	↓ 46.1%
Have boy/girl friend	1,133	1,139	2,272
	↓ 73.0%	↓ 38.7%	↓ 55.8%
Ever had sexual Intercourse	827	441	1,268

Figure 15 shows the proportion of adolescents who have ever had sex by type of CSE program implemented. Overall, 26% of adolescents reported having sexual intercourse regardless of whether they had a boyfriend/girlfriend.

Figure 15: Proportion of adolescents who ever had sexual intercourse by program

The proportion of adolescents who reported having sexual intercourse is low among those enrolled in schools implementing the SCEV program, although the difference is not statistically significant (Figure 15).

6.2 Sexual experience and preventive behavior

One of the objectives of CSE is to promote preventive behavior to avoid unwanted pregnancy and STI/HIV/AIDS. This section reports the association between CSE course exposure and selected preventive behavior indicators, including condom use during sexual intercourse, HIV testing, knowledge of HIV status, and knowledge of partner's HIV status. Among sexually active students, Figure 16 shows that 38% systematically used condoms. This proportion was low (30.1%) among students enrolled in schools implementing other CSE programs compared to those who did not receive CSE and those receiving SCEV.

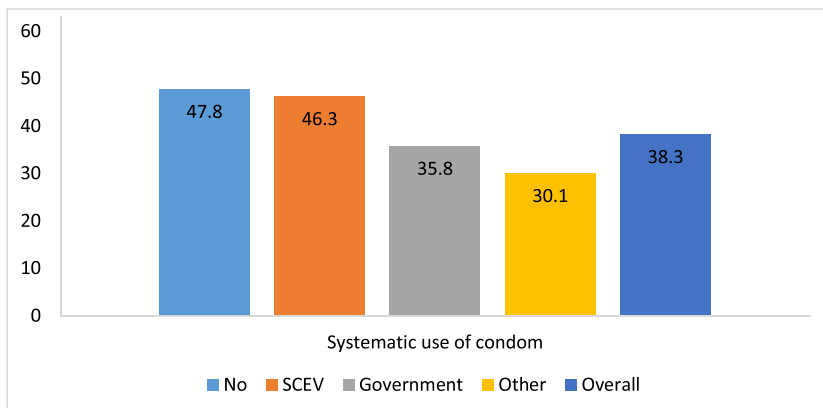
Figure 16: Proportion of sexually active adolescents who reported systematic use of condoms

Table 19 summarizes students' preventive SRH behaviors by type of CSE program received. Less than 40% of sexually active students adopted preventive behaviors. Most sexually active students were not systematically using condoms (62%) while only 27% received HIV testing, with only 24% receiving the test results. Findings also show that only 17% of students knew the HIV status of their sexual partners.

Table 19: CSE and preventive behavior

	No	SCEV	Government	Other	Overall	Chi-square	P-value
Systematic use of condom	47.8	46.3	35.8	30.1	38.3	20.481	0.000
Ever performed HIV test	24.8	24.0	29.0	26.7	26.7	2.289	0.515
Know HIV status	22.6	28.9	22.1	22.6	23.9	4.414	0.220
Know HIV status of partner	18.8	16.3	14.6	20.3	17.0	4.047	0.256

A low proportion of students adopting preventive behaviors in the context where sexual intercourse is common among adolescents suggests the vulnerability of adolescents regarding negative SRH outcomes, including unwanted pregnancies and STIs/HIV/AIDS.

6.3 Sexual experience and negative outcomes

This section examines the prevalence of negative SRH outcomes, including unwanted pregnancies, unsafe abortions, and STIs. Table 20 reveals that among sexually active adolescents, 3% had experienced pregnancy (2.3% for male versus 3.6% for girls) and 6% had experienced an abortion.

Table 20: Sexual behavior outcomes by type of sexuality education program

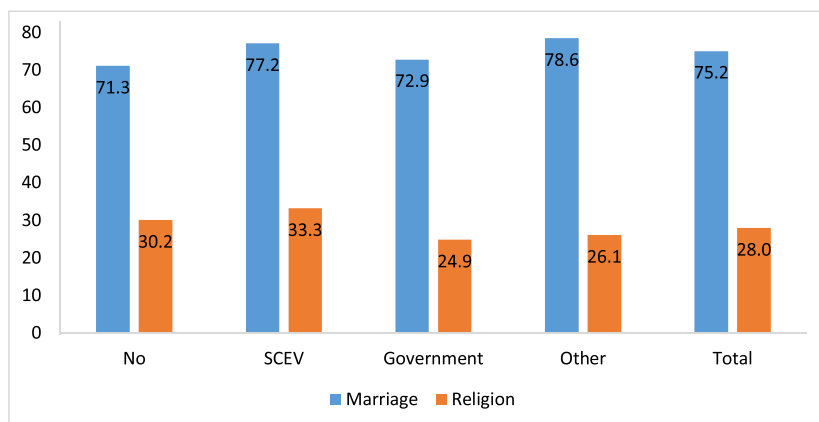
	No	SCEV	Government	Other	Overall	Chi-square	P-value
Pregnancy experience	2.3	3.3	3.2	3.4	3.2	0.412	0.938
Experienced abortion	6.1	3.7	2.7	2.3	3.3	4.620	0.202
Ever suffered from STIs	8.3	5.7	8.9	2.3	6.4	12.939	0.005

The number of sexually active adolescents who had experienced an abortion represents 97% of those who have ever experienced pregnancy.

6.4 Protective factors against sexual intercourse

Three out of five (74%) surveyed students have never had sex. Figure 17 reports the main protective reasons, including waiting for marriage (75%) and religious beliefs (28%).

Figure 17: Main reasons for delaying first sexual intercourse



The proportion of students who reported waiting for marriage was high among those enrolled in schools implementing other programs, while those who referred to religious beliefs was higher among those in the SCEV program.

Box 6: Summary

This section focused on students' SRH behaviors by type of CSE program. About 26% of students had experienced sexual intercourse. However, the use of preventive means is below 30% among sexually active students. Less than 40% of sexually active students reported systematic use of condoms. This proportion was lower among students enrolled in schools implementing other programs. The main reason students reported delaying sex was 'waiting for marriage', especially among adolescents enrolled in schools implementing the SCEV program.

Conclusion and Recommendations

School-based CSE courses are advocated as an important tool to prevent STIs/HIV, unwanted pregnancies, and unsafe abortions among youth and adolescents. DRC started teaching a sexuality education module as part of its Family Life Education course in 1970. This study aimed to describe implementation of school-based sexuality education programs in Kinshasa and to identify differences in outcomes between the national sexuality education courses and other programs. Findings from this study are mixed, raising both hope and concerns. Table 21 summarizes key findings and recommendations.

Table 21: *Synoptic table of objectives, key findings and recommendations*

Objectives	Key Findings	Recommendations
Describe the implementation of school-based sexuality education in Kinshasa	<p>There are two curricula: the government program launched in 2014 and the SCEV curriculum initiated in 1970 and revised in 2015. Contents are comprehensive according to the UNFPA, FFA, the ICPDAP, the Human Rights Declaration, the MDGs and SDGs.</p> <p>The SCEV program is supported by manuals, while the government's is not yet.</p> <p>Lack of compliance in the implementation with reference to documents of reference, systematic teaching of the course, frequency of lessons per week, quality of teachers. Majority of teachers were using the SCEV manuals regardless of the declared program implemented.</p>	<p>Although the contents of the two programs are similar, the ideal is to have only one program.</p> <p>Ensure provision and use of training support materials, including manuals, demonstration tools, and videos to enhance the quality of training.</p> <p>Effective M&E of the implementation; mapping CSE course implementation in Kinshasa; create "Sexuality and Family Studies" specialization at the training college or university to train teachers; conducting summer schools (30-45 days course) on "Sexuality and Family Studies".</p>

Identify differences in outcomes between the national sexuality education and other programs	Mixed findings depending on the indicator. Lack of exposure to CSE is not necessarily associated with poor outcomes. However, CSE courses are listed as the first learning source of some FP methods. Students enrolled in schools implementing SCEV were more likely to know HIV transmission means and FP methods. Difficult to establish causal effect of sexuality education because some students who reported not having SEC might have attended a course in the past. Also, students might have moved from one program to another over their school life.	Improve implementation of CSE; conduct intervention studies using longitudinal framework to measure the effect of sexuality education on knowledge, attitudes and behaviors.
Identify factors as well as barriers that influence the effectiveness of school-based sexuality education	All stakeholders, including students recognized interest and importance of the CSE to improve adolescents and youth SRH. Principal barriers to CSE programs included religious beliefs, relatively poor training of teachers and lack of manuals as well as other didactic materials.	The government and its partners should continue collaborative efforts to involve all stakeholders, including parents and religious leaders to improve implementation of CSE. The government should develop training manuals. Government and funders should produce training materials and make them available.

These analyses suggested three key findings: First, the government has good intentions towards addressing adolescent and youth SRH; second, there is non-compliance in CSE implementation; and more importantly, CSE offers hope for improving adolescent SRH outcomes.

Government's good intentions

In DRC, the sexuality education module is part of the Family Life Education course. In 1970, Catholic schools began teaching a sexuality education module as part of its Family Life Education course to promote an integrated education (physical, spiritual and mental/intellectual) based on human dignity. In 1989, the Ministry of Primary and Secondary Education created the National Commission for Education and Family Life course to develop the curriculum, produce manuals and materials, and train teachers nationwide. In 2014, the government launched

a CSE curriculum to be used in all schools regardless of ownership/manager (*e.g.* Catholic-managed, Protestant-managed, government-managed, private). According to the national policy, CSE courses should be taught in all classes, from the first class of primary school to the last class of secondary school. The policy also determines the frequency of course per week (once). The contents of the SCEV and government curricula are comprehensive and consistent with the UNFPA FFA, ICPDAP, the Human Rights Declaration, the MDGs and SDGs. The programs include the following themes: (1) knowledge of body; (2) love and emotional relationships; (3) human sexuality; (4) STIs/HIV; (5) gender discrimination, stigmatization and violence.

Non-compliance in implementation

Curricula implemented, manuals used, and number of lessons per week varied among schools and classes, despite the government organizing a systematic course. This study revealed that only 38% of the 192 surveyed schools implemented the national program launched in 2014; 18% implemented SCEV; and 44% of other schools implemented their own program. Regardless of the curriculum implemented, 66% of schools used the SCEV manuals to support teaching, while 32% used a school-developed syllabus and documents downloaded from the internet or other sources, because the government has not yet developed manuals.

Although the majority of teachers reported teaching modern contraceptive methods, they also thought that modern contraceptives were bad for adolescents' health. Furthermore, whereas more than half the students reported receiving instruction on physiology of reproduction, abortion, STIs/HIV/AIDS and gender issues, only 32% reported that lessons included messages about how to use modern contraception, and 22% mentioned lessons on where to obtain modern contraception. Students enrolled in schools implementing the SCEV program reported high coverage of several topics compared with those benefiting from other curricula, except for how to use and where to obtain modern contraception, sexual and reproductive rights, and Female Genital Mutilation (FGM).

Furthermore, while the majority of teachers received pre-service and in-service training, many reported needing supports in teaching contraceptive methods, HIV/AIDS, and FGM. The proportion of teachers who received pre-service training is higher in schools implementing the SCEV program.

C

SE offers hope for improving adolescents' SRH

This study shows that all students, parents, teachers and stakeholders interviewed strongly support CSE as part of the school curriculum. Preventing unwanted pregnancies and STIs/HIV were the most-perceived benefits of CSE mentioned by participants regardless of program. The majority of teachers reported that CSE helped adolescents adopt safe sexual behavior (85%) and improve SRH knowledge (83%). The proportion of students who named STI/HIV/AIDS prevention as a perceived benefit of CSE varies from 54% among students enrolled in schools using other CSE programs (government or school-owned) to 62% observed among students in schools implementing SCEV. CSE is an important source of knowledge on family planning although the proportion of students who received information for the first time from this program remains below 50% on average. CSE courses are the first source of knowledge on condoms for more than half of participants receiving the SCEV curriculum. However, findings also show that not receiving CSE is not necessarily associated with poor knowledge. Three reasons might justify these findings. First, almost all students were exposed at some time to a CSE course: more than 30% of students not on a CSE course reported hearing about modern contraception, condoms, and traditional methods for the first time during such a course. Second, CSE courses are not the only source of information on SRH: media and friends provide knowledge on SRH. Lastly, students also might have moved from one program to another during school.

Principal barriers to CSE courses included religious beliefs, relatively poor training of teachers, and a lack of manuals as well as other teaching materials. Students enrolled in schools implementing other CSE programs or the SCEV program were more likely to report potential negative influences of sexuality education course on religious beliefs. The proportion of teachers who thought sexuality education course disrupts religious values varied from 10% among those teaching other CSE programs to more than 36% among those using the SCEV and the government programs. One in four teachers using SCEV or another CSE program thought that sexuality education course violates traditions (compared with 32% who did not).

Recommendations and way forward

In the light of these findings, we identify some potential opportunities for addressing CSE implementation in Kinshasa. First, there is need for an effective M&E system for course implementation. A mapping study could serve as a baseline to support the M&E system, which will ensure effectiveness of CSE implementation in all schools. Second, the government should organize

a 'Sexuality and Family' specialization at training colleges and universities, because the CSE course is a stand-alone subject entitled 'Éducation à la vie' or 'Éducation à la vie familiale et population'. Meanwhile government, funders and stakeholders could conduct teachers' training through summer schools/short course programs of 30-45 days each year. Furthermore, the government should develop and supply training support, including manuals and other materials.

The study also recommends public sensitization on the Family Life Course and the sexuality education module, as well as the legal and regulatory texts supporting this course. Collaboration between the national leadership of Family Life Course Directorate and the SCEV should be strengthened to harmonize the curricula and produce manuals as well as other instructional materials to improve the teaching. The study calls for creation of an inclusive platform/taskforce for collaboration encompassing the ministries (Primary and Secondary Education, Social affairs, Youth, Health) and other stakeholders (non-governmental organizations, parents SCEV, religious orders, UNFPA, UNESCO, UNICEF, WHO) that will work in synergy to support implementation of the program. The task force will support the development and production of reference manuals for Family Life Course by the Ministry of Primary, Secondary and Professional Education.

Findings from this study also suggest continuous dialogue between parents/school/other stakeholders because religious beliefs and traditions were seen as the main barriers to sexuality education. The government and partners should provide financial resources to support the Family Life Course/Sexuality Education module; as well as promote intervention and evaluation studies using a longitudinal framework to generate evidence and document best practices.

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APPENDICES

A1. Students' Questionnaire



A2. Teachers' Questionnaire



A3. Principals' Questionnaire



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