

Achieving UNAIDS 90-90-90 targets among adolescents in Kinshasa, Democratic Republic of Congo. Does school-based comprehensive sexual education effective?

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Comprehensive school-based sexuality education (CSE) has been advocated as an important tool for supporting young people to avoid negative reproductive health outcomes, including STIs/HIV. The Democratic Republic of Congo (DRC) has been implementing CSE since 1970. The study uses data from 1,247 sexually active students enrolled in 192 schools in Kinshasa. Analyses revealed that out of the 1,247 students who ever had sexual intercourse, 26% reported condom use during the last sexual intercourse, 27% ever got an HIV test among which only 15% know their HIV status. Less than 1% of participants knew the four mean of HIV transmission. These indicators are far from the 90% UNAIDS target by 2020. We argue that noncompliance in the implementation of CSE, unavailability of trained teachers, lack of manuals, and absence of strong monitoring systems as well as religious beliefs and traditions constitute barriers to achieve the UNAIDS 90-90-90 targets by 2020.

Introduction

In 2014, the Joint United Nations Programme on HIV/AIDS (UNAIDS) and partners launched the 90–90–90 targets. The UNAIDS goal targets 90% of HIV positive individuals aware of their status, 90% of people living with HIV (PLHIV) being on sustained anti-retroviral therapy (ART), and 90% of PLHIV in care being virally suppressed by the year 2020. Comprehensive school-based sexuality education offers an important tool for supporting young people to avoid negative reproductive health outcomes, including STIs/HIV (Agha & Van Rossem, 2004; Fonner, et al., 2014). The program primary goal is to equip adolescent and youth with the knowledge, skills and values to make responsible choices about their sexual and social relationships (UNESCO, 2009). In the Democratic Republic of Congo (DRC), sexual education program is part of the Family Life Education course since 1970. This study assesses the association between exposure to CSE and adolescents sexuality behavior to prevent HIV/AIDS transmission in the light of the UNAIDS 90-90-90 objective.

Data and methods

The study participants include 1,247 students who reported ever had sexual intercourses out of 5,147 students enrolled in 168 schools surveyed in Kinshasa from May 16 to May 31, 2017. Data were collected using self-administered structured questionnaire. Data analysis relies on chi-square test and Generalized Estimating Equation to determine the effect of the independent variables and covariates on the outcome variables. Exposure to school-based sexual education course is the independent variable, whereas dependent variables include systematic use of condom during sexual intercourse. Covariates encompass school ownership, district of residence, student' sex, age, class, knowledge of HIV transmission means. Independent variable (Exposure to school-based program) contains four categories: None, “Service Central d'Education à la Vie” (SCEV) program, government program lunched in 2014 and other program (school owned program).

Adolescent sexuality behavior includes the following indicators: systematic use of condom during sexual intercourse; condom use during last sexual intercourse (last six month); Ever performed HIV test; Knowledge of HIV status; Knowledge of partner HIV status.

Results

Participants are aged 15–19 years with mean of 16.9 (SD±1.27), among which 431 (34.6%) were females, 232 (23.2%) of the students were at the third class of secondary and 10% were attending the last class of secondary. About 23% of participants were attending government schools whereas 25% were enrolled to schools managed by Catholics churches and 21% in schools managed by Protestants Churches. Students attending private and other ownership schools represent 19% and 11% respectively. The large majority was enrolled to a school implementing the government curriculum (39%) following by the “Service Central d’Education à la Vie” (SCEV) curriculum (24%) and school owned curriculum 25%. Only 12% of participants reported not receiving CSE course in 2017.

Table 1 reports sexual and HIV/AIDS/STIs preventive behavior by exposure to comprehensive sexual education curriculum among adolescent who ever experienced sexual intercourse in Kinshasa selected course.

Table 1 CSE curriculum and Sexual and HIV/ADS/STIs preventive behavior

	CSE curriculum				Total	Chi2	P-value
	No	SCEV	Gov	Other			
Ever had sex	25.9	23.6	26.2	27.2	25.7	9.463	0.149
Condom use last sexual intercourse	30.0	31.3	26.3	18.6	26.2	13.123	0.004
Ever used 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	27.3	22.0	12.9	5.6	14.7	11.6376	0.009
Know HIV status of partner	18.8	16.3	14.6	20.3	17.0	4.047	0.256
Ever suffered from STIs	8.3	5.7	8.9	2.3	6.4	12.939	0.005
Number Ever had sex	155	294	484	314	1247		

Overall 26% out of 5,147 surveyed students aged 15-19 enrolled in 192 schools of Kinshasa (DRC) reported ever had sexual intercourse. Proportion of students who ever experienced sexual intercourse is low among adolescents enrolled in schools implementing the SCEV program (23.6%) compared to those receiving other curriculum (above 26%, P-value < 0.053).

Table 1 shows also that out of 1,247 adolescents who ever experienced sexual intercourse, 38% ever used condom while 26% only used condom during the last sexual intercourse occurred over the last six months. Findings from chi-square test revealed that students receiving the SCEV program were more likely to use condom (ever used or condom during last sex) than those enrolled in schools implementing other curriculum (Government or schools owned).

Analyses of HIV-related test revealed that 27% of adolescents got HIV test. Proportion of adolescents who ever got HIV test was low (24%) among students enrolled in schools implementing SCEV curriculum or not receiving any CSE course that year compared to those receiving other program (government and school owned) though the difference is not statistically significant. By contrast, proportion of adolescents who know their 27% HIV status among those who got HIV test is respectively estimated at 27% and 22% for students enrolled in schools where CSE was not taught and those receiving the SCEV curriculum. The corresponding proportion was estimated at 15% on average, 13% and 6% for students enrolled in schools implementing the government and school owned program respectively. Last, table 1 reports that 6% of adolescents who ever had sexual intercourse had ever suffered from an STI over the last 12 months. This proportion is low among adolescents (15-19) receiving other CSE program compared to those enrolled in schools implementing the SCEV (5%) or the government curriculum (9%) as well as those who were not exposed to the CSE in 2017 (8%).

Multivariate models using the Generalized Estimating Equations report mixed findings depending on the considered outcome indicator. Overall, observed differences at the bivariate level are not significant after controlling for covariates. Findings showed that participants' sex, age and grade are the best predictors of HIV-related preventive behavior. Females are less likely to use condom compared to males and more likely to go for HIV test.

Conclusion

This study aimed to analyze assesses the association between exposure to CSE and adolescents sexuality behavior to prevent HIV/AIDS transmission in the light of the UNAIDS 90-90-90 objective. Overall, all considered indicators are far below the UNAIDS 90-90-90 targets regardless of their exposure to the school-based comprehensive sexual education and the type of curriculum. Out of the 1,247 students who ever had sexual intercourse, 26% reported condom use during the last sexual intercourse, 27% ever got an HIV test among which only 15% know their HIV status. These last indicators are far from the 90% UNAIDS target by 2020. Whereas findings from bivariate analyses showed slight differences by type of curriculum (proportion who ever used condom or who used during the last sexual intercourse) or knowledge of HIV status, these differences are not significant after controlling for the effect of covariates (age, sex, district of residence, etc.). We argue that noncompliance in the implementation of CSE, including the co-existence of several programs and curriculum, unavailability of trained teachers; lack of manuals, and absence of strong monitoring systems as well as low collaboration between parents and religious leaders constitute barriers to achieve the UNAIDS 90-90-90 targets by 2020. Government and principal stakeholders should increase efforts in improving the implementation of the course as well as improving access to sexual and reproductive health services for adolescents and youth.

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Table 1 – Characteristics of participants

Characteristics	%	N
Sex		
Male	65.4	816
Female	34.6	431
Age		
15	15.5	193
16	24.6	307
17	26.1	325
18	19.9	248
19	14.0	174
Class		
3	23.2	232
4	34.0	340
5	32.7	327
6	10.1	101
School ownership		
Government	22.7	283
Catholic	24.7	308
Protestant	20.7	258
Private	18.4	229
Other	13.6	169
District		
Funa	17.5	218
Lukunga	27.5	343
Mont Amba	14.0	174
Tshangu	41.1	512
Religion		
Catholic	24.1	1,207
Protestant	21.9	1,093
Other christians	49.8	2,491
Others	4.2	211
CSE curriculum		
No	12.4	155
SCEV	23.6	294
Government	38.8	484
Other	25.2	314
Total	100.0	1247