Original Article

Predictors of Family Life and Human Immunodeficiency Virus Education among Secondary School Students in a Southwestern Metropolis, Nigeria

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Abstract

Background: In schools, young people learn about sexuality in both formal and informal ways. Family Life and human immunodeficiency virus/acquired immune deficiency syndrome Education (FLHE) is important to students. Effective implementation of FLHE program will ensure that adolescents do not lack important information to develop the right attitude and behavior toward sexuality issues. **Aims and Objectives:** This study aimed to assess the level of impact of FLHE curriculum among students in a Southwestern metropolis of Nigeria. A quantitative study was carried among 410 students in selected secondary schools in Ibadan. Data collection was carried out using pretested, semi-structured, interviewer-administered questionnaires. **Materials and Methods:** Data analysis was done using descriptive statistics, Chi-square test, and binary logistic regression was used to test the relationships between variables at a 95% level of significance. **Results:** The mean age for the study respondents was 14.93 ± 1.42 years with 53.2% from public schools; 25.6% from private schools, and 21.2% from missionary schools. Mass media accounted for the most frequent source of information (85.1%) while the school was the least source of information (23.2%) on FLHE. Students aged 16–20 years were 1.6 times more likely to have sex as compared to students aged 12–15 years (odd ratio [OR]: 1.60; 95% confidence interval [CI]: 0.73–3.49) while female students were six times less likely to have sex compared to male students (OR: 0.163; 95% CI: 0.08–0.33). **Conclusion:** Knowledge of FLHE amongst young adults is considerably more from extraneous sources other than from school or family units. The budgetary allocation by the National and State governments to the educational sector should be scaled up to enhance the full implementation of FLHE in most secondary schools to invariably support the Fourth Sustainable Development Goal.

Keywords: Adolescents, awareness, knowledge, secondary school, teachers

Introduction

Sexuality among young adults is an ever-increasing sensitive topic that must be handled by not only teachers and parents, but by role models in every community.[1] Deficient ownership or control of this topic can tilt teens and young adults to seek answers from random persons or media that place very little emphasis on their physiological and psychological developments, in many instances leading to fatal and detrimental consequences. Schools and formal educational environments are known to be a major source of information and avenue of instruction for young adults.[2] For about the three decades, many developing countries have witnessed an immense improvement in enrolment rates in schools with about 1.2 billion people of the world population, adolescents aged 10–19 years, making up the global secondary school population.[3]

Adolescence is a period of physiological, emotional, and social development in a young individual, is a crucial time for improving the attitudes and behaviors concerning sexuality and reproductive rights and responsibilities.[2] Although

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adolescents are often characterized by extreme emotional outbursts, this period is crucial to impact them with positive lifestyle changes. It is equally a known fact that the approach used to nurture them will determine their propensities to rebel or not.[4] The recent scourge and the global concern of Human Immunodeficiency Virus (HIV)/acquired immune deficiency syndrome (AIDS) in Nigeria initiated an urgent intervention in adolescent reproductive health issues. One of the interventions involved reviewing the sexuality education curriculum. The curriculum was reviewed and redesigned as Family Life and HIV Education (FLHE) Curriculum for primary, secondary, and tertiary tiers of education.[5]

Family Life and HIV/AIDS Education (FLHE) is defined as "a planned educational process designed to foster an individual physical, emotional, and moral development as they grow into adulthood, parenthood, aging, as well as their relationships socially, culturally with the family and society at large."[5] Regardless, FLHE is incomplete without a brief explanation of health-promoting schools. The concept of health-promoting schools centers on an infusion of healthy lifestyles and promotion of health system and lifestyle into all schools' daily activities. The concept of health-promoting schools also extends to the education of young persons on issues around family life, reproductive health and reduction of health-related challenges such as early and unintended pregnancies, HIV/sexually-transmitted infections, and sexual violence.[6]

FLHE plays a vital role in influencing attitudes and behaviors toward sexuality issues. Therefore, effective implementation of FLHE program will help in ensuring that adolescents in Nigeria are well informed to exhibit and make appropriate decisions regarding sexuality.[7] School-based programs provide significant opportunities for preventing HIV/AIDS. Suicide, Interpersonal Violence, and HIV/AIDS are the major causes of death among adolescents. Reports have shown that over 1.1 million adolescents aged 10–19 years died in 2016 with a daily mortality rate of 3000, mostly from treatable or preventable conditions. Fifty percent of all mental disorders among adults start by age 14 which was undetected. Across the globe, there are 44 births/1000 to girls aged 15–19 annually.[3] The Global Campaign for Education has shown that effective primary education alone could universally prevent 700,000 HIV infections incidences globally each year. Education causes an increase in knowledge, safe behavior, and reduction in infection rates. It has been described as the "social vaccine" and potentially "the single most effective preventive weapon against HIV/AIDS.[2]

In schools, young people learn about sexuality in both formal and informal ways. A study by Lan *et al*. 2018 revealed school teachers as the most common source of information.[8] Therefore, there is a need to ensure that these sources provide accurate information that will influence the appropriate behavioral change in adolescents.[9] Health and family life education; a total life-skill programme, focuses on HIV and AIDS prevention through education and community development projects. Its primary aim is to increase the awareness of children and youths using both formal and informal approaches to positively influence their choices. Achieving this will not only positively impact their health but also their overall development in adolescence and into adulthood.[10,11]

Two possible reaction outcomes have been identified about sexuality education among adolescents particularly school-based FLHE. The first possible outcome is an inability to engage in sexuality and health-promoting activities due to bottlenecks such as fear and uncertainty about community acceptability. Another possible outcome is embarking on the health promotion projects without an action plan, thus resulting in little or no impact. However, holistic and accurate sexual reproductive health information for young people will predispose them to develop attitudes that support appropriate behavior.[1]

The basic role of the Ministry of Education is to emphasize the implementation of the revised FLHE curriculum in all schools, by integrating the scope of early sex education programs in schools, with an increased focus on the younger age groups.[12] The media should also be used to provide sex-specific moral messages that target youths.[12,13] Some countries have replaced the curriculum with policy documentation of FLHE while Nigeria is still unable to fully implement the FLHE curriculum in some schools in Ibadan metropolis. Although the curriculum was introduced into the Nigerian educational sector in 2003, full implementation of the FLHE curriculum in all secondary schools in Ibadan has not been actualized. A study by Lan *et al*. 2018 has highlighted the need to upscale and assess the FLHE curriculum.[8] The importance of FLHE in our secondary schools cannot be underestimated and has called for this study to assess the level of impact of the FLHE curriculum among students in Ibadan metropolis.

Materials and Methods

This study design employed a cross-sectional quantitative approach. The study was carried out in Ibadan, the capital city of Oyo State. Ibadan is located in the southwestern part of Nigeria. The metropolis is the most populous city in Oyo state and the third-most populous city in Nigeria, with a population of over 3 million inhabitants.[14] The predominant residents are Yoruba ethnic groups with a sizable number of Hausa and Igbo communities (living occasionally in community clusters). At present, Oyo state has 969 public secondary schools including seven schools of Science and 57 private secondary schools.[14] The state also has five government technical colleges at Oyo, Ogbomoso, Ibadan, Saki-Okeogun, and Igbo-Ora. The city is made up of 11 Local Government Areas (LGAs) which is been divided into five urban (comprising of Ibadan North, Ibadan North-East, Ibadan North-West, Ibadan South-East, and Ibadan South–West LGAs) and six semi-urban areas (comprising of Akinyele, Egbeda, Ona–Ara, Ido, Oluyole, and Lagelu LGAs). The study sites were 14 selected secondary schools from six

LGAs. The study population consisted of students from selected junior secondary and senior secondary schools (SSSs).[15]

A sample size of 427 was estimated using a 5% level of significance, at a 90% power, 5% tolerable error and the prevalence of 50% with the inclusion of a 10% nonresponse rate. A multi-stage sampling technique was employed for the selection of the study participants. First, three urban local governments and three semi-urban local governments were selected using a simple random sampling technique from five urban local governments and six semi-urban LGAs in the metropolis. The list of schools from the selected six LGAs was obtained from Oyo State PostPrimary Teaching Service Commission Ibadan, followed by a simple random sampling technique in the selection of one public secondary school and one private secondary school from each LGA and two missionary-owned secondary schools were purposively selected. Then, in each of the selected schools, 31 students were selected across all the classes using a stratified random sampling technique. The sample was proportionately selected by dividing the number of students in each class by the total number of students in the school (population size) multiplied by 31 (sample size) then the simple random method was later introduced for the final selection of participants by asking all students to pick numbers randomly from a bag intermingled with blank sheets; the student that picked a blank sheet was selected to participate in each classroom. All selected schools that were recognized and registered with the Oyo State Ministry of Education were included in the study, students below the age of 12 were not selected for this study.

Out of a total of 422 students enrolled to participate, 12 questionnaires were not properly filled (discovered during data cleaning). Hence, 410 respondents' data were utilized for the final analysis. A standard interviewer-administered questionnaire was adapted from the literature[16] to collect data from the respondents. The questionnaire was divided into four sections based on the objectives of the study (sociodemographic data; level of awareness on Family Life and HIV/AIDS Education; level of knowledge on all the six themes in the FLHE curriculum, and students' sexual attitudes). Data collection was carried out using a pretested questionnaire. The pretest was carried out in a secondary school in Oyo town to test the reliability of the data collection instruments. Slight modifications were carried out on the instrument before it was adapted for the study. A Cronbach's alpha model score of 0.84 was derived to authenticate the reliability of the study instrument (to ascertain the internal consistency of the questionnaire).

Each questionnaire was completed in approximately 20 min. Questionnaires were checked for errors and cleaned. Data were entered and analyzed using the SPSS version 23.[17] Relevant frequencies, percentages, means and appropriate graphs, and diagrams were generated. The Chi-square test was used to test the relationships between variables at a 5% level of significance and logistic regression was used to show the predictors of FLHE curriculum at a 95% confidence level. The outcome variables explored for this study were, "knowledge on exposure to family life and HIV/AIDS education" and "students' awareness of family life and HIV education."

A standard questionnaire that was used had a total of 40 questions toward knowledge on FLHE with a "yes, "no" or "don't know." Correct responses were scored "1" while wrong responses (don't know responses) were scored "0." The total score was computed with the highest score being 40 and the lowest score being 0, the mean score was 28.76 ± 4.19. The mean score was used to dichotomize knowledge such that students that scored <28 were categorized as students with poor knowledge while students with a score of >29 were categorized as good knowledge. Students' awareness of family life and HIV education was also an outcome variable in this study. The variable was derived from the computation of what were the different sources of information on sexuality and HIV/AIDs issues that were provided by the respondents. Scoring and categorization of the awareness component were similar to the knowledge construct.

Written informed consent was obtained from all the participants and ethical issues like confidentiality, right to decline interview at any stage and nonexposure to risk were fully discussed with each respondent before the interview session. The methods used in this study were performed following the relevant institutional guidelines, rules, and regulations.

Results

The respondents were between the ages of 12–20 years with a mean age of 14.93 ± 1.42 years. The majority of the respondents were between the ages of 12 and 15 years (69.5%), females (61.5%), practicing Christianity (58.5%), and of Yoruba descent (86.8%). The majority of the students were also living with both parents (84.4%), attended public schools (53.2%), and operated a mixed school setting comprising of both genders (87.1%). The larger percentage of the population sample was in SSS II (SS2) with 64.4% and others from different levels of Junior Secondary School (JSS) and SSS were 35.6% [Table 1].

The mean score was 28.76 ± 4.19, this was used to dichotomize knowledge, students that scored 28 and below were categorized as a student with poor knowledge while students with a score of 29 and above were categorized as good knowledge. Students that had poor knowledge were 179 (43.7%) and the students with good knowledge were 231 (56.3%) [Figure 1].

Results highlighted that age, family type, and type of secondary school attended were significantly associated with the overall knowledge of FLHE curriculum in secondary schools in the metropolis ($P < 0.05$). Good knowledge was significantly higher among students between the ages of 12 and 15 years (61.1%) compared to students within the age group of 16 and 20 years (45.6%) ($P = 0.004$). Good knowledge was significantly higher among students from monogamous

Table 1: Sociodemographic characteristics of students (*n*=410)

Variable	Frequency, *n* (%)
Age (years)	
12-15	285 (69.5)
16-20	125 (30.5)
Sex	
Male	158 (38.5)
Female	252 (61.5)
Religion	
Christianity	240 (58.5)
Islam	170 (41.5)
Ethnicity	
Yoruba	356 (86.8)
Igbo	44 (10.7)
Hausa	9 (2.2)
Others^	1 (0.2)
Whom student live with	
Both parents	346 (84.4)
Either of the parents	46 (11.2)
Others≠	18 (4.4)
Family type	
Monogamous	322 (78.5)
Polygamous	88 (21.5)
Type of school	
Public	218 (53.2)
Private	105 (25.6)
Missionary	87 (21.2)
Category of school	
Mixed	367 (87.1)
Girls only	52 (12.7)
Boys	1 (0.2)
Current class in school	
JSS 1	2 (0.5)
JSS 2	4 (1.0)
JSS 3	53 (12.9)
SS 1	75 (18.3)
SS 2	264 (64.4)
SS 3	12 (2.9)

^Ibibio, ≠Grandparent, uncle, aunt, daddy's friend, guardian.
SS: Secondary school, JSS: Junior SS

families (59.9%) compared to those from polygamous families (43.2%) (P = 0.005). Similarly, good knowledge was significantly higher among students from missionary schools (66.7%) and private schools (59.0%) compared to students from public schools (50.9%) (P = 0.035).

The association between students' overall knowledge on exposure to FLHE curriculum in secondary schools in Ibadan and sex, whom they live with, school category, and current class were not found to be statistically significant factors [P < 0.05, Table 2].

Majority of the respondents (96.6%) had heard about FLHE. The respondents' attested that the frequent source of information was the mass media (85.1%) which include radio and television while the school was observed as the least

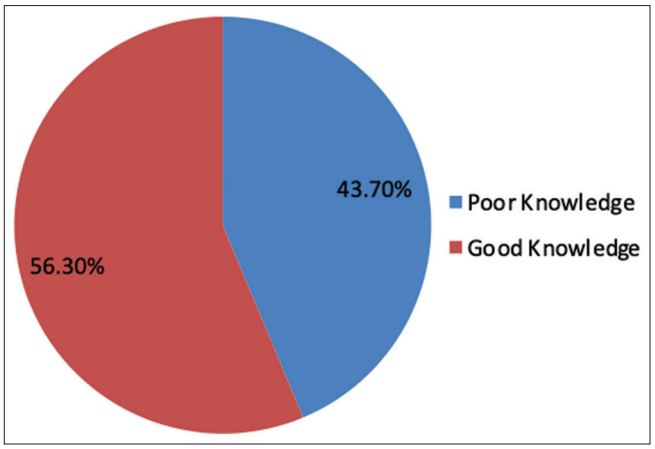

Figure 1: Overall knowledge on exposure to FLHE curriculum among students'. FLHE: Family Life and HIV/AIDS Education

source of information (23.2%) on FLHE. It was observed that source of information is taken more seriously than other and the most important source of information which was given higher priority was mass media (radio and television) with 32% while the least important source of information was from neighbours, peers, friends, family members and community dwellers (0.7%). This information influenced the relationship with the opposite sex (60.9%), most of the students (82.7%) reported that the source provides adequate information to address FLHE concerns. Over half (76.3%) reported that they have attended school classes on puberty and sexual education which contradicts the significance of the study but portrays that the respondents give contradicting information that is beclouded with preferences, biases, and self-induced reasons [Table 3].

Table 4 presented the findings of variables with a significant association. Four factors (age of the student, gender, family type, and type of secondary school attended) were all factors found to be statistically significant factors associated with sexual exposure at a 5% level of significance. Amongst the population of students with sexual exposure, students aged 16–20 years were found to significantly indulge more in sexual intercourse (21.6%) compared to their counterparts between ages 12–15 years (8.1%) (P < 0.001). Male students were significantly more involved in sexual encounters (21.5%) compared to female students (6.3%) (P < 0.001). Students from polygamous family settings were significantly more involved in sexual activities (22.7%) compared to their counterparts from monogamous family units (9.3%) (P < 0.001). Students that attended public secondary schools were sexually more active (16.5%) compared to students from private secondary schools (8.6%) and missionary secondary schools (5.7%) (P = 0015). There was no statistically significant association between whom the students live with, category of schools, current class in school, and sexual activities of the students at the 5% level of significance [Table 4].

Table 2: Association between sociodemographic characteristics and students' overall knowledge on exposure to family life and human immunodeficiency virus/acquired immuno-deficiency syndrome education curriculum

Sociodemographics	Poor knowledge, *n* (%)	Good knowledge, *n* (%)	Total, *n* (%)	χ^2	*P*
Age (years)					
12-15	111 (38.9)	174 (61.1)	285 (100)	8.435	0.004*
16-20	68 (54.4)	57 (45.6)	125 (100)		
Sex					
Male	66 (41.8)	92 (58.2)	158 (100)	0.372	0.542
Female	113 (44.8)	139 (55.2)	252 (100)		
Whom do you live with					
Both parents	152 (43.9)	194 (56.1)	346 (100)	4.125	0.127
Single parents	23 (50.0)	23 (50.0)	46 (100)		
Others[≠]	4 (22.2)	14 (77.8)	18 (100)		
Family type					
Monogamous	129 (40.1)	193 (59.9)	322 (100)	7.889	0.005*
Polygamous	50 (56.8)	38 (43.2)	88 (100)		
Type of secondary school					
Public	107 (49.1)	111 (50.9)	218 (100)	6.691	0.035*
Private	43 (41.0)	62 (59.0)	105 (100)		
Missionary	29 (33.3)	58 (66.7)	87 (100)		
School category					
Boys only	0	1 (100)	1 (100)	1.054	0.590
Girls only	21 (40.4)	31 (59.6)	52 (100)		
Mixed school	158 (44.3)	199 (55.7)	357 (100)		
Current class in school					
JSS 1	2 (100)	0	2 (100)	6.432	0.266
JSS 2	1 (25)	3 (75)	4 (100)		
JSS 3	22 (41.5)	31 (58.5)	53 (100)		
SSS 1	27 (36.0)	48 (64.0)	75 (100)		
SSS 2	120 (45.5)	144 (54.5)	264 (100)		
SSS 3	7 (58.3)	5 (41.7)	12 (100)		

*Significant associations, [≠]Grandparent, uncle, aunt, daddy's friend, guardian. SS: Secondary school, JSS: Junior SS, SSS: Senior SS

Sexual activities among students

Table 5 presents predictors of sexual activities among the respondents. Students aged 16–20 years were 1.6 times more likely to have sex compared to students between 12 and 15 years (odd ratio [OR]: 1.60; 95% confidence interval [CI]: 0.73–3.49). The analysis also showed that female students were six times less likely to have sex compared to male students (OR: 0.16; 95% CI: 0.08–0.33). The analysis revealed that students from polygamous families were 2 times more likely to have sex compared to those from monogamous families (OR: 1.96; 95% CI: 0.94–4.09). Students from private secondary schools (OR: 0.25; 95% CI: 0.08–0.81) were 4 times less likely to have sex compared to their counterparts in public schools, while students that attended missionary secondary schools (OR: 0.54; 95% CI: 0.17–1.72) were 1.9 times less likely to have sex compared to those from public secondary schools [Table 5]. Findings from this table establish the gender of a student and the type of secondary school attended as predictors of sexual intercourse among secondary school students in the metropolis.

Discussion

The majority of the respondents were between the ages of 12 and 15 years with a mean age of 14.93 ± 1.42 years which represent early and middle age adolescents who are exposed to challenges of health risk behavior.[18] It was shown that most of the respondents were females, this was similar to the study done in Cross Rivers State.[19] More than half of the respondents are Christians which is similar to the study population of the research done by Hassan *et al*. where the students that practice Christianity were 62.8%.[20] The majority of the students were Yorubas, this is logical because Ibadan is a state in the western part of Nigeria dominated by Yoruba-speaking people. Students living with both parents were found to be 84.4%, the students' from monogamous families are 78.5%, this is also similar to the population sample of the study done by Hassan *et al*. in which those from monogamous families were 75.9% while others from polygamous home were 21.5%.[20]

Furthermore, this study disclosed that students' knowledge on reproductive health education was relatively fair, 56.3% of students' interviewed had a good knowledge of sexuality and HIV/AIDS education while 43.7% fell into the poor knowledge category, this finding is consistent with a study conducted in Rivers State to estimate the relevance of reproductive health needs of secondary students.[21] In this study, 50% of the respondents indicated that Family Life HIV/AIDS Education improved quality of life, sex education, family

Table 3: Awareness of students to family life and human immunodeficiency virus education (*n*=410)

Variables	Frequency (%)
Ever heard of FLHE	
Yes	396 (96.6)
No	14 (3.4)
Source of information*	
Radio and television	344 (85.1)
Family members	251 (62.1)
Health workers	207 (51.2)
Friends	195 (48.3)
Pamphlets and posters	186 (46.0)
Religious groups	186 (46.0)
Neighbors	136 (33.7)
Community groups	104 (25.7)
Schools	95 (23.2)
Most important source of information	
Mass media	131 (32.0)
Family members	114 (28.2)
Health workers	54 (13.4)
Schools	38 (9.4)
Religious	29 (7.1)
Friends	23 (5.6)
Pamphlets and posters	9 (2.2)
Neighbors	3 (0.7)
Community groups	3 (0.7)
Source of information influence relationship with opposite sex	
Yes	246 (60.9)
No	158 (39.1)
Source provide adequate information to address FLHE concerns	
Yes	334 (82.7)
No	70 (17.3)
Ever attended school classes on puberty and sexual education	
Yes	313 (76.3)
No	82 (20.0)
Don't know	15 (3.7)

*Multiple responses. HIV: Human immunodeficiency virus, AIDS: Acquired immuno-deficiency syndrome, FLHE: Family Life and HIV/AIDS Education

planning, and promotion of health. It was clear that they have been taught these topics but they could not relate them to the term FLHE,[21] and the study done in some private secondary schools in Ibadan North Local Government showed that 54.1% of respondents had the basic knowledge of health education curriculum content, this implies that the larger percentage of respondents had good knowledge on what health education entails.[22] This study found that secondary schools students were knowledgeable about HIV/AIDS, this is consistent with the study carried out in SSSs in Ibadan northwest LGA; a large number (84%) felt that HIV/AIDS could be prevented through abstinence from sex while 78% and 75% respectively agreed it can be prevented.[23] However, these findings were contrary to the study of assessment of comprehensive HIV/AIDS knowledge level among in-school adolescents in eastern Ethiopia which reported only a quarter (24.5%) to have comprehensive knowledge of HIV/AIDS.[24]

The frequent source of information on sex education in this study was the mass media (85.1%) (including radio and television) while the school is the least source of information (23.2%) on sex education. These findings are consistent with the study done in Oyo state in 2013 which showed that the mass media (63%) is the most frequent source of information about HIV.[25] These findings are however not in consonance with the research done in Ibadan Northwest LGA in 2016 which revealed that the frequently reported source of information on HIV/AIDS was the school (45%) friends or mass media (30%) and health workers (11%) while parents (5%) are the least.[23] Research done in Akwa Ibom revealed that the school (79.7%) was also the major source of information on HIV.[26] Another study carried out in India showed that the frequent source of FLE were parents (81%), schools (55%) while the health workers (10%) were the least source of information on FLE.[27] This difference in results may be attributed to the location of the research. Surprisingly, 60.9% of the students agreed that the information influenced their relationship with the opposite sex positively.

The gender of the student is also a factor for carrying out sexual intercourse apart from age of the adolescent, the type of family, and the type of secondary school attended. It was revealed thatmale students are significantly higher to have sex (21.5%) compared to female students (6.3%), this is similar to the study done across the geo-political zones of Nigeria in 2016, where more males (24.4%) reported that they had experienced sexual intercourse compared to their female (13.2%) counterparts.[20] In contrast, another study done in Akwa Ibom showed that exposure to sex did not differ between females and males[26] while the study done in Ethiopia revealed that more females (44.6%) were involved in sexual intercourse compared to male students (33.1%).[28] Cultural differences from differing study sites might have been responsible for this difference among the participants.

Female students being 6 times less likely to have sexual intercourse compared to male students, maybe as a result of the fact that male students may not be victims of teenage pregnancy compared to female students. Similarly, the relative increase of sexual encounters amongst public school students compared to private secondary and missionary secondary schools may be attributed to the fact that students who attend government-owned schools are less protected and exposed.[29] Hence, they may want to explore their sexualities at any given opportunity of freedom. The laxity that comes with polygamy also contributes and has been documented in the literature to favour uncontrolled exploitation of sexuality amongst teens and young adults.[30]

A pertinent limitation that was observed in this study was the issue of interviewer bias (students being skeptical to divulge personal information such as age at sexual debut), however,

Table 4: Association between sociodemographic characteristics and sexual activities among students

Sociodemographics	Yes to sex, *n* (%)	No to sex, *n* (%)	Total, *n* (%)	χ^2	*P*
Age (years)					
12-15	23 (8.1)	262 (91.9)	285 (100)	14.854	<0.001*
16-20	27 (21.6)	98 (78.4)	125 (100)		
Sex					
Male	34 (21.5)	124 (78.5)	158 (100)	20.870	<0.001*
Female	16 (6.3)	236 (93.7)	252 (100)		
Whom do you live with					
Both parents	39 (11.3)	307 (88.7)	346 (100)	4.388	0.111
Single parents	6 (13.0)	40 (87.0)	46 (100)		
Others[≠]	5 (27.8)	13 (72.2)	18 (100)		
Family type					
Monogamous	30 (9.3)	292 (90.7)	322 (100)	11.608	0.001*
Polygamous	20 (22.7)	68 (77.3)	88 (100)		
Type of secondary school					
Public	36 (16.5)	182 (83.5)	218 (100)	8.463	0.015*
Private	9 (8.6)	96 (91.4)	105 (100)		
Missionary	5 (5.7)	82 (94.3)	87 (100)		
School category					
Boys only	0	1 (100)	1 (100)	2.458	0.293
Girls only	3 (5.8)	49 (94.2)	52 (100)		
Mixed school	47 (13.2)	310 (86.8)	357 (100)		
Current class in school					
JSS 1	1 (50)	1 (50)	2 (100)	6.953	0.224
JSS 2	1 (25)	3 (75)	4 (100)		
JSS 3	3 (5.7)	50 (94.3)	53 (100)		
SSS 1	7 (9.3)	68 (90.7)	75 (100)		
SSS 2	37 (14)	227 (86.0)	264 (100)		
SSS 3	1 (8.3)	11 (91.7)	12 (100)		

*Significant associations, [≠]Grandparent, uncle, aunt, daddy's friend, guardian. SS: Secondary school, JSS: Junior SS, SSS: Senior SS

Table 5: Logistic regression showing the predictors of sexual intercourse among secondary school students in Ibadan

Characteristics	OR	95% CI		*P*
		Lower	Upper	
Age (years)				
12-15 (reference)	1			
16-20	1.601	0.734	3.491	0.237
Sex				
Male (reference)	1			
Female	0.163	0.080	0.331	<0.001*
Family type				
Monogamous (reference)	1			
Polygamous	1.963	0.941	4.093	0.072
Type of secondary school				
Public (reference)	1			
Private	0.252	0.078	0.814	0.021*
Missionary	0.540	0.170	1.716	0.296

*Significant associations. OR: Odds ratio, CI: Confidence interval

they were being interviewed individually and reassured of confidentiality to obtain such sensitive information. The major source of bias emerged from this study during questionnaire administration in which students might have failed to understand the questions correctly; this bias was overcome by the researcher-guided method (interviewer-assisted approach).

Conclusions

This study showed that the level of awareness of the FLHE curriculum was associated with sex, religion, type of secondary school attended, and the category of the school attended by the students while the predictors of sexual activities included the type of family and the type of secondary school attended.

FLHE has been demonstrated to be an essential and effective framework for the establishment and execution of sexuality and life skills education program in Nigeria. It is discouraging that it has been poorly adopted in all schools hence influencing the sexual behavior of students negatively as shown in this study. Inadequate budgetary allocation by the government to the educational sector in Nigeria is a key issue to explore that may be responsible for such a dismal uptake in many schools. The consequent reduction in uptake of FLHE is a manifestation of poor social responsibility on the part of National and State governments, which are saddled with the responsibility of providing quality primary and secondary education for their citizens. Achievement of quality sexual education will contribute to the realization of the fourth

sustainable development goal. All governments worldwide should conduct periodic large-scale, country-specific nationwide assessments to evaluate FLHE curricula regularly, to measure its effectiveness, status and continuing impact on adolescents and young adults.

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Conflicts of interest

There are no conflicts of interest.

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