



Knowledge and attitude of sex education among secondary school students in south-western Nigeria: A cross-sectional study

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ABSTRACT

Sex education helps in preparing adolescents to have responsible attitudes and behaviour towards sex for a harmonious sexual life. This study assessed the level of knowledge and attitude towards sex education among secondary school students in an urban south-western Nigeria.

The study adopted a descriptive cross-sectional design. Multistage sampling technique was used to select a sample size of 378 students from a population of 3674 students in public secondary schools. A pre-tested self-administered questionnaire with Cronbach' Alpha value of 0.76 was used for data collection. The approval of the study was obtained from the Human Research Ethics Committee of Lagos University Teaching Hospital. Data were analyzed using SPSS version 20. Chi-square test and multiple logistic regression were used for test of association among the variables at $p < 0.05$.

Majority of the respondents 338 (89.9%) were between age 14–17 with mean age of 16 ± 5.22 years. Majority of the respondents 309 (82.1%) had a good knowledge of sex education. More than half, 216 (57.5%) of the respondents had positive attitude towards sex education. There was a significant relationship between knowledge and attitude of the respondents towards sex education ($p = 0.01$). Knowledge of sex education increases as class of students increases to SS2 = (OR = 7.750; 95% CI [3.268–18.378] and SS3 = (OR = 2.219; 95% CI [1.067–4.613] respectively.

The study concluded that the respondents had good knowledge of sex education and there was a significant relationship between students' knowledge and attitude towards sex education. There is need for awareness and effective sex education among secondary school students. Teachers and parents should create the view of improving the attitude of secondary school students towards sex education.

1. Background

Sexuality is a natural part of life and it is defined as the very essence of one's humanity which includes one's self-image, gender, physical looks and ability to reproduce [1]. Human sexuality is concerned with the way people experience and express themselves as sexual beings. On the other hand, sex education involves the process of acquiring knowledge and making up beliefs, values, and attitudes about intimacy, relationships, and identity [1]. Due to the influence of religion, cultural background and norms of many African societies especially parents most times find it difficult to teach their adolescents about sex, with the mind that such matter should not be discussed at home and that the child does not need such information until he or she is ready for marriage [2,3]. Most parents that understand sex education should be part of their responsibilities are afraid to provide sex education because of their unfamiliarity with teaching methods or lack of adequate knowledge [4,5] Most of the discussions about sex between parents and adolescents was more of giving do's and don'ts without a proper

explanation of critical issues that bother on proper understanding of adolescents sexual and reproductive challenges they encounter in their different developmental stages [6]. To this effect, studies [7–8] have shown that adolescents go online, meet friends at school [6] and other sources in their neighbourhood to seek answers to their inquisitive minds about sex and meet their sexual and reproductive health information needs [7–8]. Freeman et al. [10] opined that adolescents and young people generally differ in their sophistication, ability to search and appraise information. Therefore, many adolescents and young people may end up with inadequate or deficient knowledge about what sexuality really mean if the information obtained is not accurate or adequate [9].

Indeed, sex education does not mean instructing adolescents in sexual techniques or acts, rather it entails giving the necessary facts, information or knowledge about sex and encouraging questions and discussions [2]. According to Obiunu [1], sex education helps in preparing adolescents to have responsible attitudes and behaviour towards sex for a harmonious sexual life. Its goal is to help students make wise, important, responsible and

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informed decisions by providing them with accurate, current and appropriate knowledge, with regard to their age, on human sexuality and the consequences of sexual activities. Sexuality education is also meant to help students develop a moral consciousness, respect for themselves and for others. It also helps students practice abstinence before marriage which stands as the best protection against sexually transmitted diseases and unwanted pregnancies among adolescents [1].

Adolescence can be seen as the transitional period from childhood to adulthood in which major changes that are physiological, psychological and intellectual take place [10]. Most recent studies on sex education for adolescents and young students in sub-Saharan Africa were tilted towards assessing knowledge and attitude of teachers and parents [3,4], on who should give the sex education and what should be the right timing of sex education for these young students [5]. Many studies have shown that changes and development in adolescence make the adolescent students inquisitive as to know what is going on within and around them, therefore they seek for information from sources made available to them. This has become a societal problem when the information gotten are inadequate and inappropriate as to what they really need to know about sexuality, and this leads to the increase in incidences of inappropriate sexual behaviours, unplanned sex, unwanted sex, unwanted pregnancies, unsafe abortion, sexual coercion, sexual violence and sexually transmitted diseases [11,12]. Therefore, there is need to assess the knowledge and attitude of sex education among secondary school students in South – Western Nigeria.

2. Methods and materials

The study adopted a descriptive cross-sectional research design. Data collection was through a self-administered questionnaire, designed through intensive literature search. Multistage sampling technique was used for selection of respondents. The population for the study were the senior secondary school students between the ages of 10–21 year above in Surulere Local Government Area of Lagos State, Nigeria. There are Twenty-eight (28) secondary schools in Surulere Local Government Area in which eight (8) of the schools were mixed government schools. These eight schools were purposively selected to enable the researcher to have a wide range of results and generalize the study since mixed schools are both male and female gender. Stage two involved the selection of three schools out of the eight mixed schools by simple random sampling technique. The three-school selected were Community Senior Grammar School with a population of 873 students, Aguda Senior Grammar School with 2002 students and Obele Community Senior High School with 799 students. The total population of the three schools at the time of data collection was 3674.

Parten [13] formula was used to calculate the sample size. Partens’s formula is useful for the determination of the sample size of population less than 10,000.

$$n = \frac{NX}{(N - 1)E^2 + X}$$

Total number of students = 3674. Where, n = sample size, N = Population size (3674), X = Level of confidence (0.95), E = sampling error (0.05 acceptable error).

Substituting,

$$n = \frac{3674 \times 0.95}{(3674 - 1)0.05^2 + 0.95}$$

n = 344.47 approximately 344 senior secondary school students. A 10% non-response rate was added to make a sampling size of 378 students.

Participants’ selection was done by convenient sampling technique until the desired sample size was achieved.

Ethical approval was obtained from Lagos University Teaching Hospital Research Ethical Committee (LUTHREC) with approval number (ADM/DCST/HREC/APP/2582). Informed consent from the respondents and

parental accent through the school principals was taken. Assurance of the confidentiality and privacy of the information obtained was ascertained.

The instrument used was pre-tested with a result of Cronbach’s Alpha reliability coefficients for the questionnaire ranged from 0.74 to 0.78. The overall knowledge was scored by ranking right responses as 1 and the wrong responses as 0. Scores were summed up for the 7 items that assessed knowledge in section B of the questionnaire. Scores of 4 out of 7 were categorised as good knowledge and scores below 4 as poor knowledge. The overall attitude was scored by ranking the right responses as 1 and the wrong responses as 0. The 10 items in section C of the questionnaire were summed up for the attitudinal scores. Scores of 5 out of 10 were categorised as positive attitude and those below 5 as negative attitude. Data collected were analyzed using descriptive and inferential statistics with the aid of SPSS version 20. Chi-square test and multiple logistic

regression was used for test of association among the variables at p-value < 0.05.

3. Results

A total of 378 questionnaires were distributed and 376 (99.5%) were successfully filled and returned by the respondents.

The mean age of the respondents was 16 ± 5.22. The ages 13 – 14 was 3.8% while respondent above 21-year-old was 0.5% of the total population. The age range between 14–17 (89.9%), constituted the highest number of the respondents, ages 18–21 was (5.8%). Males’ respondents were 196 (52.1%) while Females 180(47.9%). Senior Secondary 2 (SS2) were the highest 217(57.7%), followed by SS3 students 107(28.5%) and the lowest were SS1 students 52(13.8%). Yoruba ethnic group dominated the respondent with 230(61.2%) followed by Igbos 100(26.6%). Religion of the respondents, Christianity 238(63.3%) while Islamic religion 133(35.4%) (See Table 1).

The results shows that 305 (81.1%) had an orientation on sex education before. Majority of the respondents 350 (93.1%) have heard about sexually transmitted diseases before, while 318 (84.6%) have not. More than half 213 (56.6%) of the respondents heard from school, 76 (20.2%) heard from the internet, 44 (11.7%) heard from the neighbourhood. Majority of respondents 250 (66.5%) knew about condom and 25.0% knew about drugs.

Table 1
Socio-demographic data of respondents.

(N = 376)		
Variables	f	%
Age (years) Mean Age: 16 ± 5.22		
10–13	14	3.8
14–17	338	89.9
18–21	22	5.8
>21	2	0.5
Total	376	100
Gender		
Male	196	52.1
Female	180	47.9
Total	376	100
Class		
SS1	52	13.8
SS2	217	57.7
SS3	107	28.5
Total	376	100
Ethnicity		
Igbo	100	26.6
Hausa	5	1.3
Yoruba	230	61.2
Others	41	10.9
Total	376	100
Religion		
Christianity	238	63.3
Islam	133	35.4
Traditional	5	1.3
Total	376	100

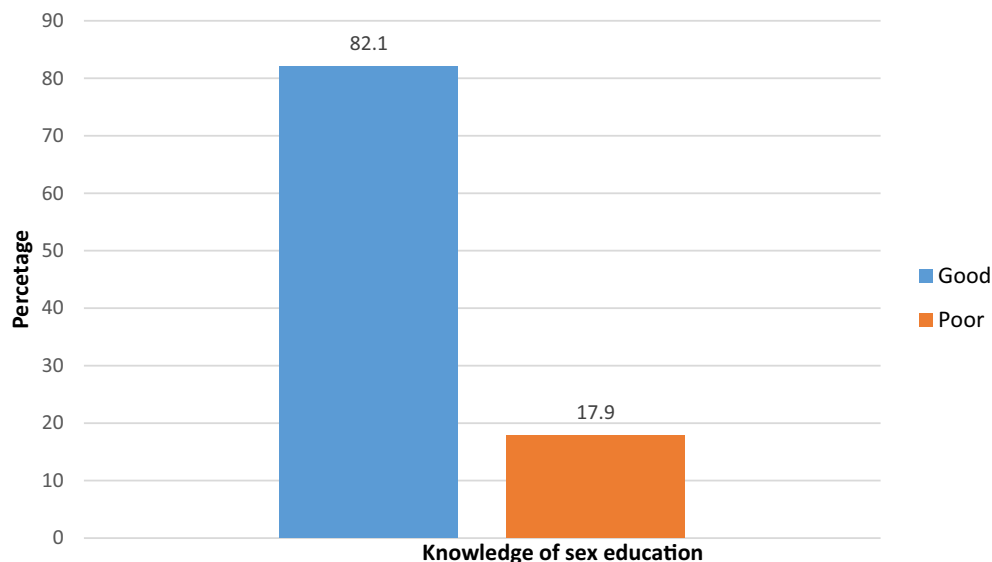


Fig. 1. Overall knowledge on sex education.

Fig. 1 shows that 82.1% of the respondents have good knowledge of sex education (See Table 2).

Table 3 shows that 277 (73.7%) strongly agree that sex education should be taught in every school. More than half of the respondents (57.4%) strongly agree that sex education helps young people to have good behaviour and attitude later in life. Many of the respondents 213 (56.6%) strongly agree that unprotected sex causes sexually transmitted diseases. while 18 (4.8%) disagree. 104 (28.5%) strongly agree that sexually transmitted diseases can be prevented with the use of condoms. More than half of the respondents 219 (58.2%) strongly agreed that the knowledge of sex education helps them not to involve themselves in unwholesome sexual practices.

Fig. 2 shows that majority of the respondents 57.5% had positive attitude towards sex education while minority 42.6% of the respondents had negative attitude towards sex education.

Table 4 shows that there was a statistically significant relationship between the knowledge of sex education and the attitude of the respondents towards sex education ($\chi^2 = 17.874$, $p < 0.01$).

Multiple logistic regression analyses of knowledge of sex education as dependent variable and participant's socio-demographic variables and attitude to sex education as independent variables was done. The odds ratio (O. R) depicts that the knowledge of sex education increases as each variable increases. Knowledge of sex education was significantly associated with class of students. Knowledge of sex education increases as class of student increases to SS2 = (OR = 7.750; 95% CI [3.268–18.378] and SS3 = (OR = 2.219; 95% CI [1.067–4.613] respectively (See Table 5).

4. Discussion

The findings of this study shows that the mean age was 15.60 ± 1.37 years; this is in agreement with the study of Kumar et al. [14] on Perception of adolescents towards sex education and Ayalew, Nigatu, Sitotaw, and Debie's study [15] on Knowledge and attitude towards sexual and reproductive health rights and associated factors among Adet college students, Northwest Ethiopia: where the mean age was 15.96 ± 1.61 years.

The findings also shows that majority of the respondents had good knowledge of sex education, this finding is in contrary with the study conducted by Ajibade, Olagunju and Oyediran [16], where adolescents were found to have inadequate knowledge about sex education as they do not really understand the meaning of sex education, some reasoned that it is a means of corrupting the youths, while some indicated that it is a process of teaching young people bad things. Only a few believe that it is the information and teaching about sex matters. Whereas, findings from the result of

some studies in Ethiopia and Nigeria, [15–18] on knowledge relating to sexual and reproductive health and rights shows that their respondents were knowledgeable and had positive attitude towards sex education, which is in conformity with the findings of this current study.

The findings of this study further shows that majority of the respondents had positive attitude towards sex education, this finding is in accordance with Ajibade, Olagunju and Oyediran's [16] findings where the authors conducted a study on the attitude of adolescents towards sex education and their findings showed that majority of the respondents had positive attitude to sex education.

Other studies [15,18,17], found that the respondents had a favourable attitude towards sex education Regarding the need for sex education among adolescents, the study by Ajibade, Olagunju and Oyediran [16] shows that majority of adolescents recognized the need for sex education. However, boys (97.1%) were more likely to support sex education as compared to girls (89.7%).

Furthermore, this study findings further show that, there was a statistically significant relationship between the knowledge of sex education and the attitude of the respondents towards sex education. This shows that a change in the knowledge of the respondents would significantly affect the attitude of the respondents towards sex education. This study's findings thus, corresponds with Kassa et al.'s study [17] which reveals that there was a significant relationship between the knowledge of young people and their attitude towards sex education. In addition to the above, knowledge of sex education was significantly associated with class of students in this study. Knowledge of sex education increases as class of student increases; this finding is in agreement with Gebretsadik and Weldearegay [19] and Ayalew et al. (2019) that found a significant association between level of education and knowledge of reproductive and sexual rights of youths. These findings shows that the more knowledgeable adolescents and young people are, the more likely they are to have positive attitude towards sex education. Good knowledge and positive attitude to sex education will have far reaching influence of adolescents and young people sexual and reproductive health.

5. Conclusion and recommendations

The study concluded that the respondents had a good knowledge of sex education and there was a significant relationship between students' knowledge and attitude towards sex education. There is a need for parents to be involved fully in training and teaching of their children on sex education. Teachers also have mandate of creating awareness and also engaging in effective teaching of health and family life education for secondary

Table 2
Knowledge of sex education.

Variables	Frequency (N = 376)	Percentage %
Have you had any orientation on sex education before?		
Yes	305	81.1
No	63	16.8
I don't know	8	2.1
Total	376	100
If yes, where?		
Home	62	16.5
School	250	66.5
Internet	44	11.7
Neighbourhood	20	5.3
Total	376	100
Have you had any subject in school on sex education before?		
Yes	321	85.4
No	48	12.8
I don't know	7	1.8
Total	376	100
Have you heard about sexually transmitted disease before?		
Yes	350	93.1
No	26	6.9
Total	376	100
Have you ever had a sexually transmitted infection or disease?		
Yes	55	14.6
No	318	84.6
I don't know	3	0.8
Total	376	100
If yes, which type of STI?		
Human papillomavirus infection	14	3.7
Genital herpes	28	7.4
Chlamydia	2	0.5
Gonorrhoea	13	3.5
HIV/AIDS	71	18.9
Syphilis	40	10.6
I don't know	208	55.3
Total	376	99.9
How do you protect yourself from STI?		
No protection	17	4.5
Use of contraceptives	85	22.6
Abstinence	216	57.4
I don't know	58	15.4
Total	376	99.9
Have you heard about the use of contraceptives before?		
Yes	266	70.7
No	88	23.4
I don't know	22	5.9
Total	376	100
If yes, where?		
Home	43	11.4
School	213	56.6
Internet	76	20.2
Neighbourhood	44	11.7
Total	376	99.9

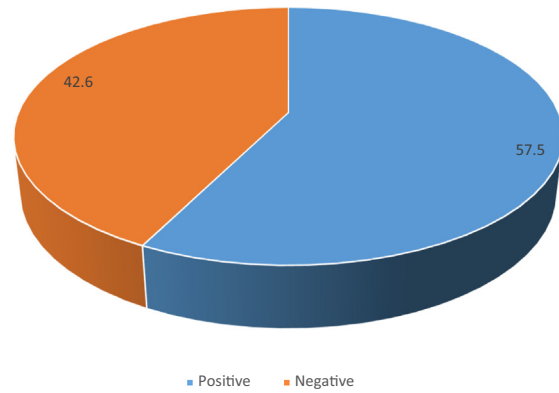


Fig. 2. Overall attitude towards sex education.

Table 4
Association between the knowledge on sex education and attitude towards sex education.

Variables	Overall attitude		Total	χ^2	Df	P-value
	Positive	Negative				
Overall knowledge	Good	162	147	309	17.874	1 <0.01
	Poor	54	13	67		
Total		216	160	376		

Table 5
Relationship between knowledge of sex education, socio-demographic variables and attitude to sex education.

Variables	Unstandardized Coefficient (B)	Standard Coefficient (β e)	95%CI	P-value
Age				
<10 years (Ref)	21.114	1477952949.038	0.000	1.000
11–20 years	− 0.812	0.444	0.025	0.581
>20 years ²	− 0.784	0.457	0.026	0.593
Marital status				
Single (Ref)	20.284	644271258.153	0.000	1.000
In a relationship	20.027	498477705.974	0.000	1.000
Class				
SS1 (Ref)	0.000	0.000	0.000	0.000*
SS2	2.048	7.750	3.268	0.000*
SS3	0.797	2.219	1.067	0.033*
Position in family				
1 st Child(Ref)	0.655	1.926	.844	0.119
2 nd child	0.327	1.387	.561	0.478
3 rd Child	0.784	2.190	.899	0.084
Attitude to sex education				
Positive	− 0.332	0.717	0.412	0.240
Negative	− 21.623	0.000	0.000	1.000
R = 0.270				
R ² = 0.104				
F = 0.0126				
P = 0.000*				

* Significant relationship between variables where p-value < 0.05.

Table 3
Attitudes towards sex education.

Variables	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Sex education should be taught in every school.	277 (73.7%)	87 (23.1%)	5 (1.3%)	2 (0.5%)	5 (1.3%)
Parents should teach their children about sex.	179 (47.6%)	84 (22.3%)	30 (8.0%)	39 (10.4%)	44 (11.7%)
Sex education helps young people to have good behaviour and attitude later in life.	216 (57.4%)	92 (24.5%)	26 (6.9%)	23 (6.1%)	19 (5.1%)
Sex education teaches young people bad things and should be avoided.	56 (14.9%)	67 (17.8%)	22 (5.9%)	91 (24.2%)	140 (37.2)
It is good to have unprotected sex.	16 (4.3%)	16 (4.3%)	19 (5.1%)	86 (22.9%)	239 (63.9%)
Unprotected sex causes sexually transmitted diseases.	213 (56.6%)	104 (27.7%)	17 (4.5%)	18 (4.8%)	24 (6.4%)
Sexually transmitted diseases can be prevented with the use of condoms.	104 (28.5%)	141 (37.5%)	62 (16.5%)	49 (13.0%)	17 (4.5%)
Condoms are 100% effective in preventing pregnancy and sexually transmitted disease.	66 (17.6%)	91 (24.2%)	86 (22.9%)	89 (23.7%)	44 (11.7%)
It is good to engage in sexual practices before marriage.	14 (3.7%)	14 (3.7%)	22 (5.9%)	107 (28.5%)	219 (58.2%)
Knowledge of sex education helps me not to involve myself in unwholesome sexual practices.	219 (58.2%)	97 (25.8%)	26 (6.9%)	17 (4.5%)	17 (4.5%)

school students in order to improve their knowledge and attitude towards sex education.

Declaration of Competing Interest

No existing or potential conflict of interest relevant to this article was reported.

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