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ORIGINAL ARTICLE

Parental Knowledge, Attitude and Practice of Adolescent Sex Education in Yaba, Lagos, Nigeria

Onyeodi IA, Ladi-Akinyemi TW, Kanma-Okafor OJ

Department of Community Health & Primary Care, College of Medicine, University of Lagos, Nigeria.

Keywords

Knowledge; Attitude; Practice; Adolescents Sex Education; Parents; Lagos

ABSTRACT

Background: The period of adolescence is characterized by rapid physical and cognitive growth along with sexual maturation. Parents are obligated to educate adolescents on matters of sex and relationships with age-appropriate information using culturally relevant methods and providing scientifically accurate and non-judgmental information. This study assessed the knowledge, attitude and practice of sex education among parents in Yaba, Lagos, Nigeria.

Methods: This was a descriptive cross-sectional study among 350 parents selected by multi-stage sampling technique. Data were collected using a pretested interviewer-administered questionnaire and analyzed using Epi info version 7.2 statistical software. The Chi-square and Fisher's exact tests were used to determine statistical associations. A p-value of <0.05 was considered statistically significant.

Results: The mean age of the respondents was 46.1±10.2 years. The male to female ratio was 1.6:1. About two-thirds, 227 (67.2%) opined that sex education is best commenced in primary school. Overall, 311 (92.0%) had good knowledge, 323 (95.6%) of the respondents had positive attitudes while 255 (75.3%) had good practice of sex education. The major barrier to the practice of sex education was the lack of a general protocol to guide parents. Good knowledge and positive attitudes were significantly associated with practicing sex education (p<0.001).

Conclusion: Although parents mostly had good knowledge, positive attitudes and good practice of sex education, a quarter of them still had poor practice of sex education mostly due to the lack of a protocol to guide them. Sex education programs and guidelines to encourage parents should be developed.

Correspondence to:
Dr. Ifeanyichukwu Augustine Onyeodi
Department of Community Health & Primary Care,
College of Medicine,
University of Lagos, Nigeria
Email: onyeodiifeanyichukwu@gmail.com
Phone number: +234 8160665742

INTRODUCTION

Adolescents, according to the World Health Organization (WHO) are persons between 10 to 19 years of age, while those between 10-24 years of age are classified as young people.[1] Adolescence is a time of transition from childhood to adulthood and is often characterized by physical, biological, psychological, and social

changes. Adolescents account for 16 percent of the world's population, that is, a total of about 1.2 billion people. [2] In sub-Saharan Africa, where adolescents make up the greatest population, as high as 23% of the total population fall within this age category. [2] Africa is regarded as the youngest continent and a 42% increase in the number of youths in Africa is projected by 2030.[3] The numbers are expected to continue to increase to even beyond a doubling by 2055.[3]

Although adolescents are generally in the healthiest period of their lives, research reveals an increase in the odds of dying to about four times higher in sub-Saharan Africa.[4] Despite variations in the causes of adolescent deaths, some common causes noted include communicable diseases such as HIV/AIDS and non-communicable diseases linked to adolescent risky behaviors such as motor vehicular accidents, violence, self-harm, alcohol, tobacco, and other drugs, and risky sex leading to unwanted pregnancy.[5] Studies report an increasing proportion of Nigerian women experiencing sexual debut before reaching 15 years of age, and 50% being already sexually active by the age of 16.[6] Even more worrisome is the fact that less than 1% of adolescents in Nigeria use conventional forms of contraception while the majority are ignorant about issues such as contraception and that the first coitus can result in pregnancy. [6, 7] There is the need for age-appropriate and scientifically accurate information on sex provided by their parents, whilst using culturally relevant approaches. This is because the influential role of parents on child and adolescent behavior is undisputed. Parents bear the unique responsibility of being the primary sexuality educators of adolescents. [8, 9] This becomes even more necessary in a developing nation like Nigeria where adolescents may not receive any formal education, thereby missing out on the sexuality education provided at school.

Unfortunately, inadequate adolescent sex education by parents has been the norm and this has been encouraged in the past by religious and cultural restrictions.[10] Parents fear that discussing sex suggests some implied approval that may encourage the adolescent to be promiscuous. Many parents struggle to talk to their children about issues relating to their

sexuality because they do not know how to approach the topic. On the other hand, some parents may lack the confidence to answer the questions they are asked.[8, 11] As a result, some parents would rather leave it to the school to "handle". However, the role of parental advice cannot be substituted by the teacher at school.[12] It has been found that even when schools try to engage parents by arranging seminars and meetings where teaching resources are explained, many parents avoid them, may consider them unimportant, and ignore them. [12] These underscore the need to assess the knowledge, attitude and practice of parents regarding sex education and to identify the barriers that parents experience. This study helps to address the dearth of literature on the knowledge, attitude, practice, and barriers to sex education among parents who are the primary sex educators of adolescents. [13] The findings from this study will add to the body of knowledge about sex education and could also serve as a baseline for future research.

METHODOLOGY

The study was a descriptive cross-sectional study conducted among parents of adolescents (aged 10 to 19 years) residing in Yaba Local Council Development Area of Lagos State. The study was conducted from August to September 2018. Yaba is centrally located in the Lagos metropolitan area, with mostly medium-density residential areas. It has, situated in its center, the National Institute of Medical Research, the Psychiatric Hospital, the Central Medical Library, and 2 primary health care centers.[14] In 2018, an estimated 629,469 people were living in Lagos Mainland where Yaba is located. [15] The main occupation of the people is trading. The predominant tribes include the Igbos, Hausas and Yorubas while the predominant religions were Christianity and Islam. Yaba is divided into nine (9) administrative wards.

This study was conducted among parents of adolescents (aged 10 to 19 years), who had been residents of Yaba for over 6 months. The sample size was calculated using the prevalence of knowledge of sex education (75.8%)[16] at a confidence

level of 95% by using the Cochran formula[17] $n = z^2 \frac{pq}{d^2}$

The calculated sample size was adjusted for non-response, missing questionnaires or incompletely filled questionnaires and a total of 371 was obtained. The participants were selected by multistage sampling; firstly, using simple random sampling by balloting, five out of the nine administrative wards in Yaba were selected. In the second stage, five streets were selected from each ward also by balloting. In stage three, eight houses were selected out of about 30 houses in each street by systematic sampling using a sampling fraction of four. In stage four, by balloting one household was selected from each house, and where there was more than one eligible respondent, one participant was selected also by balloting.

A pretested structured interviewer-administered questionnaire was used to collect data from the study subjects. The questionnaire was developed from previous studies[18, 19, 20] to collect socio-demographic data of both the respondents and their adolescent children. Data were collected about the respondents' *cognitive* knowledge of sex education using a total of 15 close-ended questions. *The* attitude towards sex education was assessed using 9 attitude statements on a 3-point Lickert scale, and the practice of sex education was assessed using 10 close-ended questions. The respondents' knowledge of sex education was scored "good" and "poor" based on the 15 knowledge constructs in the questionnaire. Each question was scored 1 if correctly answered or 0 if a wrong or 'I don't know' response was given. The highest knowledge score obtainable was 15. Scores of 7 and below were termed poor knowledge and scores over 7 were considered good knowledge. Respondents' attitudes were assessed based on 9 attitude statements. Scores of 1, 2 or 3 were assigned to 'don't agree, 'slightly agree', or 'strongly agree' responses, respectively on the Likert scale. The highest possible obtainable attitude score was 27 and a cut-off for positive or negative attitudes was based on the median score of 12. The median score was obtained using Microsoft Excel, by applying the median function and selecting the range of values in the dataset. Scores of below 12 were termed "negative" attitudes while scores of 12 and above

were termed "positive" attitudes. The respondents' practice of sex education was scored "good" and "poor" based on 10 practice questions. Each practice question was scored one if the action was practiced and zero if not practiced. The highest obtainable practice score was 10. Scores of 5 and below were termed poor practice and scores of 6 and above were considered as good practice.

Epi Info version 7 was used in data analysis. The results were presented in the form of tables showing descriptive frequencies, and proportions. The Chi-square and Fisher's exact tests were used for bivariate analysis to determine the factors that were significantly associated with the categorical variables (knowledge, attitude and practice of sex education). Statistical significance was determined if the two-tailed probability was less than 5% ($p<0.05$).

Ethical approval was obtained from the Health Research Ethics Committee of the Lagos University Teaching Hospital (HREC Number: ADM/DCST/HREC/APP/048).
Permissions were obtained from the Medical Officer of Health at Yaba where the study was conducted. Before each interview, the participants were informed about the nature and purpose of the study and written informed consent was obtained from each participant. Participants were not required to fill in their names or initials on the questionnaires to maintain anonymity, and all the information collected was treated with confidentiality. Participants were informed of the voluntary nature of their participation and that they could withdraw from the study at any time without any loss of benefits to which they were otherwise entitled.

RESULTS

A total of 371 questionnaires were administered and retrieved. However, 350 questionnaires were properly filled and were included in the data for analysis, yielding a response rate of 94.3%. The age range was 28 to 70 years with a mean of 46.1 ± 10.2 years. There were more females 217 (62.0%) than males 133 (38.0%). The majority of the respondents were married 321 (91.7%), in a monogamous setting 305 (87.1%) and/or had attained a tertiary level of education 215 (61.4%). Almost half of the respondents 167 (47.7%) were employed as professionals. Most of the

respondents had less than 5 children 271 (77.4%) (Table 1).

The majority of the respondents were aware of sex education 338 (96.6%). The most frequently stated source of information on sex education was the broadcast media (radio and television) 328 (97.0%) closely followed by the print media (newspapers, magazines, journals, newsletters, posters, hand-bills and flyers 317 (93.8%). The internet as a source of information on sex education was the least utilized 196 (58.0%) by respondents. Although less than one-third of the respondents 102 (30.2%) answered wrongly that sex education was all about teaching adolescents how to have sex, over two-thirds of the respondents 275 (81.4%) answered rightly that sex education was designed to teach about reproduction, body growth, and sexual relationships. Overall, 311 (92.0%) had good knowledge of sex education (Table 2).

The majority of the respondents 273 (80.8%) agreed that the knowledge of sex education should precede puberty. About three-fifths of the respondents 196 (58%) wrongly believed that sex education made youths more sexually active while the majority 303 (89.6%) believed that sex education was meant for adults only. The majority of the participants 323 (95.6%) agreed that both male and female adolescents should receive sex education. The majority of the participants 306 (90.5%) agreed that teachers should teach sex education and 334 (98.8%) agreed that parents should teach sex education. Overall, 323 (95.6%) had a positive attitude towards sex education (Table 3). About two-thirds 227 (67.2%) of the respondents opted for the commencement of sex education as early as primary school, while 320 (94.7%) prefer that sex education is given rather than none at all. While age-appropriate information was suggested by 274 (81.1%) of the respondents, providing the required information as one's children undergo pubertal changes was also acceptable to 308 (91.1%) of the parents. The majority of the respondents 323 (95.6%) practiced sex education. About a quarter 93 (27.5%) of the respondents had these discussions very often, most 157 (48.6%) preferring that age-appropriate information be given, verbally 323 (100%) while 71 (21%) of

Table 1: Sociodemographic characteristics of the respondents

Variables	Frequency (n=350)	Percent
Age (in years)		
<30	5	1.4
30-39	92	26.3
40-49	117	33.4
50-59	97	27.7
60-69	32	9.1
70-79	7	2.0
Sex		
Female	217	62.0
Male	133	38.0
Religion		
Christianity	322	92.0
Islam	22	6.3
Traditional	6	1.71
Marital Status		
Married	321	91.7
Single	12	3.4
Widow	10	2.9
Separated/Divorced	7	2.0
Type of Marriage		
Monogamy	305	87.1
Polygamy	45	12.9
Highest level of education		
None formal	12	3.4
Primary	35	10.0
Secondary	88	25.1
Tertiary	215	61.4
Occupation		
Unemployed	15	4.3
Unskilled	55	15.7
Semi-skilled	40	11.4
Skilled	73	20.9
Professional	167	47.7
Number of children		
1-4	271	77.4
≥5	79	22.6
Number of children aged 10-19 years		
1-2	315	90.0
3-4	35	10.0

the respondents used the internet as a sex education tool. One hundred and forty-eight (45.8%) of the respondents had discussed sex education with their adolescents in the past 1-2 months while about 60 (18.6%) could not remember when they last discussed sex education with their adolescent, Overall, 84 (24.6%) had a poor practice of sex education. (Table 4).

The knowledge of sex education had a statistically significant association with practice (p=0.001). Two hundred and forty-two (77.8%) of respondents that had good knowledge had good practice compared with 13 (48.1%) of those with poor knowledge.

Table 2: Awareness, source of information and knowledge of sex education

Variable	Frequency	Percent
Aware of sex education (n=350)	338	96.6
Source of information* (n=338)		
Broadcast Media	328	97.0
Print Media	317	93.8
Health worker/ Seminar/ Health Talk	315	93.2
Friends	310	91.7
Religious Houses	302	89.3
Parents and family relatives	228	67.5
Internet/Social media	196	58.0
Meaning of sex education* n=338)		
Education on sexual matters	288	85.2
Education on responsibility	283	83.7
Education about the body and the opposite sex	275	81.3
Education on how to have sex	102	30.2
Components of sex education* n=338)		
Abstinence	327	96.7
Sexual maturity/Puberty	325	96.2
Unwanted Pregnancy	310	91.7
Health & Hygiene	299	88.5
Sexually Transmitted Infections (HIV)	299	88.5
Unsafe Abortion	275	81.4
Early Marriage	248	73.4
Relationships	246	72.8
Sexual Violence	243	71.9
Contraception	211	62.4
Nutrition	184	54.4
Overall Knowledge (n=338)		
Good	311	92.0
Poor	27	8.0

**Multiple responses allowed*

Table 3: Respondents' attitude to sex education

Statement (n=338)	Agree n (%)	Undecided n (%)	Disagree n (%)
Sex education does not make youths more sexually active	106 (31.4)	36 (10.7)	196 (58)
Knowledge of sex education should be before a young person experiences pubertal changes	273 (80.8)	26 (7.7)	39 (11.5)
The responsibility of imparting sex education*			
Sex education should be taught by teachers	306 (90.5)	3 (0.9)	26 (7.7)
Sex education should be taught by parents	334 (98.8)	0 (0.0)	4 (1.2)
Sex education should be taught by friends	116 (34.3)	7 (2.1)	215 (63.6)
Sex education should be taught by relatives	154 (45.6)	24 (7.1)	160 (47.3)
The gender that should receive sex education			
Not males ONLY should receive sex education	0 (0.0)	13 (3.8)	325 (90.2)
Not females ONLY should receive sex education	2 (0.6)	13 (3.8)	323 (95.6)
Both should receive sex education	323 (95.6)	13 (3.8)	2 (6.0)
Who sex education suits			
Sex education is not for adults only	26 (7.7)	9 (2.7)	303 (89.6)
Sex education to adolescents is not wrong	7 (2.1)	17 (5.0)	314 (92.9)
Confident in discussing sexual issues	289 (85.5)	9 (2.7)	40 (11.8)
Overall attitude (n=338)			
Positive	323 (95.6)		
Negative	15 (4.4)		

The respondents' attitudes towards sex education also showed a statistically significant association with practice ($p<0.001$). Two hundred and fifty-two (78.0%) respondents that had a positive attitude had good practice compared with 3 (20.0%) with a negative attitude. (Table 5). The most often reported barrier was "the lack of a general protocol for sex education for parents" 270 (79.9%), followed by a lack of knowledge as to what sex education entails 153 (45.3%), then a lack of awareness 137 (40.5%) and access to information about sex education from the internet and social media 104 (30.8%). About a quarter 85 (24.3%) of the respondents would rather focus on educating their children on other matters that they consider more beneficial in the future (Table 6).

DISCUSSION

This study was conducted to assess the knowledge, attitude and practice of sex education among parents with adolescent children. This study is timely as our world is becoming increasingly hypersexualized.[21] This is owing to the ease with which everyone especially adolescents have access to the internet, magazines, movies, and billboards and how impressionable adolescents are. A Korean study was found to have reported how children as early as those in elementary school are not only able to easily access inappropriate information through smartphones but are today first-person media creators who produce their own sensitive and provocative media content to gain social media popularity.[22] Parents must leverage the reported confidence adolescents have in them as role models and help equip them with age-appropriate knowledge, skills and values about sex to help ensure they make responsible choices about their sexual and social relationships else they risk having them obtain this information from wrong sources. [23]

Overall knowledge of sex education among respondents was good. Good knowledge of sex education is important for effective sex education practice by parents as this is dependent on the extent of information parents have on the subject matter.[24] Similar to this study, the majority of parents in a study conducted in Osogbo had good knowledge of sex education.[16] A similar study conducted among parents in China also reported a

Table 4: Preferences and practice of sex education

Preferences	Frequency	Percent
Best time to commence sex education (n=338)		
Primary School	227	67.2
Junior Secondary School	96	28.4
Senior Secondary School	15	4.4
Prefers sex education rather than none	320	94.7
Extent to which in favour of sex education* (n=338)		
Full information	126	37.3
Not much	28	8.3
Age-appropriate	274	81.1
Required information as they undergo pubertal changes	308	91.1
Practices sex education (n=338)		
Yes	323	95.6
No	15	4.4
Frequency of sex education (n=323)		
Very often	93	28.8
Sometimes	200	61.9
Hardly ever	30	9.3
Depth of information given to adolescent*(n=323)		
Full information	39	12.1
Not much	26	8.0
Required information	101	31.3
Age-appropriate	157	48.6
Method(s) applied* (n=323)		
Internet	71	22.0
Print Media	99	30.6
Broadcast Media	121	37.5
Verbal	323	100.0
Components imparted*(n=323)		
Nutrition	125	38.7
Reproductive systems & organs	165	51.1
Puberty	259	80.2
Sexually Transmitted Infections (HIV)	271	83.9
Health and Hygiene	317	98.1
The last time sex education was practiced (n=323)		
1-2 months ago	148	45.8
3-6 months ago	95	29.4
>6 months ago	20	6.2
Can't remember	60	18.6
Overall practice of sex education(n=338)		
Good	255	75.4
Poor	83	24.6

**Multiple responses allowed*

Table 5: Association between knowledge/attitude and practice of sex education

Variable	Practice		χ^2	P-value
	Good (n=255) n (%)	Poor (n=83) n (%)		
Knowledge				
Good	242 (77.8)	69 (22.2)	11.801	0.001
Poor	13 (48.1)	14 (51.9)		
Attitude				
Positive	252 (78.0)	71 (22.0)	26.045	<0.001*
Negative	3 (20.0)	12 (80.0)		

**Fisher's exact p-value*

generally good knowledge across several subthemes on sex education.[25] Our result finding was expected, given the averagely high educational level of the respondents in our study. Our findings may also indicate that the increasing awareness of sex education is finally yielding positive results as parents are recognizing the importance of adolescent sex education. In addition, parents now live in a time when information on sex education can be easily obtained from print media, broadcast media, the internet, social media, religious houses, and even from other parents. The high level of education of the respondents translated into the overall good knowledge reported in this study.

Similar to our study, a study conducted in Osogbo, Osun State Nigeria found that the majority of parents knew that sex education meant educating adolescents on sex-related matters.[16] Although, sex education involves other components, providing basic information about sex and related issues remains a core part of sex education and this was identified by respondents in both studies. The problem however is that many parents struggle with teaching about sex and sex-related matters to their children, mostly leaving them to discover about these matters on their own. This has the potential of exposing adolescents to dangerous situations. Almost all the parents seem to have exposure to sex education through print media, broadcast media, and religious houses. The reservations expressed by the parents in this study about the use of the internet are valid because the internet itself, if unrestricted, can be a dangerous tool by which young people are negatively influenced. A review conducted in the United States also reports parents' utilization of the media as a source of information on sex education.[26] This finding is however, contradicted by those of a similar study conducted in South Korea where 50% of the parents received information from seminars or lectures, and about one-third searched websites from a smartphone app or an internet browser. [22] The difference in the level of education of respondents in these studies may have influenced their preference for these sources of information. With many studies reporting adolescents' preference for the internet as major primary health information sources due to the opportunity of

confidentiality and the youth-friendliness this method avails them, efforts must be made to address the technological divide between tech-savvy adolescents and their technologically-challenged parents. Parents must be assisted so they are updated on the web-based influences their children access.[27]

The current study showed that the majority of the respondents knew that sex education was about teaching adolescents to be responsible adults, similar to a study where qualitative data were collected by in-depth interviews.[28] Sex education equips young people with evidence-based knowledge and skills that empower them to maintain their health, well-being, and dignity whilst developing respectful social and sexual relationships. Parental sex education when effectively practiced also helps adolescents understand and ensure their rights are protected. Our study reports a general uncertainty among parents about what sex education entails and how to effectively provide sex education to their adolescents. This finding has been documented in other studies especially about contraceptive options, sexually transmitted infections, and the normal biological functions of the body.[29, 30] A contributory factor to this may be the absence of such discussions with their parents while they were growing up.[31] This preference for the conservative sex expectations like abstinence is not peculiar to Africans as a previous study in the United States found that 51% of school superintendents required that abstinence be taught as the preferred option, 35% required abstinence to be taught as the only option for unmarried people, while only about 10% have a truly comprehensive policy that taught about both abstinence and contraception.[32] Another study conducted among Nigerian parents showed that over a quarter of the parents expressed reservations about exposing children to knowledge about contraception as it encourages promiscuity.[18] This is similar to other studies conducted in sub-Saharan Africa which revealed that many homes discussed abstinence, unplanned pregnancy, and HIV/AIDS, but the use of contraceptives and condoms were rarely discussed.[33] This, however, was in contrast with a cross-sectional study conducted among parents in Harare Ethiopia, where most of them considered discussing contraception

Table 6: Barriers to parental practice of adolescent sex education

Barrier(s) to practice of sex education*	Frequency (n=338)	Percent
Unsure what benefits lie in practicing sex education	30	8.9
Lack of spousal support	32	9.5
The practice of sex education is stressful and difficult	33	9.8
My Child's curriculum is already too demanding	33	9.8
Should be handled by the extended family member	45	13.3
Age of parent	55	16.3
It brings a feeling of shame	63	18.6
Sex education gives the approval to engage in sex	70	20.7
My Child is being taught already by his teachers	73	21.6
Age of Adolescent	83	24.6
I would rather focus on educating my child on other areas that will benefit him/her in Future	85	25.1
Lack of time	87	25.7
Religious beliefs	89	26.3
My adolescent is of the opposite sex	91	26.9
Cultural taboos	97	28.7
Can already be accessed from the internet/social media	104	30.8
I don't know how to practice sex education	108	32.0
Lack of awareness	137	40.5
I don't even know what sex education entails	153	45.3
There is a lack of general protocol in sex education practice methods for parents	270	79.9

**Multiple responses allowed*

and sexually transmitted infections to be the major component of sex education. [31] This is possibly due to a high prevalence of sexually transmitted infections in these parts of Africa and the need to communicate it to their adolescents.[34]

Sexuality education should be appropriate to adolescents' age and developmental level[35] and the majority of the respondents in our study provided age-appropriate information to their adolescents. Parental preference for age-appropriate sex education in this study may be to preserve the innocence of the younger adolescents. [36] A function that parents can effectively serve.[37] Most parents in our study preferred the commencement of sex education very early while the adolescent is in primary school and junior secondary school. Parents advocating for beginning sex education early has been reported in other studies.[29,31] Majority of parents' preference in our study for commencing sex education early is possibly due to the new understanding that sexual health topics are more already required in elementary school.[38] A study among parents reports that over half (53.4%) of the elementary school children had asked about sex. [22] Another plausible reason

for parents requesting an earlier age for sex education may be due to reports about a lesser likelihood of sexual abuse among children educated by their parents on sexual abuse.[39, 40] Our study advocates for sex education for both boys and girls[41, 42] as it ensures a healthy sexual debut.[43] Our study found that the lack of a general protocol for practicing sex education was possibly one of the greater challenges with its success. [44] Educational materials on sex education for parents can deliver guidance but also important is ensuring these materials are at appropriate readability levels to facilitate comprehension and motivation. Although our study did not assess the standards of available materials, it has been reported that that the majority of educational materials available online to support parents' communication with adolescents on sex and sexuality do not meet the needs of many or most parents.[45] Efforts to ensure educational resources are available for parents' sex education effectively as well as improve the readability and accessibility of available materials are thus warranted.

Limitations to the study: This study did not consider adults who may be caring for adolescents as guardians, who because they are usually the choice of such adolescents as their preferred carer may be close enough to the adolescent to offer sex education.

Conclusion: This study showed that a majority of the respondents had good knowledge, a positive attitude, and good practice of sex education. There were however identified gaps in knowledge. This calls for interventions towards improving parental knowledge of sex education such as through enlightenment programs using the broadcast media. Findings from this study have necessitated further research aimed at developing a protocol to guide parents in their role as primary sex educators of their adolescent children.

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