

Relationship Between Knowledge of Sexuality Education and Secondary School Students' Attitude Towards Contraceptive Use in Nigeria

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Abstract

This study examines the impact of sexuality education on secondary school students' attitudes toward contraceptive use in Nigeria. Using a cross-sectional design, it explored the relationship between students' knowledge of contraceptives and their attitudes toward both sexuality education and contraceptive use. Data was collected through a 7-point Likert scale questionnaire called the "Adolescents' Knowledge and Attitude to Contraceptive Use Questionnaire" (AKACQ), which had a reliable Cronbach alpha of 0.70. Results showed significant positive correlations: students with greater knowledge of contraceptives had more favourable attitudes toward both sexuality education and contraceptive use. These findings highlight the importance of enhancing contraceptive knowledge and promoting positive attitudes toward sexuality education to improve contraceptive acceptance among students. Comprehensive sexuality education should be prioritized by policymakers and educators to enhance public health outcomes for adolescents in Nigeria.

Keywords: Sexuality education, Contraceptive use, Secondary school students, Attitude, Adolescent reproductive health

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I. Introduction

Sexuality is a natural aspect of life that forms a core part of human identity, including self-image, gender, physical appearance, and reproductive capabilities. It encompasses how individuals gather knowledge and communicate as sexual beings. Sexuality education is the process through which people acquire knowledge and develop mental acceptance, values, and attitudes regarding intimacy, relationships, and identity (Obiunu, 2014). There is an urgent need for interventions in many countries regarding sexuality, particularly because adolescents are increasingly interested in sexual relations at a young age. Many lack knowledge about contraception, and even among those who know about it, consistent and correct usage is often not practiced. This leads to unplanned pregnancies, which may result in miscarriages, stillbirths, or induced abortions (Aderibigbe et al., 2010; Oyediran & Joel, 2011; Murro et al., 2021). Teendom is a period of physical, physiological, and emotional changes between childhood and maturity; it is also a time of opportunity, susceptibility, and risk, especially concerning health, unsafe sexual activity, and reproductive health. The World Health Organization clarified that adolescents are 10 – 19 years old (WHO, 2004). Students in secondary schools are within this range of early teenhood (10 – 13 years), middle childhood (14 – 16 years), and late adolescence (17 – 19 years).

Action Health Incorporated has observed that as children enter puberty, their curiosity in sexual activities increases, with most of them not prepared for the problems they are faced with. In contrast, society, parents, and schools do little to clarify the situation (AHI, 2011). The reproductive health and rights of adolescents are a growing global concern and priority. The Sustainable Development Goals include those of adolescents, for which the United Nations has produced a global strategy for women's, children's, and adolescents' health (UN, 2015). It has been observed by several researchers that school-based sexuality education is one means of empowering adolescents to gain control over their bodies and lives in addition to improving their reproductive health outcomes.

Sexual debut during adolescence is increasing in developing countries. In Tanzania among teenagers and young women between the ages of 15 and 23 years, 75.5% were sexually active and engaged in great-risk

sexual conduct which includes sexual activities with more than one sexual partner, inconsistent use of condoms, and contrary experiences, such as unwanted pregnancy (Nkata et al., 2019). In Nigeria, studies have shown that about 90% of adolescents and young adults become sexually active at the age of 19 and 20, a large proportion engage in casual and non-connubial relationships thereby increasing their vulnerability to several sexual and reproductive problems (Idonje et al., 2011, Ololade, et al., 2016). Approximately 42 million abortions are performed yearly and 20 million of these procedures are unsafe. In Africa, one-quarter of the unsafe abortions occur between ages 15 and 19 years. Adolescent pregnancy, induced abortions, and HIV/AIDS infection in Nigeria have become major problems because of adolescents' sexual relations. Girls between 15 to 16 years give birth every year and 95% of these pregnancies occur in developing countries (WHO, 2004).

There are reports that the frequency of knowledge and attitude towards sexuality education and contraception are likely lower in public schools than in private schools due to less rigorous or absent curricular programs on sexuality and less access to sexual and reproductive health services. Reina *et al.* (2010) concluded that a substantial number of youths from public schools with the lowest incomes received less information about contraception which led to considerable sexual and reproductive health-related problems. Osian et al. (2024) reported Sipalan & Majawat's findings that adolescents in public secondary schools obtain inadequate information on sexuality education which results in reckless behaviour, lack of protection from sexual predators and sexually transmitted diseases, and consequence of which leads to an enormous risk of a painful transition to parenthood, lifetime effects, and early pregnancy/motherhood, which can compromise educational achievement and economic potential. On the other hand, other studies concluded that teenagers in public schools have good knowledge of contraceptives (Osian et al., 2024). The rural area is associated with poor knowledge of sexuality education (Chimbidin et al., 2022). In rural areas, 32 percent of adolescents have given birth, compared with 10% in urban areas (NPC, 2014).

To improve the safe sexual conduct of individuals, knowledge must be the first to improve upon that will foster motivation (attitudes, behavioural intentions, and subjective norms) and behavioural skills. This implies that adolescents with knowledge, information, motivation, and skills can change their attitudes and subsequently their sexual behavior (Reis et al., 2011). This has been shown in studies that there is a significant relationship between knowledge and attitude towards sexuality education (Ademuyiwa et al. (2023). Castro et al. (2024) found out that 52.3% of 827 students in Colombia had adequate knowledge about contraceptives and 80.1 % had an attitude of acceptance which is a consequence of being exposed to sex education. Their conclusion also included that being male and studying in a public school was associated with lower possibilities of attitude of acceptance. Low levels of sexual knowledge were observed among Chinese adolescents and this contributed to unsafe behaviour (Lyu et al., 2020). On the other hand, a study that assessed the ability of an online sexuality education unit to enhance sexual and reproductive health knowledge and attitudes among 10th-grade vocational high school students in China revealed that students had higher sexual and reproductive health attitude scores, with girls having more contemporary attitudes than boys (Chen et al., 2023). Research findings among Tanzanians and Portuguese students revealed low utilization of contraceptive methods even though they knew the methods (Reis et al., 2011; Kagashe & Honest, 2013; Kara et al., 2019). In Nigeria, studies also show a high level of knowledge of contraception and a positive attitude to sexuality education, but a low level or no use of any form of contraceptives (Ololade, 2016; Ugoji, 2013; Idowu et al., 2017; Chimah et al., 2019; Ofovwe et al., 2020; Ademuyiwa et al, 2023; Olowu et al., 2023). According to them, male and female students exhibit similar attitudes towards contraceptive use which is likely due to environmental influences. The type of school (public or private) did not affect the students' attitude towards contraceptives which suggests that access to information on sexuality education and contraception is not heavily dependent on the school environment. On the other hand, Effiom et al. (2022) concluded that students in Bekwarra Local Government Area of Cross Rivers State did not know about contraceptives.

Numerous studies have been conducted on students' knowledge and attitudes toward sexuality education and contraceptive use. However, there is a lack of information regarding students' knowledge of sexuality education and contraceptive use in both rural and urban areas of Nigeria. This study aims to address that gap in Delta State. Research like this can provide valuable insights that the education sector can utilize to bridge the knowledge gap between rural and urban communities. The study has the overall purpose to determine the relationship between knowledge of sexuality education and students' attitudes toward contraceptive use among post-primary school students in Delta State. Four research questions and hypotheses guided this study.

Research Questions:

1. To what extent do students know about contraceptives, and how frequently do they utilize them using a 7-point Likert scale measurement?
2. What are the attitude levels of students toward sexuality education using a 7-point Likert scale measurement?
3. Are there differences in students' attitude scores towards sexuality education by gender, location, and school type?

4. Are there differences in the means of students' attitudes towards contraceptive use among the school students by gender, location, and school type in Delta State?

Hypotheses

1. There are no significant differences in students' knowledge of contraception by gender, location, and school type.
2. No significant differences exist in students' attitudes toward sexuality education by gender, location, and school type.
3. There are no significant differences in students' attitudes toward contraceptive use by gender, location, and school type.
4. There is no significant relationship between students' knowledge of contraceptive use, students' attitudes toward sexuality education, and students' attitudes toward contraceptive use.

II. Material And Methods

A cross-sectional research design was employed to describe the correlation between students' knowledge of contraceptive use, their attitude toward sexuality education, and their attitude towards contraceptive use. A sample of 162 secondary school students in Delta State (58 males, 104 females; 84 residing in Rural areas, 78 in Urban areas; and 85 attending Private schools, 77 attending public schools) were chosen, using the stratified random sampling method over two weeks across the state. 162 adolescents across different gender, location, and school type participated in the study. The sampling frame was constructed to ensure proportionate representation of adolescents from all the strata with each stratum carefully constructed to represent specific combinations such as rural public-school males and females; rural private-school males and females; urban public-school males and females; and urban private-school males and females. With the collaboration of teachers from the four selected schools (two public and two private, and two rural and two urban) utmost ethical considerations were upheld. Data collection was facilitated through a 7-point Likert scale questionnaire named the "Adolescents' Knowledge and Attitude to Contraceptive Use Questionnaire" (AKACQ) with response options ranging from 1 to 7 (strongly disagree, disagree, somewhat disagree, neutral, somewhat agree, agree, and strongly agree). The questionnaire underwent rigorous scrutiny by professionals in Measurement and Evaluation, health education, and psychology for face and content validity as well as reliability, using a pilot study with a separate sample of 50 adolescents. During the fieldwork, questionnaires were distributed to students aged 13 to 18 for immediate completion and retrieval. Descriptive statistics were employed to answer the research questions, while t-tests and Pearson correlation coefficients were used to analyze the data for significant differences and relationships among the variables while inferential statistics, including t-tests and Chi-square tests, were applied to explore the relationships between analog and digital sources of sex education and adolescents' awareness level on sex education.

III. Result

Research Question 1: To what extent do students know about contraceptives, and how frequently do they utilize them using a 7-point Likert scale measurement?

Table 1: Means of the level of students' knowledge of contraceptives on a 7-point scale.

Item	SD	D	S	N	SWA	A	SA	X	SD	
					W					
					D					
I have sufficient knowledge about contraception methods.	Frequency	7	5	5	13	23	47	62	5.65	1.61
I believe using contraception is a responsible choice	Frequency	7	6	12	24	15	50	48	5.32	1.69
I know where to access contraception methods if needed.	Frequency	17	15	11	22	23	42	32	4.69	1.97
My knowledge of contraception will influence my decision to use it when needed	Frequency	19	19	9	29	16	45	25	4.48	1.99
No of students 162	Grand mean and std dev							5.03	1.82	

Table 1 presents the mean scores of students' knowledge about contraceptives on a 7-point scale. The mean score for the item "I have sufficient knowledge about contraception methods " is 5.65, indicating that students generally agree they have sufficient knowledge. The standard deviation of 1.60 suggests a consensus among responses. Regarding "I believe using contraception is a responsible choice," the mean score is 5.32, also showing agreement among students, with a standard deviation of 1.69 indicating a narrow range of responses. For "I know where to access contraception methods if needed," the mean score is 4.69, indicating neutrality or

uncertainty, with a wider standard deviation of 1.97 reflecting variability in responses. On the item "My knowledge of contraception can influence my decision to use it when needed," the mean score is 4.48, showing neutrality and a standard deviation of 1.99, suggesting a diverse range of opinions.

Overall, the grand mean of 5.03 indicates that students generally feel knowledgeable and responsible regarding contraception, are uncertain about where to access contraception methods, and the influence of their knowledge on their decisions to use it.

Research Question 2: What are the attitude levels of students toward sexuality education using a 7-point Likert scale measurement?

Table 2: Attitude levels of students towards sexuality education on a 7-point scale

Item		SD	D	SWD	N	SW A	A	SA	X	STD
I believe that sexuality education is important for adolescents.	N %	14 8.6	15 9.3	15 9.3	20 12.3	19 11.7	35 21.6	44 27.2	4.83	2.00
I feel comfortable discussing sexuality-related topics with adults.	N %	36 22.2	16 9.9	13 8	17 10.5	15 9.3	42 25.9	23 14.2	4.09	2.22
I think that schools should provide comprehensive sexuality education programs	N %	41 25.3	25 15.4	13 8	26 16	18 11.1	26 16	13 8	3.52	2.06
I support open and honest conversations about sexuality among teenagers.	N %	16 9.9	10 6.2	10 6.2	20 12.3	21 13	51 31.5	34 21	4.91	1.92
I believe that knowing about contraception methods is essential for adolescents.	N %	32 19.8	17 10.5	16 9.9	29 17.9	18 11.1	32 19.8	18 11.1	3.94	2.05
I think that discussing contraception is a responsible choice for teenagers	N %	31 19.1	34 21	10 6.2	29 17.9	20 12.3	23 14.2	15 9.3	3.63	2.01
I trust that teenagers can make trustworthy decisions about their sexual health.	N %	7 4.3	5 3.1	8 4.9	21 13	18 11.1	55 34	48 29.6	5.44	1.63
Grand mean									4.33	1.98

Table 2 presents student attitudes toward sexuality education on a 7-point scale, measured in percentages. It includes the means and standard deviations of their attitudes for each item, with a midpoint or benchmark set at 4.00. For the statement "I believe that sexuality education is important for adolescents," the highest percentage of responses falls in the "Strongly Agree" (SA) category at 27.2%, followed closely by the "Agree" (A) category at 21.6%. This indicates that most students have a positive attitude regarding the importance of sexuality education for adolescents.

Concerning the statement "I feel comfortable discussing sexuality-related topics with adults," the highest percentage is found in the "Agree" category at 25.9%, followed by "Strongly Agree" at 14.2%. While many students feel comfortable discussing these topics, there is also a significant percentage (22.2%) in the "Strongly Disagree" (SD) category, suggesting that some students feel uncomfortable discussing such matters. For the statement "I think that schools should provide comprehensive sexuality education programs," the "Agree" category has the highest percentage at 16%, with "Strongly Agree" close behind at 15.4%. This reflects that many students support comprehensive sex education programs in schools, although a notable percentage (25.3%) disagrees, indicating divided opinions on this issue. Regarding the statement "I support open and honest conversations about sexuality among teenagers," the highest percentage is in the "Agree" category at 31.5%, with 9.9% expressing disagreement. This shows that most students favour open discussions about sexuality, but a minority disagrees.

For the statement "I believe that knowing about contraception methods is essential for adolescents," both the "Strongly Agree" and "Agree" categories have an equal response rate of 19.8%, highlighting the students' shared belief in the importance of this knowledge. On the statement "I think discussing contraception is a responsible choice for teenagers," 21% of students agree, while 14.2% strongly agree, indicating overall support for discussions about contraception. Lastly, in responses to the statement "I trust that teenagers can make responsible decisions about their sexual health," the "Strongly Agree" category leads at 29.6%, followed by "Agree" at 34%. This suggests strong confidence among students in teenagers' ability to make informed decisions regarding their sexual health.

In summary, the overall grand mean of 4.33, which is slightly above the midpoint of 4.00, indicates that most secondary school students in Delta State hold positive attitudes toward sexuality education. They acknowledge its importance, express comfort in discussing related topics with adults, support comprehensive education in schools, encourage open conversations among teenagers, recognize the necessity of understanding contraception, advocate for responsible discussions about contraception, and trust teenagers to make sound decisions about their sexual health. However, some students remain uncertain or hold negative views on certain aspects of sexuality education.

Research Question 3: Are there differences in students' attitudes toward sexuality education by location, gender, and school type?

Table 3: Level of students' attitude towards sexuality education by location, gender, and school type

Variables		N	Mean	Std. Dev.	Std. Error Mean Mean diff.	
Gender	Male	58	32.78	7.231	0.949	3.77
	Female	104	29.01	8.826	0.865	
Location	Rural	84	31.39	8.470	0.924	
	Urban	78	29.24	8.367	0.947	2.14
school type	Private	85	29.56	8.244	0.894	-1.67
	Public	77	31.23	8.668	0.988	

Table 3 shows students' attitudes toward sexuality education based on gender, location, and school type. Male students have a mean score of 32.78 (SD = 7.231) compared to females at 29.01 (SD = 8.826), indicating a 3.77-point advantage for males. Rural students score 31.39 (SD = 8.470) versus urban students at 29.24 (SD = 8.367), a difference of 2.14 favouring rural students. Private school students have a mean of 31.23 (SD = 8.668) compared to public school students at 29.56 (SD = 8.244), yielding a -1.67 difference. These findings suggest that gender and location significantly influence attitudes toward sexuality education more than school type.

Research Question 4: Are there differences in the means of students' attitudes towards contraceptive use among secondary school students by gender, location, and school type in Delta State?

Table 4: Means of Students attitude towards contraceptive use by gender, location, and school type.

Variable	Gender	N	Mean	Std. Dev	Mean Diff	Std. Error Diff
Gender	Male	58	33.45	6.283	0.448	1.1
	Female	104	33.00	6.941		
Location	Rural	84	33.79	6.453	1.299	1.051
	Urban	78	32.49	6.928		
School Type	Private	85	33.31	6.870	0.306	1.057
	Public	77	33.00	6.541		

Table 4 presents the statistics for each variable regarding contraceptive use attitudes. For "Gender," male students have a mean attitude score of 33.45 (SD = 6.283), while female students score 33 (SD = 6.941), resulting in a mean difference of 0.448 (SE = 1.1), indicating slight differences. Under "Location," students in rural areas have a mean of 33.79 (SD = 6.453), compared to 32.49 (SD = 6.928) for urban students, showing a mean difference of 1.299 (SE = 1.051), suggesting small differences in attitudes. Regarding "School Type," students in private schools score a mean of 33.31 (SD = 6.87), while those in public schools have a mean of 33 (SD = 6.541), leading to a mean difference of 0.306 (SE = 1.057) and indicating differences in attitudes towards contraceptive use.

Hypothesis 1: There are no significant differences in students' knowledge of contraceptives by gender, location, and school type.

Table 5: Tests on differences in students' knowledge of contraceptives by gender, location, and school types

Variable		N	Mean	Std. Dev	Std. Error Mean	T-test	Df	Sig. (2tailed)	Mean Diff
Gender	Male	58	20.21	5.231	0.687	0.144	160	0.886	0.12
	Female	104	20.09	5.034	0.494				
Location	Rural	84	20.27	5.292	0.577	0.373	160	0.71	0.299
	Urban	78	19.97	4.891	0.554				
School Type	Private	85	19.47	5.07	0.55	-1.743	160	0.083	-1.387
	Public	77	20.86	5.044	0.575				

Table 5 provides statistics on knowledge of contraception among students based on gender, location, and school type. The t-value for "Gender" is 0.144 (p = 0.886), showing no significant difference between male

and female students (mean difference = 0.12). For "Location," the t-value is 0.373 ($p = 0.71$), indicating no significant difference between rural and urban students (mean difference = 0.299). In terms of "School Type," the t-value is -1.743 ($p = 0.083$), also demonstrating no significant difference between private and public-school students (mean difference = -1.387).

Overall, there are no significant differences in contraception knowledge across these variables.

Hypothesis 2: There are no significant differences in students' attitudes toward sexuality education by gender, location, and school type.

Table 6: t-test statistics of students' attitudes toward sexuality education

Variable		N	Mean	Std. Dev	T	df	Sig. (2-tailed)	Mean Diff
Gender	Male	58	32.78	7.231	2.771	160	0.006	3.766
	Female	104	29.01	8.826				
Location	Rural	84	31.39	8.47	1.623	160	0.107	2.149
	Urban	78	29.24	8.367				
School Type	Private	85	29.56	8.244	-1.256	160	0.211	-1.669
	Public	77	31.23	8.668				

Table 6 presents the mean, standard deviation, t-value, significance (2-tailed), and mean difference for each variable analyzed. Regarding the "Gender" variable, the t-value is 2.771, with a significance level of 0.006. This indicates a notable difference in students' perceptions of sexuality education between male and female students, with males showing more favourable attitudes. For the variable "Location," the t-value is 1.623, and the significance level is 0.107, which exceeds the standard threshold of 0.05. Therefore, we can conclude that there is no significant difference in students' attitudes toward sexuality education between those from rural and urban areas, even though the p-value approaches the significance threshold.

Concerning the "School Type" variable, the t-statistic is -1.256, with a significance level of 0.211, also exceeding the 0.05 threshold. This suggests that there is no significant difference in students' attitudes toward sexuality education between those attending private and public schools.

Overall, these results indicate a significant difference in attitudes toward sexuality education between male and female students. While gender appears to influence these attitudes, other factors such as location and school type seem to have less impact.

Hypothesis 3: There are no significant differences in students' attitudes towards contraceptive use by gender, location, and school type.

Table 7: t-test showing students' attitudes towards sexuality education by gender, location, and school type.

Variable		N	Mean	Std. Dev	T	df	Sig. (2-tailed)	Mean Diff	Std. Error Diff
Gender	Male	58	33.45	6.283	0.407	160	0.684	0.448	1.1
	Female	104	33	6.941					
Location	Rural	84	33.79	6.453	1.235	160	0.219	1.299	1.051
	Urban	78	32.49	6.928					
School Type	Private	85	33.31	6.87	0.29	160	0.773	0.306	1.057
	Public	77	33	6.541					

Table 7 includes information on the mean, standard deviation, standard error mean, t-value, degrees of freedom, 2-tailed significance, mean difference, standard error difference, and 95% confidence interval of the difference for each variable. For the variable "Gender", the t-value is 0.407, with 160 degrees of freedom and a significance level of 0.684. The mean difference between male and female students is 0.448, with a standard error difference of 1.1. Based on these results, there is no significant difference in the attitude toward contraceptive use between male and female students. Regarding the variable "Location," the t-value is 1.235, with 160 degrees of freedom and a significance level of 0.219. The mean difference between students in rural and urban areas is 1.299, with a standard error difference of 1.051. Based on these results, there is no significant difference in the attitude toward contraceptive use between students in rural and urban areas. For the variable "School Type," the t-value is 0.29, with 160 degrees of freedom and a significance level of 0.773. The mean difference between students in private and public schools is 0.306, with a standard error difference of 1.057. Based on these results, there is no significant difference in the attitude toward contraceptive use between students in private and public schools.

Overall, based on the t-values and significance levels, the results suggest that there are no significant differences in the attitude toward contraceptive use based on gender, location, or school type which indicate that these factors do not have a significant influence on students' attitudes toward contraceptive use.

Hypothesis 4: There is no significant relationship between students' knowledge of contraceptive use students' attitude toward sexuality education and students' attitude toward contraceptive use.

Table 8: Pearson correlation of interactions of variables

		Knowledge of contraceptive use	Attitude to sex education	Attitude to contraceptive use
Knowledge of contraceptives and use	Pearson Correlation	1	.465**	.270**
	Sig. (2-tailed)		.000	.001
	N	162	162	162
Attitude toward sexuality education	Pearson Correlation	.465**	1	.274**
	Sig. (2-tailed)	.000		.000
	N	162	162	162
Attitude towards contraceptive use	Pearson Correlation	.270**	.274**	1
	Sig(2-tailed)	.001	.000	
	N	162	162	162

**. Correlation is significant at the 0.01 level (2-tailed).

Table 8 presents the Pearson correlation coefficients and p-values for the variables: "Knowledge of contraception," "Attitude towards sexuality education," and "Attitude towards contraceptive use." Significant relationships were observed at the 0.01 level. There's a positive correlation between "Knowledge of contraception" and "Attitude towards sexuality education" ($r = 0.465$, $p < 0.01$), suggesting that greater knowledge leads to more positive attitudes toward sexuality education. Additionally, a positive correlation exists between "Attitude towards sexuality education" and "Attitude towards contraceptive use" ($r = 0.274$, $p < 0.01$), indicating that positive attitudes toward sexuality education correlate with positive attitudes toward contraceptive use. Finally, there's a significant correlation between "Knowledge of contraception" and "Attitude towards contraceptive use" ($r = 0.270$, $p < 0.01$), implying those with more knowledge also have more positive attitudes toward contraceptive use. These findings align with previous studies (Santelli et al., 2017). Overall, positive associations among the variables are evident.

IV. Discussion

Knowledge of sexuality and contraceptives equips adolescents with information that fosters positive attitudes and behaviour that engenders a strong foundation for their reproductive health. The results of this study showed that the average age of respondents was 15.94 ± 2.02 years which is similar to the result of Ademuyiwa et al. (2022) with an average age of 15.60 ± 1.37 years. Observations in this research revealed that respondents had a good knowledge of contraception methods and believed that using contraception is a responsible choice. This could be attributed to readily available information on mass and social media and friends of respondents. This corresponds with the findings of Idowu et al. 2017, Ofovwe et al. (2020), Olowu et al., 2023, and Arise et al, 2024 but contrary to the study of Effiom et al. (2022) who reported that majority of the respondents do not know about contraceptives.

Most respondents of this research work were observed to have a positive attitude toward sexuality education as also observed by Reis et al., (2011). Ademuyiwa et al. (2022) as well as Arise et al. (2024) recorded a significant relationship between knowledge and attitude toward sex education. Castro et al. (2024) also reported that 80.1% of their respondents had an attitude of acceptance about contraceptives because of their exposure to sexuality education. This indicates a change in the knowledge of the respondents notably affects their attitude toward sex education. Arise et al. (2024) who had the same conclusion observed that 97.1% of boys were more likely to support sex education than 89.7% of girls among respondents and reported a statistically significant relationship between knowledge of sex education and the attitude toward it.

Differences in the attitude toward sexuality education concerning gender, location, and school type were observed in this study. These findings indicated that gender and location may play a role in shaping students' attitudes toward sexuality education, while school type may have less influence. This could be a result of the disposition of girls to the subject because the majority of studies conducted on sexual reproductive health (SRH) campaigns are geared towards the female gender as an adolescent, single or married adult to prevent unplanned pregnancies and prevention of sexually transmitted infections. Chen et al. (2023) reported girls had more contemporary attitudes than boys in their study to evaluate the ability of an online sexuality education

module to improve sexual and reproductive health knowledge and attitudes among high school students in China. According to Lyu et al (2020), there are unequal abilities between males and females in sexual decision-making which makes the female populace particularly insistent on obtaining more sex-related knowledge as well as precautions against unplanned pregnancy make girls more curious and cautious.

Furthermore, the results of the t-values and significance levels showed significant differences in students' knowledge of contraception by gender, location, and school type. These results suggest that the knowledge of contraception is relatively similar across these variables. This may be because of the availability of information on print and social media as well as the subject being taught in all schools since it has become a part of the curriculum. Kagashe & Honest (2013) reported that school scored 60%, and the media scored 40%, while parents depicted the least source of sexual knowledge. Aderibigbe et al. (2010) reported that more than half of the sources of information on contraception were from electronic media, while Olowu et al. (2023) reported that social media was the chief source of sex education in their study. Findings are not in accord with the results of Reina et al. (2010) recorded that students in public schools received less information on contraceptives which may result in reckless sexual behavior.

The t-values and significance levels in the result suggest a major difference in the attitude towards sexuality education between male and female students. However, there are no notable differences based on location or school type at different conclusions with Ketting et al. (2015) and Santelli et al. (2017). These findings indicate that gender may function in shaping students' attitudes toward sexuality education while other factors such as location and school type may have less influence. Overall, the findings agree with previous studies (Idonije et al, 2011; Reis et al 2011; Kumar et al. 2017; Chen et al 2023; Arise et al., 2024) and in disagreement with previous findings, (Idowu et al., 2017; Lyu et al., 2020; Effiom et al., 2022) which indicate that a greater proportion of students have adequate knowledge about contraception methods and believe using contraception is a responsible choice.

The results of the third hypothesis indicated that there are no significant differences in attitudes toward contraceptive use based on gender, location, or school type, which may suggest that these factors do not substantially influence students' attitudes toward contraceptive use. These findings are supported by previous research by Kumar et al. (2017). Additionally, while a majority of students know where to access contraceptives if needed, there is still a notable percentage who are uncertain or unaware. This agrees with previous studies of Aderibigbe et al. (2010) and that of Kagashe & Honest (2013) but is in contrast to the findings of Ademuyiwa et al., 2023 and Olowu et al., 2023.

V. Conclusion

This research explored the connections between knowledge of sexuality education, attitudes towards sexuality education, and attitudes toward contraceptive use among students. The findings showed significant positive correlations: students with greater knowledge of contraceptives tend to have more favourable attitudes towards both sexuality education and contraceptive use.

These results suggest that enhancing knowledge of contraceptive methods and promoting positive attitudes towards sexuality education can improve acceptance and utilization of contraceptives among students. The study aligns with existing literature, emphasizing the importance of sexual education in empowering informed reproductive choices, and advocating for access to accurate information to improve reproductive health outcomes.

VI. Recommendations

- i. There should be integration of more of sexuality education into school curricula to improve knowledge and attitudes of students towards sexuality education by the education authorities.
- ii. There should be targeted interventions that intentionally address misconceptions about contraceptive use planned and carried out by the education authorities.
- iii. Health care providers and medical practitioners should be invited regularly to give health talks to students on sexuality education and contraceptive use.

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