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Examining Adolescent Sexual Patterns in Creek Town, Nigeria: Insights From a Cross-Sectional Survey and Implications for Tailored Interventions


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Abstract

In the dynamic landscape of global health, the sexual behaviors of adolescents are of particular significance due to their profound implications for individual well-being and public health. This article focuses on Creek Town, a vibrant community in Nigeria, and aims to provide a nuanced exploration of the sexual behaviors of adolescents within the context of local culture and socio-economic factors. A cross-sectional survey design was employed, involving a multi-stage sampling approach with 422 participants. A comprehensive 112-item questionnaire captured various aspects of adolescent sexual behaviors. Additionally, four focus group discussions, including both in-school and out-of-school adolescents, provided qualitative insights. The average age of sexual initiation was established at 15 years for both male and female adolescents. Despite 51.4% purportedly practicing protected sex, a discernible 25.2% displayed inconsistency in adhering to this precautionary measure. Gender differentials manifested statistically significant associations with masturbation ($\chi^2 = 5.084$), pornography ($\chi^2 = 11.296$), and sexual encounters with older individuals ($\chi^2 = 16.094$). The study underscored the urgent need for tailored interventions aimed at fostering safe sexual behaviors among adolescents in Nigeria. The importance of heightened parental monitoring is emphasized, highlighting its potential to act as a protective factor guiding adolescents toward healthier choices.

Keywords: *sexual behavior, sexual activities, adolescent, in-school, out-of-school*

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Note: We extend our appreciation to the participants of this study for their valuable contributions and cooperation. Their willingness to share their experiences and insights was instrumental in the successful completion of this research. We would also like to acknowledge the invaluable assistance provided by our dedicated team of research assistants. Their hard work, diligence, and attention to detail were essential to the smooth execution of the data collection process. We are deeply thankful for their commitment and contributions.

Introduction

According to the World Health Organization (WHO; 2024), individuals between 10 and 19 years of age—commonly referred to as adolescents—constitute approximately 1.3 billion of the global population. Adolescents are prone to engaging in precarious sexual practices, which render them susceptible to reproductive health complications, including unintended pregnancies, unsafe abortions, early childbearing, and sexually transmitted infections (Animasahun et al., 2017).

Adolescents are increasingly becoming a significant proportion of individuals living with HIV and other sexually transmitted infections worldwide (WHO, 2023). Data presented by the IeDEA Pediatric Working Group (2016), shows that a considerable proportion of adolescents in sub-Saharan Africa are afflicted with sexually transmitted infections, including HIV. Specifically, statistics reveal that 13% of adolescent girls and 9% of adolescent boys (between the ages of 15 and 19) tested positive for these infections within the 12 months preceding the survey. Famutimi and Oyetunde (2014) also found a concerning trend among adolescents in Nigeria toward a declining age of sexual debut, increasing number of sexually active adolescents, and high-risk sexual behaviors like multiple and concurrent partnerships. Additionally, Agaba et al. (2016) found a significant proportion of Nigerian adolescents become sexually active, with many initiating sexual activities, by the age of 13. Furthermore, over 25% of adolescents become sexually active by the age of 16, and 21% of female adolescents have experienced pregnancy or childbirth. Among Nigerian adolescents, the escalating rates of early sexual debut, high-risk behaviors, and adolescent pregnancies in Nigeria demand immediate attention and targeted interventions to curb them.

Several studies documented the sexual behaviors of Nigerian adolescents. These studies revealed that a significant proportion of Nigerian adolescents (particularly females; 46.2% of females, 22.1% of males) engaged in sexual intercourse between the ages of 15 and 19 (National Demographic Health Survey, 2013; Federal Republic of Nigeria Federal Ministry of Health, 2012). In some states, such as Cross River (where this study was conducted), the mean age of sexual debut can occur as early as age 7 (Diala et al., 2011) and contributes to Nigeria's high adolescent birth rate, which is among the highest in the world (Adebowale et al., 2016). A similar study among adolescents in Southeast Nigeria reported that 22.9% were sexually exposed, of which 26.7% had sex without a condom. Furthermore, 37.3% reportedly had more than one sexual partner (Adeomi et al., 2014). These findings highlight the need for comprehensive sexual education programs that address the sexual and reproductive health needs of adolescents and promote safe sexual practices.

The sexual and reproductive health of adolescents in Nigeria stands as a paramount public health concern—a fact that is substantiated by various studies conducted across the nation. Carlson et al. (2014) identified adolescent sexual risk behaviors, such as early sexual debut, multiple partners, and inconsistent use of condoms or other forms of birth control, as adolescent sexual behaviors that can have significant consequences for health and well-being. Aji et al. (2011) documented elevated levels of sexual activity among adolescents of both genders, noting a diminishing age of sexual initiation and the prevalence of risky sexual behaviors, such as unprotected intercourse with multiple partners. Another study revealed that nearly half (48.6%) of Nigerian adolescents engaged in sexual activity, with approximately one in five sexually active females and one in two sexually active males initiating sexual intercourse by the age of 15 (Udigwe et al., 2014). Discrepancies in reported ages of sexual debut were noted, ranging from 12 years in some studies (Ejike, 2015; Nwabueze et al., 2014; Obono and Obono, 2009) to 14.6 years for females and 13.3 years for males in other investigations (John et al., 2014; Alex-Hart et al., 2015). More recent data disclosed sexual debut at 16 years for females and 17 years for males in certain regions of Nigeria (Odimegwu & Somefun, 2017).

Adolescents who engage in what are deemed “risky” sexual relationships pose a considerable threat to their health and overall well-being (Aliyu and Aransiola, 2023). Such behaviors heighten the susceptibility to sexually transmitted infections (STIs) and unintended pregnancies (Alawode et al., 2021), and warrant

profound concern due to the potential enduring impacts on the physical, emotional, and social dimensions of adolescent well-being. According to the Centers for Disease Control and Prevention (2014), sexual engagement is prevalent among high school students, with an overall rate of 47%, demonstrating a higher prevalence among boys (49%) in comparison to girls (46%). Some engaged in risky sexual behaviors, such as multiple and concurrent sex (15%), low condom use (40%), and non-use of birth control pills during the last sexual encounter (18%). As a consequence of suboptimal utilization of condoms and other contraceptives, adolescents face heightened vulnerability to sexually transmitted diseases as well as unintended pregnancies. Empirical investigations revealed a notable proportion of adolescents who refrain from condom use during their initial sexual encounters, with instances of unprotected intercourse attributed to factors such as early sexual initiation and the misuse of alcohol (Nwabueze et al., 2014; Tarkang, 2013; Tobin & Okojie, 2010).

While it was clear from the foregoing that studies have addressed the sexual behaviors of adolescents in Nigeria (as well as elsewhere in Africa), most of the study locations have recorded far less HIV prevalence than the rates recorded in Creek Town and Cross Rivers State, in general, as reported in previous studies. The current study further characterized the risky sexual behavior of the in-school and out-of-school adolescents along with their motivating factors geared toward such risky behavior in a location with higher rates of HIV prevalence. Hence, a study that profiled the risky sexual behaviors of adolescents in Creek Town, which is located in the Odukpani local government area of Cross River State, is imperative.

Methods

Data Source and Study Design

The study was conducted using quantitative and qualitative methods. For the quantitative method, 422 copies of the study questionnaire were administered to adolescents. The questionnaire contained five sections: Section A captured the demographic characteristics of respondents; Section B focused on common sexual behaviors among adolescents; Section C dealt with patterns of sexual partnerships among adolescents; Section D addressed factors influencing multiple and concurrent partner sex; and Section E focused on the consequences of multiple and concurrent unprotected sex among adolescents. The questionnaire was semi-structured, with both closed- and open-ended questions to get free expression of ideas among the respondents.

The qualitative method involved the use of focus group discussions. These discussions were stratified by gender and age range. Each focus group consisted of eight participants and was moderated by the researchers along with two research assistants. Focus group discussions primarily focused on topics such as the age at sexual debut, risky sexual practices, and the reasons behind having multiple sex partners. The discussion guide addressed the objectives of the study. The group included in-school female adolescents, out-of-school female adolescents, in-school male adolescents, and out-of-school male adolescents, respectively. The researcher facilitated the discussions and encouraged each participant to respect each other's views. The interviews lasted between 45 and 50 minutes.

Data Collection and Sampling Procedure

From January to March 2017 a descriptive cross-sectional survey was carried out among in-school and out-of-school adolescents in Creek Town, which is located in Odukpani Local Government Area (LGA) of Cross River State, Nigeria. Odukpani LGA, has a population size of 192,884, and the number of inhabitants of Creek Town is estimated at 47,021. Creek Town adolescents between 10 and 19 years old constitute an estimated 23.22% (44,788 individuals) of the overall population—23,290 being male and 21,498 female (National Bureau of Statistics & United Nations Children's Fund, 2017).

The area of Creek Town is bound to the north by Biase LGA, to the northeast and east by Akamkpa LGA, to the south by Calabar Municipal LGA and Calabar South LGA, to the west by Akwa Ibom State, and to the northwest by Abia State. The area was founded by the Efiks who migrated down the Cross River in the first half of the 17th century. Efik is the main language of its inhabitants, and its major occupations include fishing and farming. Creek Town has a secondary school and a government technical college.

A Primary Health Centre is located in the heart of the community of Creek Town, however, its utilization is very low due to its distance and the low literacy level of the people living in the area. Multiple and concurrent unprotected sex is one of the most crucial drivers of the HIV/AIDS epidemic and other STI in Cross River State. This has been reported among both male and female adolescents and across all age groups (Akah et al., 2022).

Sampling Technique

For this study, we adopted a multi-stage sampling technique to gather data from 422 adolescents, aged 10 to 19 years. Data was gathered through a standard questionnaire and four focus group discussions.

In its initial phase, the Odukpani local government was purposefully chosen as the study area due to its 7.1% prevalence rate of HIV and other sexually transmitted diseases. Subsequently, a stratified sampling technique was employed to categorize the local governments into wards, with Odukpani local government comprising 13 wards. In the subsequent phase, four (4) wards were randomly selected from the 13, namely Creek Town I, Creek Town II, Odukpani Central, and Akamkpa. Consequently, a total of five (5) wards were included in this study. Extensive efforts were made to engage respondents through household surveys. Data were collected from the adolescents at the household level in the Creek Town of the LGA. The questionnaire was interviewer-administered.

Consent for this study was carried out at two levels in each household. First, consent from the head of the household was sought to allow the participation of the adolescent member of the household. Second, consent from the adolescent was sought to seek their participation in the study. Interviews were then carried out privately in a separate location, where the parent or caregiver was not in attendance to listen to the discussion. In a household where consent was not given, the researcher left the household politely. No more than one questionnaire was administered in a household.

Questionnaire Validity and Reliability

To ensure the questionnaire covered all relevant aspects of the study, we consulted with experts and professionals in the field of reproductive health to validate its content and ensure it was culturally appropriate. Before the administration of the questionnaire, we conducted a pilot test with a small group of adolescents in the study area to identify potential issues with the clarity, relevance, or cultural sensitivity of the questions. Feedback received was used to refine the questionnaire.

Outcome Variable

The outcome variables were “age at sexual debut” and “adolescent sexual practices.” Age at sexual debut was measured by asking the respondents the age they were when they had their first sexual experience. The age ranges were coded “1” for those who had sex in the first 10 years of life, “2” for between 11 and 14 years, and “3” for between 15 and 18 years. Adolescent sexual practices included variables like regular sex through vagina, masturbation, and anal sex.

Explanatory Variables

The socio-demographic characteristics of the respondents made up the explanatory variables. The selected demographic and socio-demographic characteristics are age, gender, educational level, ethnic group, religion, occupation, monthly income, and occupation.

Data Analysis

Data collected through questionnaire administration were coded and analyzed using SPSS (Version 24) software. Descriptive statistics were used to summarize data on demographic characteristics and adolescent sexual practices, which included exposure to regular sex, masturbation, anal sex, pornography, and sex with older persons. The chi-square (χ^2) test was done to check the significant association of the selected demographic variables on sexual involvement, practice of masturbation, practice of pornography, and sex with older persons.

To analyze the qualitative data obtained from the oral interviews, we employed thematic analysis, a widely recognized method for identifying patterns, themes, and meanings within qualitative data. In our study, after transcribing the interviews, we carefully reviewed the data and coded them according to key themes related to adolescent sexual behaviors and practices.

Ethics Approval and Consent to Participate

Ethical approval was sought from the College of Medicine Research Ethics Committee at the University of Ibadan in Nigeria (No. IRB00002499-U Ibadan IRB #1) prior to the commencement of this study. The research design, methods, and potential risks were thoroughly reviewed to align with established ethical principles and guidelines. This process guaranteed that the study aimed to minimize harm, maintain confidentiality, and uphold the rights of participants throughout the research journey. We also acknowledged certain ethical challenges in the data collection process.

The principle of informed consent was central to our research, which proved to be challenging due to the age of the participants, cultural sensitivity, and the overall sensitivity of the topic. To address these challenges, we ensured participants that parental/guardian consent was obtained previously and that participant anonymity would be protected. Participants were also informed about the purpose of the study, its potential risks and benefits, and their right to withdraw at any time.

In many Nigerian communities, openly addressing sexual matters is often considered taboo, and there is a strong emphasis on privacy and modesty in such discussions. To address this challenge, we employed research assistants who lived in the community. These assistants knew better ways to present the questions to the respondents while also showing respect for local norms, values, and taboos.

For this study, we employed coding to ensure de-identification to safeguard participant confidentiality as protecting the anonymity of participants in a small community, such as Creek Town, can be difficult—especially when dealing with sensitive information. Data storage was secured, and access was restricted to protect participant privacy/confidentiality.

Results

The average age of adolescents in this study was 17 years, with the majority falling within the range of 17 to 19 years old. This distribution corresponds to the typical age range observed among adolescents in Nigeria (National Population Commission & ICF International, 2014). Table 1 shows that the majority (74.2%) of the respondents in this study were between the ages of 17 and 19, followed by 21.8% who were within the age

range of 14–16. There were more female (55.2%) respondents than males (44.8%), which mirrors the overall gender ratio observed in the adolescent population.

A notable portion (73.5%) of the participants represented in-school adolescents. The majority (70.9%) of respondents had attained secondary school education, which aligns with the typical educational profile observed among adolescents in Nigeria (Ojuolape and Mohd, 2024). Additionally, a minority (10.0%) reported no formal education. This finding is in line with demographic trends, as seen in similar studies of adolescent education in the region (National Population Commission & ICF International, 2019).

The majority (68.7%) of respondents were from the Efik ethnic group, while 21.3% were Ibibios. The predominant ethnicity of the respondents being Efik is reflective of the ethnic composition of the study area. The discrepancy in the total number of respondents for ethnic groups is due to incomplete responses from a subset of respondents. Some did not disclose their ethnic background, resulting in a lower total count for this category compared to the overall respondent count. Most (99.3%) respondents were Christians. This finding corresponds to the dominant religious affiliation in the region.

When asked about familial affiliation, a majority (52.1%) of respondents identified themselves as belonging to monogamous households, while 23% belonged to single-parent households. Variations in responses about family type are due to differences in participant responses. Some respondents did not disclose information about their family type, which resulted in a lower total count for this category, as compared to the overall respondent count. Similarly, 48.1% of the adolescent respondents were living with both parents, 16.6% were living alone, 15.6% were living with only their mothers, 6.9% were living with only their father, and 5.5% were living with a sex partner.

Data on sexual status revealed that more than half (59.2%) of the respondents were already dating, while 35.8% were reportedly not in a relationship. The variation in responses related to sexual status is attributed to respondents who opted not to provide information regarding their sexual orientation. As a result, the total number of respondents for this category differed from the overall respondent count. Also, the majority (65.4%) of respondents had been involved in sexual activities at the time of the survey; only 33.6% had not been involved in sexual activities.

Table 1: Respondent Socio-Demographic Characteristics of Respondents (n = 422)

Socio-Demographic Characteristics	Frequency (#)	Percentage (%)
Age		
10–13	17	4.0
14–16	92	21.8
17–19	313	74.2
Sex		
Male	189	44.8
Female	233	55.2
In/Out of School		
In-school	310	73.5
Out-of-school	112	26.5
Education Length/Type		
No formal education	42	10.0
Primary	16	3.8
Secondary	299	70.9
Higher institution	65	15.4
Ethnicity		
Efik	290	68.7
Ibibio	90	21.3
Igbo	5	1.2
Other	27	6.4
Religion		
Christianity	419	99.3
Traditional	3	0.7
Dating Status		
Dating	250	59.2
Not dating	151	35.8
Family Type		
Monogamous	220	52.1
Polygynous	69	16.4
Single parent	97	23.0
Lives With ...		
Father	29	6.9
Mother	66	15.6
Both parents	203	48.1
Boyfriend/girlfriend	23	5.5
Relative	26	6.2
Nobody/living alone	70	16.6

Note: Field Survey, 2018

Age at Sexual Debut

This study sought information about the sexual debut of respondents. Only 60% reported their age at sexual debut. Respondents reportedly had their first sexual experience between the ages 15 and 18 (35.3%), ages 11 and 14 (15.9%), and a few (8.8%) had their first sexual experience in the first 10 years of life. The mean age at sexual debut was 15 years. Discussants put similar age at sexual debut for females and males.

Age 15 was reported as the typical age most adolescents started having sexual intercourse (female discussants reported age 10–15 years, males reported 11–16 years as the age of sexual debut). There was no difference, however, in the responses of in-school and out-of-school discussants. One respondent stated, “I was 14 years old when I sex for the first time, and my boyfriend was 17 years old” (FGD 4/female/19 years/out-of-school). The narrative from the in-school group also indicated 15 as the age of sexual debut, as another respondent stated, “I started having sex, I think, when I was 15 years old. It was something I did not plan for though” (FGD 4/female/19 years/in-school).

The existing body of empirical literature has consistently demonstrated a positive correlation between early sexual debut and a heightened likelihood of engaging in multiple sexual partnerships. The precise age threshold for initial sexual activity remains unclear, however, as evidenced by the varying cut-off points reported in the literature, ranging from 13 to 17 years old (Kazaura & Masatu, 2009; Uchudi et al., 2010).

Approximately one-half of the respondents (51.4%) reported engaging in protected sexual activity while 11.8% did not adopt protective measures. The subset of respondents who did not provide information on their engagement in protected sexual activity were those who had not yet initiated sexual activity. Therefore, the absence of data for this group reflects their sexual inactivity at the time of the survey.

Insights gleaned from group discussions unmistakably reveal a correlation between early sexual initiation and the absence of protective measures. Several participants confirmed not using condoms during their initial sexual encounters, citing the unavailability of condoms and the unplanned nature of the first sexual experience as contributing factors. This lack of condom utilization places adolescents at heightened susceptibility to sexually transmitted diseases and unintended pregnancies, as illustrated by the following excerpt from one of the respondents:

My boyfriend consistently opposed using condoms, and there were instances when condoms were not readily available. We refrained from using condoms during our first sexual encounter because it was unplanned, and this pattern persisted in subsequent instances. My boyfriend justified his refusal by claiming exclusivity, stating that I was his only sexual partner. In such decisions, I felt powerless to advocate for condom use. (FGD 4/female/18 years/out-of-school)

Studies show that adolescents are particularly vulnerable to acquiring STI, including HIV, which is due to early initiation of sexual activity and linked to engaging in high-risk sexual behaviors, such as inconsistent condom use. While some adolescents partake in sexual activities without using a condom, others demonstrate inconsistency in their utilization of condoms (Alex-Hart et al., 2015; Mmbaga et al., 2011).

Most adolescents who engaged in unprotected sex acted under the influence of alcohol. For female adolescents, the effect of alcohol consumption did not make it possible to remember to ask for condom use or reject unprotected sex. Male adolescents took advantage of the alcohol reaction to engage in unprotected sex. One participant articulated this by stating:

I chose not to use a condom during my first sexual encounter. After consuming alcohol, there were occasions when I couldn't recall using a condom. Furthermore, my boyfriend has a problem with the use of condoms. (FGD 4/female/17 years/in-school)

Sexual activity under the influence of alcohol is a prevalent issue among adolescents and young adults (Krauss, 2013). Research shows that alcohol consumption can impair judgment and decision-making abilities, which leads to increased risk-taking behaviors, including engaging in unprotected sex (Davis et al., 2010; Tobin & Okojie, 2013).

Adolescent Sexual Practices

The sexual practices of the respondents were examined. Three major sexual practices were reported, including sex through the vagina, masturbation, and anal sex. Protective methods, adopted by the adolescents, were also discussed with respondents who had regular sex. Respondents who had masturbation and anal sex provided reasons for their practices.

On the practice of sex through the vagina, Table 2 shows that half (50%) of the respondents used condoms as a protective method, 4% used withdrawal, 2.8% used contraceptive pills, 0.5% each used traditional ring and periodic abstinence, while 0.2% each used pills, herbs, and padlock. It is important to note that the padlock method of birth control refers to a practice where a female inserts a padlock or other objects into her vagina as a means of preventing pregnancy. However, this method is not only ineffective but also poses significant health hazards, such as causing infections, abrasions, and even permanent damage to the reproductive organs (Kio et al., 2016).

Table 2 also shows that masturbation was practiced by 92 (21.8%) respondents. The 92 respondents who reportedly practiced masturbation gave different reasons including deriving sexual pleasure (29.3%), satisfying sexual desire (22.8%), because it is harmless (10.6%), cannot cause unwanted pregnancy (3.3%), and due to peer influence (7.6%).

Additionally, Table 2 shows that 70 (16.6%) respondents reportedly practiced anal sex. Those who practiced anal sex engaged in it for reasons, such as the partner liked it (38.6%), gave them sexual pleasure (17.1%), peer influence (15.7%), minimized the risk of unwanted pregnancy (10%), and for financial gain (7.1%). It is important to acknowledge that the discrepancy in respondents for all categories on this table is due to missing responses from individuals who indicated they had not engaged in regular sexual activity.

Table 2: Adolescent Exposure to Regular Sex, Masturbation, and Anal Sex (n = 422)

Protective Method Used (Regular Sex)	Frequency (#)	Percentage (%)
Condom	211	50.0
Contraceptive pill	12	2.8
Withdrawal	17	4.0
Periodic abstinence	2	0.5
Pills	1	0.2
Herbs	1	0.2
Traditional ring	2	0.5
Padlock	1	0.2
Practice of Masturbation		
Yes	92	21.8
No	243	57.6
Masturbation Reasons		
Sexual pleasure	27	29.3
To satisfy sexual desire	21	22.8
Peer pressure	7	7.6
Is harmless	10	10.9
Does not lead to sexually transmitted infections	9	9.8
Cannot cause unwanted pregnancy	3	3.3
Is normal when done in private	1	1.1
Practice of Anal Sex		
Yes	70	16.6
No	273	64.7
Anal Sex Reasons		
Peer influence	11	15.7
Partner pleasure	27	38.6
Parental influence	5	7.1
Financial gain	5	7.1
Sexual pleasure	12	17.1
Minimizes risk of unwanted pregnancy	7	10.0
Minimizes risk of sexually transmitted infections	1	1.4
Preserves virginity	2	2.9

Field Survey, 2018

Table 3 shows that about half (51.7%) of respondents had viewed pornographic movies, pictures, or books. More than half of the respondents (65.1%) viewed it sometimes, while 7.8% viewed it on a daily basis. Table 3 also shows that 33.9% of the respondents obtained pornographic materials through porn websites, while 31.3% obtained it through friends. Finally, Table 3 indicates that 18.7% of respondents had sex with older persons.

On preferred sexual practice, 34.1% preferred vaginal–penile intercourse, 9% preferred unprotected sex, 2.8% preferred anal sex, 1.7% preferred masturbation, 4% preferred pornography, and 1.4% indicated that they preferred sex with older persons. It is important to note that the non-responses in this category predominantly stemmed from individuals who had not initiated sexual activity by the time of the study.

Adolescent Pornography Exposure

Some participants reportedly watched pornography more than they read their books. Male discussants demonstrated their knowledge of the risk that adolescent sexual behavior could cause them. It is important to note that the non-responses in the latter predominantly stemmed from individuals who had not initiated sexual activity by the time of the study.

The urge to practice what was watched on pornographic materials dogmatically was emphasized in one of the narratives of the discussants:

The consumption of pornographic videos may lead individuals to engage in sexual activities impulsively, without due consideration, as it compels them to emulate the actions depicted. This inclination diminishes the cognitive space for contemplating the use of condoms, as the immediate impulse is to enact the behaviors observed. (FGD 1/male/16 years/in-school)

Table 3: Adolescent Pornography Exposure and Sex With Older Persons (n = 422)

Adolescent Pornography Exposure	Frequency (#)	Percentage (%)
Viewed pornography	218	51.7
Not view pornography	125	29.6
No response	79	18.7
Pornographic Exposure Frequency		
Very often	32	14.7
Often	27	12.4
Sometimes	142	65.1
Everyday	17	7.8
Pornographic Material Sources		
Friends	71	31.3
Parents	9	4.0
A relative	3	1.3
Classmate/workmate	10	4.4
Download on porn sites	77	33.9
Buy from the store	10	4.4
Through television	11	4.8
Magazines	13	5.7
Social media	21	9.3
Others (internet, business centers)	3	0.9
Sex With Older Persons		
Yes	79	18.7
No	217	51.4
No response	126	29.9
Most Preferred Sexual Practice		
Vaginal–penile intercourse	144	34.1
Unprotected sex	38	9.0
Anal sex	12	2.8
Masturbation	7	1.7
Pornography	17	4.0
Sex with older persons	6	1.4
No response	198	46.9

Field Survey, 2018

Participants highlighted watching pornography as a way to initiate male adolescents into sexual life. According to the discussants, pornography provides an avenue for adolescents to learn to be involved. Others

identified the ease of accessibility of pornography, such as pictures and films (at a price of \$3 per DVD) or watching it on a cell phone. One discussant reported how easy it is to get access to pornographic pictures and CDs in their community, hence, sharing pornographic materials with mates is possible. One discussant stated:

Certain male individuals display timidity; they express romantic interest yet lack the knowledge or confidence to initiate sexual encounters. Consequently, they resort to viewing pornography as a means to acquire insights into the dynamics of sexual initiation. (FGD 4/female/17 years/out-of-school)

Another respondent further clarified:

In our local vicinity, explicit content, in the form of pictures or CDs, is easily obtainable in public spaces, with CDs available for purchase at a nominal cost of N100 each. In instances where a person buys such CDs, it is collectively duplicated onto empty CDs, which are subsequently distributed and sold within our social circles. (FGD 2/male/18 years/out-of-school)

Participant responses show adolescents who lack adequate sexual education, which leads to uncertainty or discomfort when initiating sexual activities. Hence, they may turn to pornography as a source of information and guidance. In addition, the availability and accessibility of pornographic material in the area—specifically through pictures and CDs sold on the streets for a relatively low price—contribute to exposure to explicit content.

Older partners attracted adolescents into sex for monetary or material gains. This was exemplified by one of the discussants who stated:

While assisting a woman in fetching drinking water, she generously provided me with food. As I ate, she unexpectedly played a pornographic movie and invited me to massage her back. Subsequently, the sequence of events led to an intimate encounter with her. This marked the commencement of my experiences involving sexual relations with older women. Engaging in such relationships often resulted in receiving financial support and gifts from them. (FGD 2/male/19 years/out-of-school)

Table 4 indicates that, in this study, more males (76.3%) were involved in sexual intercourse than females (57.9%). A chi-square test showed a p -value = 0.0001, indicating a significant relationship between gender and sexual involvement of adolescents in this study. In addition, Table 4 shows that more out-of-school adolescents (87.7%) had ever had sexual involvement than in-school adolescents (59.7%), perhaps indicating that more out-of-school adolescents were sexually active than in-school adolescents. A chi-square test showed that the p -value was 0.0001, which indicates a significant relationship between school status and sexual involvement of adolescents in the study.

Table 4: Cross-Tabulation and Chi-Square Analysis of Sexual Practices

Sexual Involvement						
	Had sex (# /%)	Not had sex (# /%)	Total (# /%)	χ^2	df	p value <0.05
Gender						
Male	142(76.3%)	44(23.7%)	186(100%)	16.230 ^a	1	0.000
Female	132(57.4%)	98(42.6%)	230(100%)			
Total	274(65.9%)	142(34.1%)	416(100%)			
School Status						
In-school	181(59.7%)	122(40.3%)	303(100%)	22.673 ^a	1	0.000
Out-of-school	94(87.7%)	17(15.3%)	111(100%)			
Total	275(66.4%)	139(33.6%)	414(100%)			
Practice Masturbation						
Gender	Yes	No				
Male	52(33.5%)	103(66.5%)	155(100%)	5.084 ^a	1	0.024
Female	40(22.5%)	138(77.5%)	178(100%)			
Total	92(27.6%)	241(72.4%)	333(100%)			
Sexual Involvement						
Had sex	81(34.8%)	152(65.2%)	233(100%)	20.120 ^a	1	0.000
Not had sex	11(10.9%)	90(89.1%)	101(100%)			
Total	92(27.5%)	242(72.5%)	334(100%)			
Pornography Exposure						
Gender	Yes	No				
Male	118(72.8%)	44(27.2%)	162(100%)	11.29a	1	0.001
Female	99(55.3%)	80(44.7%)	179(100%)			
Total	217(63.6%)	124(36.4%)	341(100%)			
Sex With Older People						
Gender	Yes	No				
Male	53(37.6%)	88(62.4%)	141(100%)	16.094	1	0.000
Female	26(16.9%)	128(83.1%)	154(100%)			
Total	79(26.8%)	216(73.2%)	295(100%)			

Field Survey, 2018

Table 4 results indicate that 33.5% of male adolescents practiced masturbation, compared to 22.5% of females. A chi-square test revealed a *p*-value of 0.024, indicating a significant relationship between the sex of adolescents and the practice of masturbation at the 5% significance level. Furthermore, among adolescents who ever had sex, 34.8% reported practicing masturbation; 27.5% among those who never had sex engaged in this behavior. Another chi-square test showed a *p*-value of 0.0001, signifying a significant relationship between sexual involvement and the practice of masturbation at the 1% significance level.

Regarding exposure to pornographic materials, 72.8% of male adolescents and 55.3% of female adolescents reported ever viewing such content. The chi-square test yielded a *p*-value of 0.001, indicating a significant relationship between gender and exposure to pornographic materials at the 1% significance level.

Lastly, findings revealed that 37.6% of male adolescents and 16.9% of female adolescents had engaged in sexual intercourse with someone older than them. A chi-square test with a *p*-value of 0.001 demonstrated a significant relationship between gender and engaging in sexual relationships with older partners at the 1% significance level.

Discussion

This study delved into the sexual behaviors of adolescents within the framework of local culture and socio-economic factors. Findings revealed that 75.6% of respondents fell within the late adolescence age bracket (17–19 years of age), a group particularly vulnerable to HIV/AIDS and other STIs due to increased engagement in risky sexual behaviors. Consistent with prior research (John et al., 2014; Olugbenga-Bello et al., 2009), 65.4% of adolescents were sexually active, with males exhibiting higher activity levels compared to females. In line with studies elsewhere (Ayoade et al., 2015), out-of-school adolescents were particularly prone to sexual activity, citing perceived maturity and freedom from parental oversight.

The mean age of sexual debut was 15 years for both genders, aligning with previous research (Ejike, 2015; Odumegwu & Somefun, 2017). Motivations for sexual activity included pleasure, love, and peer influence, echoing established patterns in adolescent sexual behavior (Folayan et al., 2019). However, despite the prevalence of sexual activity, only 51.4% reported consistent condom use, with barriers like limited access and stigma contributing to inconsistent usage, as seen in previous studies (Tarkang, 2013).

Discussants in this study gave reasons for inconsistent use of protection during sexual intercourse, including inaccessibility of places where protective devices were sold and stigmatization when they go to purchase protections like condoms. Studies have reported that objections to condom use among adolescents are due to stigma and an unfriendly environment for condom accessibility, thus exposing them to the risk of contracting STIs (Adogu et al., 2014; Earnshaw et al., 2014).

Masturbation was prevalent among 21.8% of adolescents, primarily driven by the pursuit of sexual pleasure, while 16.6% reported engaging in anal sex, often to please a partner. This underscores the need for comprehensive sexual education programs addressing diverse sexual practices among adolescents, consistent with prior research (Nwoke et al., 2011; Robbins et al., 2011).

The study also investigated the prevalence of anal sex among adolescents, revealing that 16.6% of participants reported engaging in this practice. This rate exceeds previous findings from various communities, raising significant public health concerns (Copen et al., 2012; Daka and Shaweno, 2014; Markham et al., 2009). The primary reason cited for engaging in anal sex was to please a sexual partner, emphasizing the importance of promoting safe and consensual sexual practices among adolescents. This underscores the necessity of addressing not only the physical risks associated with anal sex but also the importance of understanding and promoting healthy relationship dynamics and communication.

Moreover, our study found that over half (51.7%) of adolescents engaged in the consumption of pornographic materials, including movies, books, or pictures. In the contemporary landscape of STIs, exposure to such materials poses a substantial threat to adolescent sexual health, potentially undermining efforts to promote abstinence and encouraging the adoption of risky sexual behaviors. Notably, many adolescents reported viewing pornographic materials both independently and with peers. Consistent with our findings, previous studies (Arulogun & Ogbu, 2013; Svedin et al., 2011) have corroborated the link between exposure to pornographic content and subsequent engagement in behaviors depicted therein. This underscores the importance of addressing the influence of pornography on adolescent sexual behavior within comprehensive sexual education programs.

This study uncovered instances of sexual intercourse between adolescents and older individuals, with a notable prevalence among males compared to females. The accounts provided by discussants shed light on the primary motivator for such engagements: the pursuit of material benefits. This phenomenon underscores the profound influence of poverty, wherein adolescents seek older sexual partners in pursuit of financial or material gratification. It is evident that poverty serves as a significant driving force, perpetuating the practice of adolescents seeking older partners for financial assistance (Malinga & Modie-Moroka, 2020).

In this study, it was observed that sexual activities were more prevalent among out-of-school adolescents compared to their in-school counterparts. This finding echoes previous research that indicates that adolescents outside the formal education system may face different social dynamics and fewer opportunities for structured sexual education (Santelli et al., 2017). Out-of-school adolescents might lack access to comprehensive sexual education programs typically offered within schools. These programs often cover topics, such as reproductive health, contraceptive methods, and STI prevention, which could contribute to greater awareness and understanding of sexual risks and protective measures.

Also, the study highlights the influence of peer pressure on adolescent sexual behavior. While in-school teenagers may also experience peer pressure, the dynamics could differ. In a school setting, adolescents might be exposed to a diverse range of peer influences, including both positive and negative behaviors. They may receive information about protection and be surrounded by peers who reinforce responsible sexual practices. However, peer pressure can also lead to risky behaviors, such as early sexual debut or engaging in unprotected sex, especially if adolescents feel pressured to conform to perceived social norms or expectations. Conversely, out-of-school adolescents may face different peer dynamics, potentially lacking the structured environments provided by schools where positive influences and educational resources are more readily available. This could contribute to a higher likelihood of engaging in risky sexual behaviors, as observed in the study.

Limitations

There are three limitations associated with this study. First, given the cultural taboos surrounding discussions about sexual behavior in Nigerian communities, responses obtained from this study may not fully capture the true extent of adolescent sexual behaviors. In many traditional/rural Nigerian societies, topics related to sex are considered sensitive and private, which leads to hesitance or reluctance to disclose such information. The fear of repercussions or social consequences for discussing sex subjects may influence respondents to provide responses that do not reflect their true experiences. As a result, such data may be skewed or incomplete, impacting the reliability of findings related to adolescent sexual health and behaviors.

Second, the study's geographic focus in Creek Town, Nigeria, presented a limitation in terms of the generalizability of the findings to other regions or countries with diverse cultural, socio-economic, and demographic characteristics. Creek Town, being a specific locality within Cross River State, may have unique cultural practices, social norms, and community dynamics that differ from those in other regions or countries. As a result, the findings and conclusions drawn from this study may not be directly applicable or representative of populations in different geographic locations. Moreover, socio-economic factors, such as income levels, access to healthcare, and educational opportunities, can vary widely between different regions or countries. These disparities can influence individual behaviors, perceptions, and experiences related to sexual health and practices. By focusing solely on Creek Town, the study overlooked the nuances and complexities present in other settings, thereby limiting the applicability of its findings beyond the specific geographic area studied.

Third, language barriers posed a significant challenge during the study, as many participants were not proficient in English, the language in which the questionnaire was originally designed. To facilitate effective communication and ensure that participants fully understood the questions, researchers conducted interviews in Nigerian pidgin, an English-based Creole language widely spoken across Nigeria. Despite its widespread use, pidgin was not universally understood by all participants in Creek Town. Recognizing this limitation, researchers adapted their approach further. For participants who were unable to communicate in pidgin, interviews were conducted in Efik. This adaptation was crucial because Efik is the primary language spoken by the majority of Creek Town residents, ensuring better comprehension and more accurate responses.

Recommendations for Future Research

Future research should encompass a wider range of geographic locations to enhance the generalizability of findings on adolescent sexual behaviors. There is a need to consider the importance of including diverse regions with varying cultural, socio-economic, and demographic characteristics to gain a more comprehensive understanding of adolescent sexual behaviors across different contexts. Different regions may exhibit unique norms, values, and practices related to sexuality and relationships, influencing how adolescents perceive and engage in sexual behaviors. By including diverse regions, researchers can uncover patterns, trends, and variations in adolescent sexual behaviors that may not be apparent when focusing on a single location. Moreover, studying adolescent sexual behaviors across a variety of geographic locations allows for an exploration of how socio-economic factors, such as access to education, healthcare, and resources, can impact sexual decision-making among adolescents. By examining these factors in different contexts, researchers can identify common challenges and disparities that may exist across regions and then develop targeted interventions to address them effectively.

Given the higher prevalence of risky sexual behaviors among out-of-school adolescents, future research should target this group specifically because these adolescents often face a range of challenges that can increase their vulnerability to engaging in risky sexual behaviors. These challenges may include limited access to comprehensive sexual education, lack of parental supervision, economic hardships, social isolation, and exposure to negative peer influences. Investigating these unique challenges in relation to sexual behaviors can help researchers and policymakers design targeted intervention programs that address their specific needs. These programs can incorporate elements, such as sexual health education, access to reproductive health services, life skills training, and psychosocial support, to empower out-of-school adolescents to make informed decisions about their sexual health and well-being.

Research should focus on identifying and addressing the barriers to condom use among adolescents, as this is essential for promoting safe sexual practices and reducing the risk of STI and unintended pregnancies. The stigma surrounding condom use can create significant barriers for adolescents, as it may be associated with negative perceptions, cultural taboos, and moral judgments related to sexuality. Addressing stigma requires targeted efforts to challenge misconceptions, educate communities about the importance of condom use for sexual health, and promote positive attitudes towards protective devices. Research can play a key role in identifying the specific sources of stigma related to condom use among adolescents and informing strategies to combat these barriers effectively. Accessibility issues, including limited availability and affordability of condoms, can also hinder consistent condom use among adolescents. Research can investigate the distribution channels, availability of free or low-cost condoms, and barriers to accessing sexual health resources in the community. Collaborating with local stakeholders, including community leaders, healthcare providers, educators, and youth organizations, can help develop tailored interventions that address the specific needs and preferences of adolescents in traditional communities like Creek Town. Interventions may include peer education programs, condom distribution campaigns, sexual health workshops, and advocacy efforts to reduce stigma and promote condom use as a normative behavior.

Finally, future studies should examine the impact of exposure to pornographic materials on adolescent sexual behaviors in greater detail. Such studies can delve deeper into how exposure to pornography impacts adolescent sex perceptions, relationships, consent, and body image. Understanding the extent of the influence of pornographic materials on adolescent sexual behaviors is crucial for developing targeted interventions that address the potential risks associated with exposure to explicit content. Media literacy programs can play a key role in educating adolescents about the portrayal of sex in media to promote critical thinking skills and foster healthy sexual attitudes and behaviors. By empowering young people to analyze and deconstruct media messages about sex, researchers can help them develop a more nuanced understanding of sexuality and relationships.

Conclusion

The findings of this study underscore the urgency of addressing the escalating rates of early sexual debut, high-risk behaviors, and adolescent pregnancies in Nigeria. It also highlights the need for targeted interventions and comprehensive sexual education programs to address risky sexual behaviors among Nigerian adolescents to emphasize the importance of safe sex practices, consistent condom use, and contraceptive methods, as well as the necessity of a holistic approach to sexual education that addresses not only the physical aspects of sexual health but the psychological and emotional dimensions.

This study underscores the importance of creating an environment that supports and facilitates access to sexual health resources, thus ensuring that adolescents can make informed and responsible choices. The high prevalence of sexual activity among out-of-school adolescents (when compared to in-school counterparts) also suggests a need for tailored interventions that consider the unique circumstances and challenges faced by different segments of this population. Thus, there is a need for adequate parental supervision and monitoring of adolescents—particularly on the kind of friends with which they interact. Additionally, sexual behavior change through focused health education should be instituted by community healthcare workers.

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