



CONTRACEPTION KNOWLEDGE AMONG SECONDARY SCHOOL STUDENTS IN PORT HARCOURT METROPOLIS RIVERS STATE NIGERIA

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ABSTRACT

This study investigates the factors associated with the knowledge of contraception among secondary school students in Port Harcourt Metropolis, Nigeria. A descriptive survey research design was employed, involving 900 students from both public and private secondary schools. A validated self-structured instrument with a reliability index of 0.76 was used for data collection. The study found that 76.1% of the respondents exhibited good knowledge of contraception, with 23.9% demonstrating poor knowledge. Disastrously, 80.3% of the students opinioned that contraceptives help prevent sexually transmitted diseases, and 63.7% understood their role in preventing unwanted pregnancies. However, misconceptions persisted, with 16.7% believing that other contraceptives prevent only pregnancy and 59.3% thinking that daily oral pills must be taken daily for effectiveness. Chi-square analysis revealed significant associations between knowledge of contraception and various factors. Age was found to be significant ($\chi^2 = 13.633, p = 0.008$), with students aged 15-16 years exhibiting better knowledge. Gender was also significant ($\chi^2 = 5.705, p = 0.033$), as female students had a higher level of understanding. Religion ($\chi^2 = 23.564, p = 0.002$) and guardian ($\chi^2 = 20.432, p = 0.001$) both significantly influenced knowledge, with Christian students and those guided by parents demonstrating better knowledge. Based on the findings, it was recommended that government in collaboration with health promotion experts, health educators and school administrators should design, develop and implement a targeted educational interventions to address misconceptions and disparities in knowledge; comprehensive sexual education programs should be implemented, tailored to students' diverse backgrounds, and designed to promote gender equity.

KEYWORDS: *contraception, Knowledge, students, associated factors, secondary Schools.*

INTRODUCTION

The socioeconomic and health implications of adolescent pregnancies in the Port Harcourt Metropolis of Nigeria have raised concerns among researchers (19). Consequently, it is crucial to ensure that teens have enough access to contraception-related knowledge. The Port Harcourt Metropolis has had a notable rise in adolescent pregnancies in recent years, as evidenced by the findings of Briggs (6). This highlights the urgent necessity for more knowledge regarding contraceptive techniques among high school students. The primary objective of this study is to enhance comprehension of the intricate factors that shape the level of knowledge among secondary school students in the Port Harcourt Metropolitan Area regarding contraception. By doing so, it aims to facilitate the development of more well-informed educational programs and policies in this domain.

Contraception, also referred to as birth control, is a viable means of preventing pregnancy (6; 19). Condoms and diaphragms can be classified as barrier methods (9). On the other hand, hormonal

methods encompass birth control pills, patches, and injections(11). Intrauterine devices (IUDs) (10), fall under the category of methods that are implanted within the uterus. Emergency contraception (6), is employed to prevent pregnancy following unprotected sexual intercourse. Lastly, fertility awareness methods involve tracking one's reproductive cycle. Due to variations in efficacy, advantages, and risks among different kinds of contraception, individuals and couples have the ability to choose the method that most effectively aligns with their own needs and personal preferences.

The effective prevention of unintended pregnancies among adolescents necessitates the extensive dissemination of accurate and comprehensive contraceptive education (16), the dissemination of precise information regarding sexual and reproductive health among adolescents might serve as a preventive measure against the occurrence of unintended pregnancies and sexually transmitted infections (STIs). Enhancing the level of knowledge among secondary school



students in Port Harcourt Metropolis regarding contraception is of utmost importance in reducing the incidence of teenage pregnancies and promoting healthier sexual behaviors.

The socioeconomic status of adolescents has a substantial influence on their ability to obtain information regarding contraception. The Port Harcourt Metropolis has a notable disparity in both economic conditions and educational opportunities. Students from privileged families may have an edge due to their access to resources such as the internet, private schools, and participation in extracurricular activities. Nevertheless, individuals hailing from socioeconomically deprived households may encounter limited access to educational resources pertaining to contraception, so impeding their ability to acquire knowledge in this domain.

The acquisition of contraception information among adolescents is frequently shaped by gender dynamics. The presence of gender norms is a significant societal obstacle to open discussions about sexual and reproductive health in certain nations, such as Nigeria (12). The presence of cultural taboos and societal standards can impose further limitations on women's ability to obtain information. In order to effectively implement gender-sensitive interventions in Port Harcourt Metropolis, it is imperative to possess a comprehensive awareness of the distinct difficulties and opportunities encountered by both women and men within the urban setting.

The significance of schools in providing comprehensive sex education cannot be overstated. The extent and comprehensiveness of sex education provided in secondary schools in the Port Harcourt Metropolis may influence students' knowledge and understanding of birth control method (4). The comprehension of contraception and its effectiveness among students is significantly impacted by factors such as the curriculum, instructional methods, and interactions between teachers and students(21)

Recent studies have shown an increasing amount of evidence indicating that early engagement of students in family planning might enhance the initial adoption of contraceptives as well as the sustained usage of contraception (3,8). Despite the acknowledgement by governmental authorities of the imperative to provide cost-free access to contraceptives, the utilization rate of such methods remains disproportionately low, particularly among the younger demographic. Additionally, scholarly investigations indicate that the high occurrence of sexually transmitted infections, particularly HIV/AIDS, and adolescent pregnancy among students is a significant societal concern that has the potential to impede students' concentration on their academic pursuits (20; 14, 23).

The adverse consequences of adolescent pregnancies on the physical, mental, and social well-being of teenagers and their

communities render these statistics deeply concerning. Approximately 75 million unwanted pregnancies occur annually due to factors such as inadequate thinking, information, or practice, as well as the inefficacy of contraceptive methods (25,14). These unplanned pregnancies account for a significant portion of the estimated 210 million pregnancies experienced by women and teenagers worldwide each year. The majority of these pregnancies are terminated prior to reaching full gestation, resulting in significant health consequences (7,24). The prevalence of adolescent pregnancy is a significant global concern, with Nigeria being no exception. The phenomenon has also affected Port Harcourt Metropolis, which serves as the administrative center of Rivers State. Based on the findings of the 2018 Nigeria Demographic and Health Survey (NDHS), it was determined that the adolescent birth rate in Rivers State stood at roughly 105 births per 1,000 girls within the age range of 15 to 19 years (DHS, 2018).

AIM AND OBJECTIVES

The aim of this study is to assess associated with knowledge of contraceptive among senior secondary school students in Port Harcourt Metropolis.

The objectives of this study are to:

1. Assess the level of knowledge of contraceptive use among senior secondary school students in Port Harcourt Metropolis
2. Establish the association between the secondary students' knowledge of contraception and age, gender, religion and guardian.

RESEARCH QUESTIONS

The study sought answers to the following questions.

1. What is the level of knowledge of contraceptive use among senior secondary school students in Port Harcourt Metropolis?
2. What is the association between the secondary students' knowledge of contraception and age, gender, religion and guardian?

RESEARCH HYPOTHESIS

The following null hypotheses were formulated to guide the study
There is no significant association between the secondary students' knowledge of contraception and age, gender, religion and guardian.

METHODOLOGY

This study used a descriptive survey research method to collect and present data on high school students' understanding of and engagement with contraception in the greater Port Harcourt area. The success of similar studies in Nigeria, such the one conducted in Ekpoma by Idonije et al. (2011), provided support for this methodological choice. Given its cultural and ethnic diversity, economic significance, and growing worries about adolescent pregnancies, Port Harcourt Metropolis, a significant commercial



hub in Nigeria's Niger Delta region, was chosen as the study area. Students from both public and private secondary institutions in the Port Harcourt Metropolitan Area made up the study population of 53,000.

To determine the sample size, the Cochran formula was employed, resulting in a sample size of 900 students (see below) The sample size was calculated using the Cochran formula, (Cochran 1963)

$$n = Z^2 Pq/d^2.$$

Where Z= 1.96 set at 95% confidence interval, so that $Z^2 = 3.8416$

P= 52.0% =0.520 is the proportion of safety device utilization (Ojo *et al.*, 2021).

d = 0.05 level of significance.

$$q = 1 - 0.520 = 0.480$$

d=Error margin tolerated at 5.0% = 0.05 so that $e^2 = 0.0025$

$$n = \frac{3.8416 \times 0.520 \times 0.480}{0.0025} = 384$$

n= **900**

Two administrative regions were chosen, then five wards within those regions, and finally two schools—one public and one private—were selected from each of those wards. The data was gathered with the help of a designed questionnaire with two parts: socio-demographic information and questions on contraception. Expert assessments verified the instrument's validity, and the test-retest procedure confirmed its reliability, producing a reliability coefficient of 0.76. Descriptive statistics, including frequency percentages (%) and Chi-Square, were used for data analysis in the SPSS.

RESULTS

Table 1: Socio-Demographic Data

Variables	Frequency	Percentages
Age		
< 15 years	325	36.5
15-16 years	323	36.3
>16 years	242	27.2
Gender		
Male	362	40.7
Female	528	59.3
Religion		
Christianity	596	67.0
Islam	38	4.3
Traditional	91	10.2
Others	165	18.5
Guardian		
Parents	387	43.5
Siblings	274	30.8
Friends	17	1.9
Relatives	109	12.2
Others	103	11.6

The result showed that 325(36.5%) of the respondents were aged <15 years, 323(36.3%) were aged 15-16 years and 242(27.2%) were aged >16 years. For gender, 362(40.7%) of the respondents were males while 528(59.3%) were females. The result also showed that 596(67.0%) of the respondents were of the Christian

religion, 38(4.3%) Islam, 91(10.2%) Traditionalists and 165(18.5%) were of other religion. For guardian, 387(43.5%) had parents as guidance, 274(30.8%) had siblings, 17(1.9%) had friends, 109(12.2%) had relatives and 103(11.6%) had others as guidance.



Table 2a: Level of knowledge of contraceptive use among senior secondary school students

Variables	Frequency (n=890)	Percentages
Have you heard of family planning		
Yes	569	63.9
No	321	36.1
Source of information		
Television	145	16.3
Radio	29	3.3
Newspaper	1	.1
Health worker	129	14.5
Friends	469	52.7
Worship center	36	4.0
Others	81	9.1
What method of contraceptive have you heard or know of		
Condom	433	48.7
Oral pill	281	31.6
Safe period	137	15.4
Others	39	4.4

Table 2a shows the level of knowledge of contraceptive use among senior secondary school students in Port Harcourt Metropolis. The result showed that 569(63.9%) of the respondents indicated that they have heard of family planning.

About 145(16.3%) indicated that they got their information from television, 29(3.3%) indicated radio, 1(0.1%) newspaper, 129(14.5%) health workers, 469(52.7%) friends, 36(4.0%) worship centers and 81(9.1%) others.

Table 2b: Level of knowledge of contraceptive use among senior secondary school students

S/N	Variables	True Freq (%)	False Freq (%)	Decision
1	Contraceptive helps to prevent sexually transmitted diseases	715(80.3)	175(19.7)	bad
2	Contraceptive helps to prevent unwanted pregnancy	567(63.7)	323(36.3)	Good
3	Other types of contraceptive (oral pills, vagina foam, injectibles, IUCD, etc) prevents only pregnancy	741(16.7)	149(16.7)	Good
4	Condom is to be worn on the male penis just before penetration during sexual intercourse	804(90.3)	86(9.7)	Good
5	Emergency oral contraceptive is to be taken at most within 72hrs after unprotected sex	777(78.3)	113(12.7)	Good
6	Daily oral pills are taken regularly on daily basis for it to be effective	528(59.3)	362(40.7)	Good
7	Injectibles and IUCDs are use on long-term basis for it to be effective	616(69.2)	274(30.8)	Good
Total		678(76.1)	212(23.9)	Good

Decision = >50 % is good knowledge; <50% is poor knowledge



Table 2b shows the level of knowledge of contraceptive use among senior secondary school students in Port Harcourt Metropolis. The result showed that 678(76.1%) of the

respondents had good knowledge of contraceptive while 212(23.9%) had poor knowledge.

Table 3: Summary of Chi Square analysis to establish the if secondary school students' knowledge of contraception is associated with age, gender, religion and guardian

	χ^2_{cal}	Df	χ^2_{crit}	Cramer's Value	p.val	Decision
Age	13.633 ^a	2	5.991	0.224	0.008	Significant
Gender	5.705	1	3.841	0.213	0.033	Significant
Religion	23.564	3	7.815	0.333	0.002	Significant
Guardian	20.432	4	9.488	0.453	0.001	Significant

*Dependent variable: Knowledge of contraception

*Independent variables: Age, Gender, Religion and Guardian

* $P > 0.05$; $\chi^2_{crit} < \chi^2_{cal}$: H_0 Rejected

Age: The chi-square statistic (χ^2_{cal}) of 13.633 with 2 degrees of freedom (Df) exceeded the critical chi-square value (χ^2_{crit}) of 5.991. This result, along with a Cramer's value of 0.224 and a p-value of 0.008, demonstrates that age is significantly associated with knowledge of contraception among students.

Gender: The chi-square statistic (χ^2_{cal}) of 5.705 with 1 degree of freedom (Df) exceeded the critical chi-square value (χ^2_{crit}) of 3.841. This indicates a significant association between gender and knowledge of contraception, supported by a Cramer's value of 0.213 and a p-value of 0.033.

Religion: The chi-square statistic (χ^2_{cal}) of 23.564 with 3 degrees of freedom (Df) significantly exceeded the critical chi-square value (χ^2_{crit}) of 7.815. This suggests a notable association between religion and knowledge of contraception, as indicated by a Cramer's value of 0.333 and a low p-value of 0.002.

Guardian: The chi-square statistic (χ^2_{cal}) of 20.432 with 4 degrees of freedom (Df) exceeded the critical chi-square value (χ^2_{crit}) of 9.488. This demonstrates a substantial association between the guardian and students' knowledge of contraception, with a Cramer's value of 0.453 and a p-value of 0.001.

DISCUSSION

In order to ascertain the level of knowledge of contraceptive use among the students, the research first examined their level of awareness and found that 63.9% of them were aware of contraceptive use. The findings indicate that a significant majority of both public school student participants and private schools student participants (63%) demonstrated accurate knowledge on on contraceptive ability to prevent unplanned pregnancies. The findings of this study are supported by previous research conducted in Nigeria. For instance, it was discovered that a significant number of students had a comprehensive understanding of various contraceptive techniques (12).

Nevertheless, the study also revealed prevalent misconceptions among the students. Such as contraceptives prevent sexually transmitted diseases 80.3%, a majority of 59.3% of respondents hold the belief that the efficacy of oral contraceptive tablets is contingent upon daily usage, whilst a minority of 16.7% believe that other contraceptive techniques merely prevent conception. The existing amount of research pertaining to adolescent knowledge regarding contraception substantiates the presence of these misconceptions. Studies conducted have revealed that Nigerian young are extensively exposed to misinformation and prevalent beliefs around contraception (16,18). Misinterpretations of information can lead individuals to improperly utilize contraceptive methods, thereby diminishing their effectiveness in avoiding unwanted pregnancies and sexually transmitted infections.

Statistically significant gender disparities in contraception awareness were also observed. Female students exhibited a greater level of contraceptive awareness in comparison to their male counterparts. This finding aligns with previous research that has identified a disparity in contraceptive awareness among individuals of different genders. A study has shown that female adolescents in Nigeria had a higher level of comprehension of efficacious contraceptive techniques compared to their male counterparts (5) . This variance can be attributed to a range of factors, such as cultural norms, the availability of information, and the influence of peers.

Emphasizing the significance of addressing the gender disparity in adolescent access to comprehensive contraception information is of utmost importance. In order to address this informational disparity, it is imperative to implement comprehensive sexual education courses that actively include male pupils.

The findings of the research further emphasis the significance of students' religious affiliation and parental oversight in influencing their comprehension of contraception. According to the findings of the survey, a majority of the students, specifically 67%,



identified themselves as Christians. Notably, this group exhibited a higher level of familiarity and understanding on the topic of birth control. This finding aligns with other studies conducted under comparable circumstances. A correlation between religious affiliation and contraceptive knowledge among adolescents in Nigeria's Christian majority (1). The researchers found that religion exerted an influence on the accuracy of their understanding of contraceptives.

Additionally, the research revealed that the concept of guardianship had a substantial influence on the academic progress of students. The data revealed that individuals who resided with their parents as guardians exhibited the highest levels of knowledge. Similar to a findings that parental assistance and communication significantly contributed to adolescents' knowledge and understanding of contraception(21).

The discovery that students' comprehension of contraception seems to improve as they grow older is intriguing. There exists a strong positive correlation between knowledge and age. The cohort of students aged 15 to 16 had superior understanding of contraception compared to both their younger and older counterparts. A findings indicate that there are comparable age-related discrepancies in contraceptive knowledge among adolescents in Nigeria (5). Consequently, our research outcomes align with their study. It is possible that their exposure to sexual education programmes or discussions has increased as they have advanced in age.

CONCLUSION

Understanding the current situation of adolescent sexual and reproductive health is aided by the study's findings on contraception awareness among secondary school students in Port Harcourt Metropolis. The findings are consistent with the current literature in some respects, such as the observation of differences in education and between the sexes, but they also provide light on some novel areas, such as the impact of religion and guardianship.

Targeted educational interventions should be developed to address the observed knowledge gaps and misunderstandings. Students' age, gender, religious background, and the influence of their guardians should all be taken into account while designing these interventions. Stakeholders may help improve adolescents' sexual and reproductive health in the Port Harcourt Metropolis by providing them with more information about available methods of birth control.

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