

## Reproductive health knowledge and practices among students in public secondary schools in Ebonyi State, Nigeria

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### Abstract

*Reproductive health problems are a major public health problem among adolescents aged 10-19 years. In Nigeria, male and female adolescents suffer from sexually transmitted infections such as gonorrhoea, syphilis, genital warts, candidiasis and trichomoniasis. This study determined reproductive health knowledge and practices among students in public secondary schools in Ebonyi State, Nigeria. The cross-sectional survey was adopted for the study. A sample of 500 students in public secondary school in Ebonyi State, Nigeria was enrolled for the study. The instrument used for data collection was researcher-designed questionnaire. Out of 500 copies of questionnaire administered; 496 representing 99.2% return rate, were used for analysis of data. Results showed that respondents had good (79.3%) knowledge concerning reproductive health but had low practice (2.13±0.68). Male and female students had average knowledge of reproductive health. Male and female students had average knowledge of reproductive health. However, female students dispositions to reproductive health practices were high while males were low based on their scores. The differences were significant in the knowledge of reproductive health based on gender (256.517, p=0.000) and practices (t-value=8.529, p=0.000). The study concluded that disparities in the level of knowledge and reproductive practices are still existing among the population studied especially the male ones. The study therefore, advocate for intensive reproductive health education programmes to students by secondary school teachers both in the classroom and during moral instruction.*

**Keywords:** Reproductive Health, Knowledge, Reproductive practice, Adolescence

## **Introduction**

Adolescents' reproductive health has been a major health concern as well as a challenge to the international communities for over the decade. For instance, Adrianpau, Lobo, Suarez, and Sebastian (2013) reported that about a total of 1.5 billion youths and adolescents globally, 78% that live in the low socioeconomic continents such as Asia and Africa have sexual and reproductive health (SRH) problems, particularly unsafe sex which is the second leading cause of disease, disability, or death in developing countries. Morris and Rushwan (2015) affirmed that early pregnancy/ motherhood, increased risk of exposure to HIV and sexually transmitted infections (STIs), sexual coercion, exploitation and violence are sexual health problems adolescents faced which compromise their educational achievement and economic potential. Inabasi and Adindu (2013) noted that the adolescence stage is the most critical period in human development and characterized with peer pressure, confusion and excitement that predisposes them to pre-marital sexual intercourse, unwanted pregnancy, early marriage, unsafe abortion and sexually transmitted diseases (STDs) including HIV/AIDS. Hence, adolescents need to have knowledge about reproductive health to prevent exposure to STIs.

Reproductive health is a state of complete physical, social and mental well-being and not merely the absence of disease or infirmity, in all matters related to reproductive systems and to its function and process (World Health Organization (WHO), (2011). Nigeria Federal Ministry of Health (NFMOH, 2013) identified reproductive health components to include, pre-natal care, safe motherhood and family planning, provision of safe abortion, treatment of complication of abortion, sexual education, treatment and prevention of sexually transmitted infections and sexual health. Reproductive health improves the physical and mental, safety and well-being of the adolescents. Reproductive health services also help in the promotion, prevention, early detection and intervention of the physical, emotional or social factors affecting the health of the adolescents, hence the need for reproductive knowledge.

Reproductive health knowledge is defined as the awareness, understanding and skill gained through health education and experience of reproductive processes that can help to prevent reproductive health problems (WHO, 2010). Disparities in the Knowledge of reproductive health has been reported. For instance, Nyein, Saw, Yin and Khindarli (2013) reported that high school students in Katha Township had poor knowledge of reproductive health, male than female students were aware of use of condom, hence, gender differences were statistically significant. Deepanjali and Suklyeek (2020) found that girls had less knowledge compared to boys about reproductive health. United Nation Children's Fund (UNICEF) (2011) reported that young adolescents aged 10-19 years were not aware of pubertal changes in their reproductive organs. WHO (2010) reported that lack of knowledge of reproductive health by adolescents have led to unprotected sexual intercourse with its associated complications. Averiyyire (2015) found that senior secondary high school in Greater Accra Region had good knowledge of family planning, pregnancy, very good knowledge, abortion good knowledge and STD/HIV very high level of knowledge. Shubba and Kirti (2014) reported that adolescents in Jaipur India had good knowledge of reproductive health.

Reproductive health practice is defined as the application of good health actions to one's daily living such as use of contraception to prevent unplanned pregnancy and unsafe abortion (Bucher, 2018). The author further stated that many adolescents in schools engage in sexual acts like vaginal sex, oral sex, sexual coercion, and homosexuality; they practice them without knowing how risky these behaviours are. Akande (2012) stated that about 32% of adolescents have been reported being sexually active; with a higher proportion of the males than females and sexual practices include vaginal sex, masturbation, oral and anal sex, having multiple sexual partners. WHO (2011) reported that sexual ill-health practice

accounts for 20% of the global burden of reproductive health problem for adolescents and 14% for adults. However, the knowledge and practice of reproductive health may depend on some demographic variable like gender (Ajuwon, 2006).

On gender, Basse and Ikechukwu (2012) found that adolescent boys and girls in public secondary schools in mainland Local Government of Lagos State had average knowledge of reproductive health. Kuberan, Rajan and Kumar (2017) and Sharif, Manal, Sahar and Aziza (2018) found significant association between level of reproductive health knowledge of secondary school students in a Taluk of Tamil Nadu and Alexandria, Egypt based on gender, respectively. Mesfin, Tigist, Hailu, Shimelis, and Meselech (2020) reported that preparatory school female students of Assela Town, Arsi Zone, Oromia Regional State, Ethiopia do not practice sexual and reproductive health rights. In Asmara, Eritrea, Yonatan, Bekit, Ermias, Goitom, Tedros, Yonas and Ghidey (2022) found very low reproductive practice among adolescents attending secondary schools and significant difference was found among the participants. Kibret (2023) reported that high school students in Bahir Dar, Ethiopia do not practice reproductive health and that significant difference exist among male and female students. In Nigeria, Idowu, Aremu, Fehintola and Popoola (2017) found no significant difference in the contraception practice among female junior secondary school students in an urban community of Oyo-state, South west, Nigeria.

Studies in Sub-Saharan African countries indicated that young adolescents are sexually active and often had reproductive health problems such as unwanted pregnancies, and unsafe abortion, STIs such as gonorrhoea, syphilis, and genital warts including HIV/AIDS which they contracted through unsafe sexual practice (Akintola, Biddeom, & Georges, 2008). In Kenya, Ferguson *et al* (2006) showed that over 75% of the boys and girls had contracted sexually transmitted diseases (STDs). In Tanzania, over 90% of adolescent girls and boys have had reproductive health problems such as unwanted pregnancy, unsafe abortion and sexually transmitted infections (Shubba & Kirti, 2014).

In Nigeria, over 40 million adolescent boys and girls acquire sexually transmitted infections (STIs) such as gonorrhoea, syphilis, and genital warts, candidiasis and trichomonas infection and over 16% of females had first sexual intercourse before age 15 while their male counterparts over 8.5% had first sexual intercourse before age 15 (National Development Health Survey, 2013). These have resulted to high school drop outs, parental abuse and battering, social stigmatization, child abandonment, child abuse and even infanticide (Nigeria Federal Ministry of Health, 2013).

In Ebonyi State, the researchers observed that majority of young people aged 10-19 years diagnosed of STIs and had unplanned pregnancies and unsafe abortions were secondary school students. This has caused most of the secondary school students not to continue with their schooling and had exposed them to many reproductive health problems such as, pelvic inflammatory diseases, unsafe abortion, contraction of sexually transmitted infections such as gonorrhoea, syphilis, genital warts, candidiasis and trichomonas infection. Therefore, it is necessary to ensure that the adolescents have basic correct knowledge about reproductive health which may help to have good reproductive health practice that will reduce unplanned pregnancies, unsafe abortions, contraction of sexually transmitted infections such as gonorrhoea, syphilis, genital warts, candidiasis and trichomonas infection. It is therefore vital to investigate reproductive health knowledge and practices among adolescents' secondary school students in Ebonyi State where it has not been established whether a study of this nature has been conducted.

### **Purpose of the Study**

The main purpose of the study was to determine reproductive health knowledge and practices among adolescents' secondary school students in Ebonyi State. Specifically, the study was designed to determine:

1. reproductive health knowledge among secondary school students in Ebonyi State
2. reproductive health practices among secondary school students in Ebonyi State
3. reproductive health knowledge among secondary school students in Ebonyi State by gender
4. reproductive health practices among secondary school students in Ebonyi State by gender.

### **Research Questions**

The following research questions guided this study.

1. What is the level of reproductive health knowledge among secondary school students in Ebonyi State?
2. What is the level of reproductive health practice among adolescents in public secondary schools in Ebonyi State?
3. What is the level of reproductive health knowledge among secondary school students in Ebonyi State by gender?
4. What is the level of reproductive health practice among adolescents in public secondary schools in Ebonyi State by gender?

### **Hypotheses**

1. There is no significant difference in the level of reproductive health knowledge among adolescents in public secondary schools in Ebonyi State by gender ( $p \leq 0.05$ )
2. There is no significant difference in the level of reproductive health practices among adolescents in public secondary schools in Ebonyi State by gender ( $p \leq 0.05$ )

### **Methods**

This study adopted cross-sectional survey research design. The study was carried out using 221 public secondary schools in Ebonyi State during 2018/2019 academic session. The population of this study consisted of 125,605 public secondary students in Ebonyi State distributed according to the educational zone. Thus: Ebonyi Central zone has 41855 students, North 41766 and South 41984 (Ebonyi State Ministry of Education Abakaliki, 2017). The sample size of 500 students aged 10- 19 years in Junior and senior classes in public secondary schools in Ebonyi State participated in the study. This sample size was arrived following the suggestion from Gray, Mills and Hirasian (2009), that if a population is beyond 5000 (five thousand), 500 will be a confident Sample size. The sample was drawn using multistage sampling procedure. In the first stage, the researchers identified educational zones. In the second stage, the researchers stratified the zone into three namely Ebonyi Central, North and South Zone. In the third stage, the participants in the zones were clustered into Local Government Areas (LGAs) according to co-education and non-co-education schools. In the final stage, the researchers used purposive sampling technique to select 125 students from each of the four selected schools from co-education. This procedure yielded a total sample of 500 students used in this study. A researcher-developed questionnaire, called Reproductive Health Knowledge and Practice Questionnaire (RHKPQ), which consisted of 55 items, which were arranged in three sections A, B, and C was used for the study. Section A contained one question about the gender of the respondents. Section B comprised 32 'true or false' items on reproductive health knowledge in which items 1-11 elicited information on family planning, 12-16 on pregnancy, 17-22 on abortion, and 23-32 on sexually transmitted infections and HIV/AIDs. Section C contained 22 items which elicited information on reproductive health practices. Items 33-37 elicited information on family planning reproductive health related

practices, 38-41 on pregnancy practices, 42-48 abortion related practices and 49-54 sexually transmitted infections using response options like Always (AL) Often (O) Occasionally (OC) Never (N).

Five experts in Health Education from two higher institutions in Ebonyi State were used for validating the RHKPQ. Thirty secondary school students in Enugu State were used for test of reliability. However, Split-half computation was used to establish reliability index of the Reproductive Health knowledge Questionnaire and Cronbach Alpha computation was used to test Reproductive health Practices Questionnaire. The data yielded a reliability coefficient of  $r = 0.64$  for RHKQ. Furthermore, reliability computation of each duster (Reproductive Health knowledge on family planning  $r= 0.82$ , pregnancy,  $r=0.76$ , abortion  $r=0.81$  and sexually transmitted infections  $r=0.73$  was done. However, Reproductive health Practices Questionnaire had overall reliability co-efficient on  $r = 0.66$  and each of the clusters had reliability co-efficient  $r = 0.65$  for family planning reproductive health related practices, pregnancy practices  $r=0.74$ , abortion related practices  $r=0.82$  and sexually transmitted infections  $r =0.92$ . The reliability coefficients were high enough considering Ogbazi and Okpala (2004)'s criteria of 0.60 acceptable.

The permission to use the students for the research from the principals in each secondary school incorporated in the study was obtained before data collection. A consent letter with the explanation of the research purpose, method of response and assurance of anonymity was attached to each copy of the RHKPQ. Because of the knowledge questions, copies of the RHKPQ were administered on the respondents in their respective classrooms during break period. The researchers stayed with the respondents while they were completing the questionnaire copies. The respondents were allowed 30 minutes to respond to the copies of the RHKPQ and return the immediately. The completed copies of the RHKPQ were examined for completeness of responses and copies that had incomplete responses were discarded.

Out of 500 copies of the RHKPQ administered; 496 (male 240 and female 256) representing about 99.2% return rate, were used for analysis. Percentages were used to describe the respondents' reproductive health knowledge. In describing the respondents' reproductive health knowledge, a proportion of less than 20% was considered "poor" knowledge, 21 – 39% "fair", 40 – 59% "average", 60 – 80% "good" and above 80% very good knowledge. Chi-square test was run to examine the differences in reproductive health knowledge between male and female Mean scores were used to describe the reproductive health practices of the respondents. In describing the respondents' practices, a mean score of 2.50 and higher indicated that the respondents practice reproductive health and a mean score of less than 2.50 was adjudged not practice towards reproductive health. Standard deviations were used to examine how the responses given by the respondents varied. T-test was run to examine the differences in practice of the respondents towards reproductive health in relation to gender. An alpha level of 0.05 was set for both sets of chi-square tests and t-tests tests. All data analyses were done with IBM SPSS version 23.0 for windows.

## Results

**Table 1: Percentage of Reproductive Health Knowledge among Adolescents in Public Secondary Schools in Ebonyi State (n=496)**

Reproductive Health Knowledge	% correct responses	Decision.
Family Planning	80.6	Good
Pregnancy	84.6	Very good
Abortion	70.5	Good
Sexually Transmitted Diseases	81.6	Very good
<b>Overall</b>	<b>79.3</b>	<b>Good</b>

Table 1 shows the respondents' level of reproductive health knowledge among adolescents in public secondary schools in Ebonyi State. The results showed that respondents in public secondary schools in Ebonyi State had good knowledge of family planning (80.6%), very good knowledge of pregnancy (84.6%), good knowledge of abortion (70.5%), and very good knowledge of sexually transmitted diseases (81.6%). Overall result showed that, adolescents in public secondary schools in Ebonyi State had good knowledge of reproductive health (79.3%). This suggests that adolescents in public secondary school in Ebonyi State has good reproductive health knowledge.

**Table 2: Reproductive Health Practice among Adolescents in Public Secondary Schools in Ebonyi State (n= 496)**

Reproductive Health Practices	$\bar{x}$	SD	Decision
Family Planning Related (FPR)	2.09	0.81	NP
Pregnancy Prevention Related (PPR)	2.22	0.81	NP
Abortion Prevention Related (APR)	1.91	0.81	NP
Sexually Transmitted Diseases Practices (STDPR)	2.32	0.61	NP
<b>Overall</b>	<b>2.13</b>	<b>0.68</b>	<b>NP</b>

Table 2 shows the respondents mean score for each of the four index of reproductive health practice namely: FPR mean score ( $2.09 \pm 0.81$ ), PPR = ( $2.22 \pm 0.81$ ), APR = ( $1.94 \pm 0.81$ ) and STDPR = ( $2.32 \pm 0.61$ ) which were below the criterion mean score of 2.50 set for the study indicated that the respondent do not practice reproductive health. Similarly, the mean score on overall reproductive health practice was ( $2.13 \pm 0.68$ ) which was below the criterion mean of 2.50 set for the study. This suggested that students in Ebonyi State do not practice reproductive health.

**Table 3: Percentage and Chi-square test of Reproductive Health Knowledge among Adolescents by Gender**

Variables	% correct responses		$\chi^2$ cal- value	p-value	Dec.
	Gender				
	Male (N = 240)	Female (N = 256)			
Family Planning	48.1	51.9	26.129	0.001	S
Pregnancy	49.2	50.8	7.919	0.161	NS
Abortion	43.0	57.0	10.413	0.108	NS
Sexually Transmitted Diseases	49.4	50.6	14.176	0.077	NS
<b>RHK</b>	<b>47.4</b>	<b>52.6</b>	<b>256.517</b>	<b>0.000</b>	<b>S</b>

Results in Table 3 show that on each of the reproductive health knowledge index, male and adolescents had average knowledge with overall 240 (47.4%) and (52.6%) respectively. When chi-square was run, the analysis indicated that gender significantly associated with family planning knowledge ( $P < 0.05$ ) but on pregnancy, abortion and sexually transmitted diseases based on gender ( $P > 0.05$ ). The overall data gender is significantly associated with level of reproductive health knowledge and gender of adolescents ( $\chi^2 - \text{cal} = 256.517, p = 0.000$ ).

**Table 4: Mean and Summary of t-test Analysis of Reproductive Health Practice by Gender**

Variable	Gender	N	$\bar{x}$	SD	t-value	P-value	Decision
FPR	Male	240	1.94	0.78	9.409	0.000	S
	Female	256	2.74	0.55			
PPR	Male	240	2.12	0.83	6.212	0.000	S
	Female	256	2.67	0.51			
APR	Male	240	1.75	0.81	9.211	0.000	S
	Female	256	2.54	0.51			
STIPR	Male	240	2.25	0.63	5.154	0.000	S
	Female	256	2.60	0.43			
Overall	Male	240	2.01	0.68	8.529	0.000	S
	Female	256	2.63	0.42			

Table 4 shows that on each of the reproductive health practice index, male students score below 2.50 criteria set for this study with overall ( $2.01 \pm 0.68$ ) while female scored

above 2.50 in all the reproductive index with overall ( $2.63 \pm 0.42$ ) which was up to 2.50 and above criteria set for this study. Indicating that male students do not practice reproductive health while female practice reproductive health. Summary of t-test analysis showed that significant difference exist in all the reproductive health practice index based on gender ( $P < 0.05$ ). On the overall level of reproductive health practice, the analysis equally showed that the (t-value of 8.529,  $p = 0.000$ ) was significant at 0.05 level of significance based on gender.

### **Discussion**

Result in Table 1 indicates that students in public secondary schools had good knowledge of reproductive health in Ebonyi State. The reason for this finding could be attest to the fact that students in this era are always curious on matters that are related to reproductive matter. This finding is consistent with those of Averiyire (2015) which found that senior secondary high school in Greater Accra Region had good knowledge of family planning, pregnancy, very good knowledge, abortion good knowledge and STD/HIV very high level of knowledge. The finding agrees with those of Shubba and Kirti (2014) who reported that adolescents in Jaipur India had good knowledge of reproductive health. Results in Table 3 indicated that both male and female had average knowledge of reproductive health. This finding supported the finding of Bassey and Ikechukwu (2012) which found that adolescents' boys and girls in public secondary schools in mainland Local Government of Lagos State had average knowledge of reproductive health.

Results in Table 2 show that students in public secondary schools in Ebonyi State do not practice reproductive health. This finding was not expected based on the fact that the students had good reproductive health knowledge. This implies that good knowledge of reproductive health acquire by students does not translate to its practices. The implication is that student do not practice reproductive health knowledge acquired and this may result to high increase of reproductive health problems among the adolescents. Therefore, comprehensive reproductive educative programme is required and should be applied by teachers in the classroom and during moral instruction.. However, the finding is related with studies of other researchers. For instance, Mesfin, Tigist, Hailu, Shimelis, and Meselech (2020) reported that preparatory school female students of Assela Town, Arsi Zone, Oromia Regional State, Ethiopi do not practice sexual and reproductive health rights. Kibret (2023) who reported that high school students in Bahir Dar, Ethiopia do not practice reproductive health .

On Table 4 result showed that male students in public secondary schools in Ebonyi State do not practice reproductive health while female practice. When t-test was ran, significant difference in the level of reproductive health practice among students in public secondary schools in Ebonyi State by gender ( $P < 0.05$ ) was observed. The differences found among the students could be attributed to the fact that any matter related to reproductive health is regarded as women issues. Therefore, women are being exposed to issues related to reproductive health. This result also showed that female students are more conscious about the changes pertaining to their reproductive systems and this will help to bridge the gap of unwanted pregnancies, unsafe abortion and high school drop-out in Ebonyi State. The finding supported Kibret (2023) study which found significance difference in the reproductive health practices among students in Bahir Dar, Ethiopia. However, finding in the study disagree with Idowu, Aremu, Fehintola and Popoola (2017) who found no significant difference in the contraception practice among female junior secondary school students in an urban community of Oyo-state, South west, Nigeria.

## Conclusion and Recommendations

Reproductive health knowledge and practice are important in prevention of reproductive health problems. The result which indicated that male respondents do not practice reproductive health suggests a very high alarming gaps and could put the students especially the female ones into trouble since their male counterparts may have high influence on reproductive matters. Hence, the present study advocate for intensive reproductive health education programmes using secondary school teachers both in the classroom and moral instruction. Also, other bodies like Non- Governmental Organizations and health educators should create awareness on the need for reproductive health practices among students using seminars, workshops and conferences.

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