

Prospective Study of the Knowledge, Awareness and Practice of Effective Contraceptive Method among Secondary and Higher Institution Students in Rivers and Bayelsa States of Nigeria

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Abstract:

Objective: The purpose of this study is to ascertain the level of knowledge, awareness of the effective use of contraceptive methods among female secondary, higher and university students in Rivers and Bayelsa State in Nigeria. Which will enable provide useful information for future intervention strategies and the reduction of unwanted pregnancies.

Methods: A cross-sectional study using 1000 sample of pretested questionnaires among female students of secondary, higher, and tertiary institutions in both states were used.

Results: A total of 980 female students took part in the study. Majority of participants 91.00% were aware of ways and method of avoiding unwanted pregnancy, or delay pregnancy. While 74.897% of the participants were aware of contraceptive methods, 24.10% never understood or ever used any form of contraception. The common source of information is from friends 40.36%. Most of the students 74.791% planned to use contraception in the future to prevent unwanted pregnancy; while 25.21% showed no intention of its usage which is significantly high relatively to the total number of students questioned.

Conclusively: among those aware of the contraceptive methods only 51.25% are willing to use, if affordable, meanwhile 48.75% declines, reasons are skepticism, fear of side effect, uncertainty about the need, partner objection.

Keywords: Contraception, knowledge, abortion, Nigeria.

I. Introduction

The use of contraceptives in these era is of utmost importance, It's not just to prevent against unwanted pregnancies, and it's related maternal and child morbidity, mortality¹. It also decreases mother to child transmission of the HIV, in the underdeveloped world; most especially in our environment were the HIV, and poverty prevalence is very high^{1, 2, 3}. Which also contributes to higher rate of induced and illegal abortions found in this study; were close to one quarter of the participants have had at least one illegal abortion, as in most part the country, Nigeria: even though abortion is illegal yet very common^{4, 5, 6}. Thereby increasing the level of abortion related medical conditions such as late tubal blockage, uterine synechia, cervical incompetency etc^{4, 6}. Contraception refers to a group of birth control modalities: if it is used; birth control, spacing of offspring's, family planning and sexual activities would be more pleasant, anxiety free and unwanted pregnancy could be prevented or reduced to the barest minimum^{5, 7}.

Contraceptive efficacy by different types is 75% to 99%¹. In many low income countries, the lack of knowledge, awareness about and the access to contraceptive methods have resulted in women resorting to unsafe or illegal abortions^{4, 6, 8}. Every year, unplanned pregnancies have led to at least 50 million abortions worldwide, many of them being unsafe and subsequently resulting; in approximately 80 000 maternal deaths^{4, 6, 8}. This has also contributed significantly to maternal morbidity and mortality and also among the leading course of post abortion related female reproductive abnormalities^{4, 5}. Knowledge, awareness and practice on contraception are particularly important as a result of the high rates of unwanted and teenage pregnancies and soaring STI's and HIV/AIDS rates in this part of the world, most particularly in this environment^{6, 9}. Different studies however have shown that the knowledge, awareness and practices in relation to contraceptive methods are limited amongst the female students of high school than, those in higher institutions and university students by Kiragu et al¹⁰. In our environment Rivers and Bayelsa State in Nigeria, teenage unintended pregnancies occur from unstable relationship and they are usually unplanned or unwanted pregnancies by Ibrahim IA, et al and Omo-Aghoja LO, et al^{4, 6, 11, 12}. In fact, in our survey about 37.305% of the participants have undergone some form of illegal abortions conducted by various local illegal abortionists, or self medicated methods. Although several contraceptive methods; are available in the market, but are either very expensive, or not attainable in all communities^{6, 10}. The low uptake of the various contraceptives methods could be attributed to many factors like : higher cost, lack of proper information, traditional beliefs, skepticism, fear of side effects,

educational orientation, where sex education is a taboo in some communities in the country, literacy level of parents, poverty and lack of easy associability of these method. With a resultant effect on the high rates of Teenage and unintended pregnancies which still persists in Nigeria in general; and most particularly in the Southern part of the country where the study is carried out^{4,7,10,11}. It is estimated that close to 60-75% of pregnancies in Southern Nigeria are unintended for, with the highest proportion being among adolescents, and with a very high incidence of sexual assault. In order to increase the public health benefits, of widespread Hormonal Contraceptive and other methods availability, potential users must be well informed about the use of Contraception. Specifically, women in their child-bearing age must know the role, importance and likely benefits of the Contraceptive methods^{1,4,6}.

II. Materials And Methods

Setting and Population

A cross-sectional survey was conducted in 2013 at various centers in the two states of the country. Only female students from the Niger Delta University in Bayelsa State, University of Port Harcourt in Rivers State, Rivers State Polytechnic Bori, School of Nursing Bayelsa, and few secondary Schools in both states were enrolled. Eligible participants were women aged between 14 and 35 years who are in actively normal full time studies in these institutions. A convenience sampling method was used. All female students of the various institutions are eligible for the survey. However, only students who were present in the schools at the time the study was conducted actually participated in the survey. The study was actually conducted by providing a pretested questionnaire to all participants in English. A total of 1000 questionnaire was sent out, of which only 980 copies arrived answered. To reduce the non-respondent rate, the information was not disclosed until all students had gathered in the there lecture halls. They were then informed of the survey, its objectives and procedures and assured that the information collected would be treated as confidential and used only for research purposes. Students who gave their verbal informed consent were provided with the three-page, anonymous, self-administered questionnaire. Students were well spaced out to avoid communication among them during the exercise. They were also asked to request for clarification if any item in the questionnaire was not clear. Students were not required to identify themselves by writing their names on the questionnaire and confidentiality was emphasized. The procedure was organized twice, and each section took about 40 minutes. At the end of each section, colleagues involved collected the completed questionnaire before leaving the halls.

Study instrument:

Three page, anonymous, self-administered questionnaire for data collection. The questionnaire had both open and closed-ended questions. It was composed of four parts. The first part was the demographic nature of the participants; the second part contains the awareness and knowledge of contraception. The third section viewed the attitude towards contraceptive methods. While the last part focused about the participant's sexual history. The questionnaire was designed taking into consideration similar studies that have been carried out in other parts of Nigeria, and in other countries. The awareness and knowledge of the contraception were determined using three multiple-choice questions. The questions to evaluate the awareness and knowledge of contraception are as follows: (1) "What is contraception? This question was divided into two parts: a.) is a way or methods that can be used to avoid or delay pregnancy? b. / is a way or methods that can be used to avoid sexual activities? /answer: Yes or No. / . (2) Are you aware that there are ways and methods that can be used to avoid unintended, unwanted, delay pregnancy? / answer: Yes or No/. (3) How did you have the information about the contraceptive methods? See table below: Attitude towards contraceptive methods among the participants were measured using A,B,C,D,E questions, which were answered with three different options like (1) Yes (2) No (3) Don't know .The five questions were as follows: (A) "Contraceptive methods should be easily accessible to all ", (B) "It should be relatively cheap", (C) "Government/ other institution should provide or subsidize the price" (D) "Sex education and the use of contraception should be part of the educational protocol in all level education", and (E) "Sex education and use of contraception be preached in Churches , mosque, and public enlightenment programmers. With the use of these answers, we could be able to indicate the level of attitude towards it's need. The last part requires the sexual history of the Participants, comprising of about nine questions", (1) " Age at first sexual activity " (2) " Sex within the last 3 months" ,(3) if Yes mode of protection : a.) male condom, b.) Female condom, c.) Pills, d.) Foam/jelly, e.) IUCD, f.) withdrawal method, g.) Safe period, h.) Other unspecified methods, i.) Used nothing, want to be pregnant.

Statistical analyses

Socio-demographic characteristics

During the study a total of 1000 questionnaires were distributed, 980 students completed the questionnaire, which make a response rate of 98%. About 965 (98.5%) were sexually active, while only 15 (1.5%) of the students have not had sexual intercourse. The age bracket of the participant, were between 15 and

35 years of age. All participants are actively regular day time students; that were present in their classes, when data's were collected. The mean average age was 23 years (IQR 15-35) Among the participants majority of them are within the age bracket of 15-25 years amounting to 825 participants (84.1%). Majority, 604(61.6 %) of the participants are students from tertiary institution, 260(26.5%) are in Polytechnic, Teachers training collage, and School of nursing, while followed by 116(11.8%) are in their secondary schools. Single women accounted for 553(56.4%), Married women accounts for 254(25.9%), divorced women represents 16 (1.6%), while those in-relationship/partners were 157(16.1%)

Table 1: Age Of Respondents

Age Group	Frequency	Cumulative Frequency	Percentage	Cumulative Percentage
15-20	280	280	29%	29%
21-25	545	825	56%	85%
26-30	120	945	12%	97%
31-35	35	980	3%	100%

As deduced from Table 1 above, 280 (29%) of respondents fall within the age bracket of 15-20 years, 545 (56%) are within 21-25 yrs, 120(12%) within 26-30 yrs while 35(3%) within 31-35 yrs of age.

Table 2: Educational Status

School Attending	Frequency	Percentage %
Secondary, Technical School	116	11%
Polytechnic, Teachers Training College, School of Nursery	260	27%
University, Post graduate Institution	604	62%
Total	980	100%

Table 2 shows that 116(11%) of respondents were Secondary/ Technical School, 260(27%) were Polytechnic, Teacher Training College and School of Nursery, while 604(62%) were in the University and Post graduate schools.

Table 3: Marital Status

Status	Frequency	Percentage%
Single	553	56%
Married	254	30%
Divorce	16	2%
Relationship	157	12%
Total	980	100%

Table 3 indicates that 553 (56%) of respondents were single, 254 (30%) were married, 16(2%) divorce while 157(12%) were in relationship.

Table 4: Ethnicity

Ethnic Group	Frequency	Cum. Freq.	Percentage %	Cum. %
Ijaw	293	293	30%	30%
Hausa	16	309	2%	32%
Yoruba	62	371	6%	38%
Igbo	259	630	26%	64%
Efik	84	714	9%	73%
Other tribes	266	980	27%	100%

The ethnicity of the participants also varied a lot due to the location of these institutions, Ijaws counted to 293(30.0%), followed by the Igbo 259 (26.0%), then the other ethnic group in the southern Nigeria, 266 (27.0%), while the Yoruba, Hausa, and the Efik/Ibibio amounted to 62 (6.0%), 16 (2.0%), and 84 (9.%) respectively.

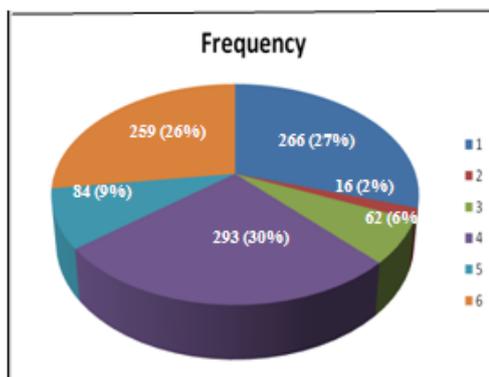


Table 5: Meaning Of Contraception

Status	Frequency	Percentage %
Method/way of avoid/delaying pregnancy	734	75%
Method/way of avoiding sexual activities	246	25%
Total	980	100%

734(75%) of respondents believe that contraception is a method/way of avoiding/delaying pregnancy, while 246 (25%) see it as a way/ method of avoiding sexual activities.

Table 6: Awareness Of Ways Of Avoiding An Intended, Unwanted Or Delay Pregnancy

Options	Frequency	Cum. Freq.	Percentage %	Cum. percentage %
Yes	892	892	91%	21%
No	88	980	9%	100%

As indicated in table 4, 892(91%) of respondents were aware of ways/methods of avoiding unintended, unwanted and or delay pregnancy, while 88 (9%) did not.

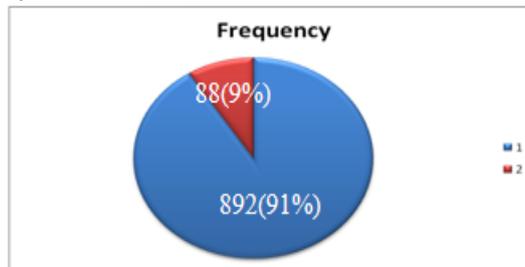


Table 7: Source Of Contraceptive Information/ Awareness

Options	Frequency	Cum. Freq.	Percentage %	Cum. percentage %
Friends	360	360	37%	37%
Parents	115	475	12%	49%
Health workers	225	700	23%	72%
Public awareness Forum	34	734	3%	75%
Radio, TV and News paper	246	980	25%	25%

From the data, most of the information about contraceptives methods were received from Friends, 360(37%), 115 (12%) from Parents, 224 (23%) from Health Workers, 34(3%) from Public Enlightenment Forum, while 246(25%) come from Radio, TV and News Papers.

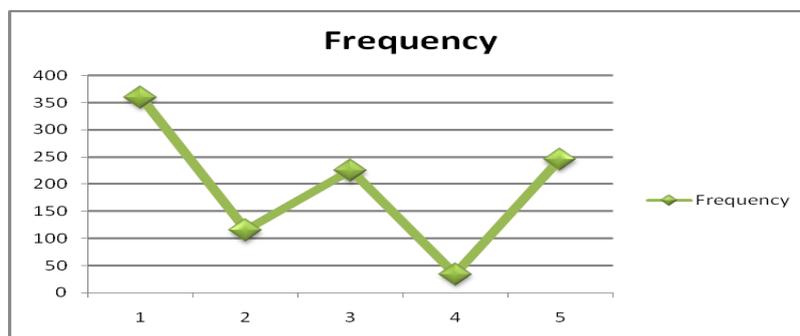


Table 7: Attitude Toward Contraceptive Methods (Cm)

Options	Frequency	Yes	No	Don't Know
A T:892	Contraceptive method should be early accessible to all	520 58.292%	190 21.300%	182 20.403%
B T:892	Contraceptive method should be relatively be cheap	610 68.385%	192 21.524%	90 10.089%
C T:940	Government/other institutions should provide or subsidize price	680 72.340%	140 21.524%	120 12.765%
D T:966	Sex education and the use of contraceptive should be taught in all level of education	906 93.788%	20 2.070%	40 4.140%
E T:966	Sex education and use of contraception be preached in churches, mosque, public education	584 60.455%	249 25.776%	133 13.768%

Table 8: Sexual History

Age Group	Frequency	Cum. Frequency	Percentage %	Cum. Percentage %
14-18	365	365	38%	38%
18-22	426	791	44.2%	44%
22-26	146	937	15%	15%
26-30	28	965	3%	3%
30-34	-	965	-	-
Never had sex	-	965	-	100%

Table 8 above shows that 365 (38%) of respondents started their sexual activities within the ages of 14-18years, 426 (44%) were within 18-22yrs, 146(15%) were within 22-26yrs while 28(3%) were within the ages of 26-30 years.

Table 9: Intercourse for the Last 3months

Options	Frequency	Percentage %
Yes	559	58%
No	406	42%
Total	965	100%

Table 9 indicates that 559(58%) of participants have had sex intercourse within the last 3 months, while 406 (42%) of them have declined..

Table 10: Use of Preventive Measures to Avoid Pregnancy

Options	Frequency	Percentage %
Males condom	244	25%
Female condom	45	5%
Pills	107	11%
Foam/Jelly	-	-
IUCD	5	5%
Withdrawal method	281	29%
Safe period	180	19%
Others	50	5%
No method applied	53	5%
Total	965	100%

Table 10 shows that; 244 (25%) of participants uses male condom as a preventive measure to prevent pregnancy, 45 (5%) use female condom, 107 (11%) use pills, 5 (0.05%) use IUCD, 281(29%) use withdrawal method, 180 (19%) ,save period, 5 (0.05%) use other method, while 53 (0.055%) do not apply any method because they wanted to get pregnant.

Table 11: Voluntary Termination of Pregnancy

Options	Frequency	Percentage%
Yes	360	37%
No	605	63%
Total	965	100%

As indicated in table 11 above, 360 (37%) of the participants had illegal termination of pregnancy, while 605 (63%) never..

Table 12: Number of Times of Abortion (N=360)

Options	Frequency	Percentage %
Once	45	13%
> 2	140	39%
3-5 times	125	34%
> 5 times	50	14%
Total	360	100%

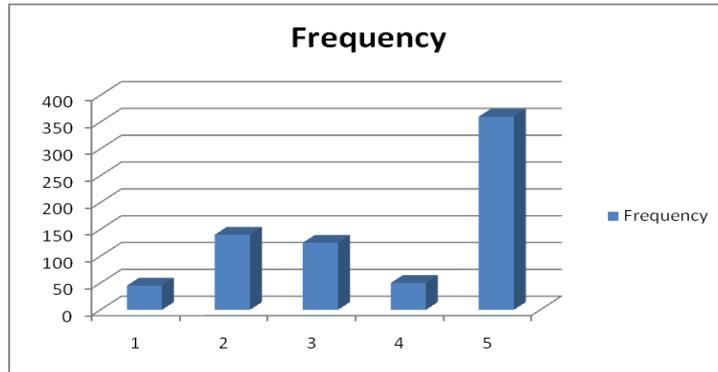


Table 12 shows that 45 (13%), participants had abortion once, 140 (39%) for more than 2 times; 125 (34%) had abortions 3-5 times, while 50 (14%) had abortion for more than 5 times.

Table 13: Reasons For Abortion (N=360)

Options	Frequency	Percentage %
Socio-economic	120	33%
Partner not interested	52	14%
Due to medical	5	1%
Due to young age	131	36%
Socio-cultural	52	14%
Total	360	100%

Table 13 shows that; 120 (33%) of the participants had abortion due to socio-economic reasons, 52(14%) because the partner not interested, 5(1%),due to medical complication, 131 (36%),due to tender age while 52 (14%), is due to socio-cultural reasons.

Table 14: Last Time Of Having Abortion (N=360)

Options	Frequency	Percentage %
Less than 6 months	11	3%
6 months – 1 year	64	18%
1-3 yrs	158	44%
Greater than 3 yrs	127	35%
Total	360	100%

As deduced from table 14 above, 11 (3%) of respondents had abortion in less than 6 months ago, 64 (18%) had it within 6 months to 1 year, 158(44%) had it within 1-3yrs, while 127 (35%) did abortion more than 3 years ago.

TABLE 15: LIKELIHOOD OF USING CONTRACEPTIVE METHODS (N=960)

Options	Frequency	Percentage %
Yes	718	75%
No	242	25%
Total	960	100%

Table 15 shows that; out of 960 participants, 718 (75%) will like to use an effective contraceptive, if aware, provided or available, while (25%) say they will no.

Table 16: Those Who Are Sceptic of the Contraceptive Methods

Options	Frequency	Percentage %
Yes	492	51%
No	468	49%
Total	960	100%

As indicated in table above, 492 (57%) of the participants affirm that they have knowledge of contraceptive but are skeptics and fear were scared of using them, while 468 (49%) think otherwise.

The most commonly used methods at last sexual intercourse were male condoms 25.3% (n = 244), while female condoms use was 5% (n=45), therefore; 30%(n=289) of participants were protected from both pregnancy and sexually transmitted infections (STI). It was observed that; 37% (n=360) of the sexually active participants have at least once been pregnant and all ended in abortion. Close to half of this abortion were perform about a year ago, 44% (n=158). All the abortions were intentional and 46% (n=166) was done by

unskilled personnel, 32% (n=116) in clinics, while 21% (n=78) was self infliction. We also noticed; that more than $\frac{2}{3}$ of the total participants with history abortion have done more than twice 87% (n=315), while only just 13% (n=45) did abortion once. The reasons for the unwanted pregnancy, and the consequence abortion, was dominated by, age social, economic, and cultural reasons. About 75% (n=718) are of the opinion that, they are ready to use these methods, if provided and well informed about its importance, while 25% (n=242) still say no to its usage due fear, skepticism, partners reactions, side effect etc.

Majority of the participants 58% (n = 520) agreed, that Contraceptive methods should be easily accessible to all. While 68% (n=610) also agreed that, contraceptive method should be relatively cheap.

Moreover; 72% (n=680) participants would prefer government institutions to provide or subsidize the price of contraceptives: which may invariability reduces unwanted pregnancy and will generate positive effect on our family planning. More than $\frac{3}{4}$; 94% (n=906) accepted that, sex education and the use of contraceptive should be taught in all level of our educational, and also 60% (n=584) also agreed that, sex education, and use of contraception be preached in Churches, Mosque, in Public educational forums; since these places pulls the largest crowd of the youths and young women in the society. Majority 70% (n=674) also confirmed that; they could get contraceptive drugs, devices, and advice from teaching hospital, government hospitals, private clinics, health centre, and in pharmacies. Finally when an overall awareness and knowledge score was computed, only 492(51%) had proper knowledge, while 468 (49%) had poor or no knowledge. Despite the large interest of participants; 718(75%) having positive attitude towards contraceptive methods, the current uptake of the contraceptive methods is still low 47%, which includes all the methods like; male, female condoms, pills, IUCD, and injectables. The commonest among them was the male condoms accounted for 244(25.3%)

III. Discussion

In this study close to hundred percent of the participants reported that; they have at least once had sexual intercourse, while more than half are sexually active at the time of the study. Which is similar to other studies conducted on emergency contraception used among students in Nigeria, South Africa, and other developing countries^{4, 6,14,10,15?}.

The findings of this study indicate that adequate knowledge and awareness of effective contraception is relatively lower among women of the institutions of higher learning in the south-south part of the country. Overall; knowledge and awareness about contraceptive methods is relatively lower in Nigeria than recent data from Europe and North America^{9,14,15,16,17,}, but is close, or similar to what has been reported in other developing countries including Ghana, South Africa, India, Kenya and other part of Nigeria^{18,19,20}. Several studies in the six geopolitical zones in Nigeria indicate that; contraceptive knowledge and awareness, especially among female students aged 15 to 24 years, is very high. In one study done in Ilorin, five of the methods mostly known by respondents were the condom (69.0%), the oral contraceptive pill (OCP, 38.8%), IUCD (29%), and periodic abstinence ((32.9%), which is far better, than what we obtained in our study in those schools in the two states^{4,5,6}. More than one-third 37% of the participants had termination of unwanted pregnancy, which is higher than, other studies done in the country: as well as countries like Ghana, South Africa, Ethiopia, India etc; all were induced and majority performed by unskilled personnel, private clinics, fewer number by self medication and other means not explained^{18,19,20}. Popular reasons: for the illegal abortions; were that of age related, fear of parent's reaction 36% and socio-economic reasons 33% respectively. Close to halve of these abortions are done within the last three years 44%, while 35% were carried out beyond three years ago, this shows some tendency of improvement as regards incidence of unwanted pregnancy; maybe due to improved awareness and used of these forms of contraceptive methods. Surprisingly among the respondents 39% have done more than two abortions, 35% more than five abortions, while 14% have more than seven abortions which are extremely very high. Which is a reflection of the fact that; the knowledge and use of contraceptive methods is still very poor? Despite the high responds of the aware of contraceptive ways to prevent unwanted pregnancy 75%, which is significantly high, only 40% were ready to use, or have used any of these methods, meanwhile more than 51.25% were reluctant and refused the usage; due to fear, side effects, skepticism of the methods, which also indicate that comprehensive knowledge and used of contraceptive methods is lacking^{1, 6, 14, 17}. The sources of information observed in the study were most particularly from friends 40%, health workers 25%, from the public enlightenment forums, TV, Radio, news paper 22%, while 13% from parents. This indicates that health education in our schools by health workers, for proper guidance on this subject needs a review. From the data it is obvious that; the low uptake: are as a result of accessibility, cost, inaccurate information; therefore advocates for more governmental interventions: In the provision, or subsidizing cost, making modern contraception and health education a mandatory and compulsory integral part of the educational system^{4,6,11}. Large proportion of participants also agreed that regular campaign or information about contraception and sex education be preached in our churches and mosques. From the data collected majority of the women who have heard about contraception did so from friends and family^{1,8,10}. Given that information about contraception is relatively simple to convey accurately, and in light of this finding, peer education approaches may be useful in increasing

contraceptive awareness. More generally these findings indicate a substantial unmet need among women for information on contraception and a need for better improved client- health care provider dialogue regarding modern contraception techniques in general: like the regular monthly pills, minipills, IUCD, injectables, implants, EC., including the existence of popularly known methods like, spermicides, condoms, safe period, withdrawal methods^{7,14,21}. Hence their availability at public sector clinics, schools and certain specified public places and the time frames involved in its use after unprotected sex. Ad vocation; for the provision of basic information on contraceptive methods; needs to become part of our routine reproductive health counseling. A specific health service interventions be designed and provided to improve contraceptive methods awareness, implemented and evaluated in this part of the country south-south, or the entire Nigeria. The study has shown us that accurate information about contraceptive method and knowledge were lacking, apparently; even among those who were aware of the method, without accurate and comprehensive knowledge of contraceptive methods: it is unlikely that those who need it will be able to access it within the appropriate window of opportunity^{4, 5,8,10}.

Ironically irrespective of the fact that in some certain public sector primary health institutions contraceptive methods, like condoms, EC, are available free of charge in Bayelsa, and Rivers State of Nigeria for some years now, yet very few women in this study had ever used it. In spite of high level of unprotected intercourse and unintended pregnancy in our environment only few women regularly use the method^{5,10,13,14}. Almost all of the women who had used contraception have purchased or given from doctors in public hospitals and from the private sources (clinics or pharmacies), which is 70% of respondents, while 30% are not aware that it can be obtained in this places, suggesting a lack of awareness of contraceptive availability at public, private clinics and in the pharmacies. Meanwhile making the contraceptive methods available in our market more affordable, and attainable through pharmacies, or other similar outlets; more so providing for those classes of our youths who cannot afford, due to unemployment and poverty, may enhance improvement in our health indexes. This study has several limitations; first it considered the gross knowledge, awareness, and use of contraceptive methods, without any specifics. Although the number of participants was relatively high, the results require further investigation in other settings in Nigeria and other Sub-Saharan Africa, particularly where reproductive health knowledge and health care infrastructure, are similar to Nigeria, or may be more limited. More so, the study was carried out in young women who are currently in their educational pursuit, which we suppose are enlightened enough to respond currently, and accurately, than women from the general public.

IV. Conclusion

The incidence of unwanted pregnancy followed by unsafe abortion is one of the major worldwide health problems, which has many negative consequences on the health and well-being of women. Information about women's knowledge, awareness and effective use of contraceptives plays a major role in the reduction of unwanted pregnancy. This study had demonstrated improper awareness, knowledge and utilization of contraceptives among female students in our educational setups.

It has also shown light and the need of government, religious, and public enlightenment interventions. Though the percentage of students aware of contraceptive technique was relatively high, yet the usage responds was low. Hence behavioral changes, conceptions and better strategies should be considered by responsible bodies to improve knowledge and bring attitudinal change on the use of contraception.

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