Socio-Demographic Determinants of Modern Contraceptive Use among Undergraduates in Universities in Enugu State

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Abstract

Modern contraceptive use is essential to the prevention of unplanned pregnancies and sexually transmitted infections. Evidences show that plethora of efforts is in place to improve use but the prevalence reports are still low. Against this backdrop, this study investigated the determinants of modern contraceptive use among undergraduates in public universities in Enugu State, Nigeria. Cross-sectional research design was used for the study. The population for the study comprised 91,107 public university students in Enugu State. The multi-stage sampling procedure was employed to select a sample of 792 respondents. Researchers' structured questionnaire titled "Socio-Demographic Determinants of Modern Contraceptive Use Questionnaire" (SDOMCUQ) was validated by five experts and used for data collection. The internal consistency of SDOMCUQ was determined using Kuder-Richardson 20 statistic. Reliability coefficients of 0.81 was obtained for sections B and the instrument was considered reliable (> 0.70). Out of 792 copies of DOMCUQ distributed, 757 (95.58%) valid copies were used for analysis. Frequencies and percentages were used to answer the research questions. The null hypotheses were tested using bivariate and multivariate logistic regression at .05 level of significance. The findings revealed that about one-third of the undergraduates were currently using modern contraceptives while almost half had used modern contraceptive in the past. More males than females have used (male = 53.3% > female = 45.0%) and are currently using (male = 38.8% > female = 28.2%) modern contraceptives. Age, gender, marital status were significant determinants of modern contraceptive use among undergraduates in Enugu State. Recommendations were made, among which included that enlightenment on contraception should be enhance in the classrooms by public health experts to reduce the magnitude of misconception/misinformation on contraception to a minimum level and increase modern contraceptive use.

Keywords: Contraceptives, contraceptive use, undergraduates, determinants, socio-demographic

Introduction

Contraceptive use is key to the prevention of unplanned pregnancies and sexually transmitted infections -STIs. Sexual behaviour among young people is characterized by erratic, infrequent and unplanned sexual activities, a trend that exposes them to unwanted pregnancies and sexually transmitted infections including HIV. While sexual activity among young women begins early, contraceptive knowledge and use remain low (Fayehun, 2017), with persistently high rate of unmet need for family planning among women in developing countries (World Health Organisation-WHO, 2019). Global estimates showed that among the 1.9 billion women of reproductive age group (15-49 years) worldwide in 2019, 1.1 billion have a need for family planning; of these, 842 million are using contraceptive methods, and 270 million have an unmet need for contraception (Kantorová et al., 2020). However, there is

a recorded increase in the demand and use of modern contraceptives in most countries (Slaymaker et al., 2020).

Data from the Multiple Indicator Cluster Surveys (MICSs) from 20 African countries collected between 2013 and 2018 indicated that the overall prevalence of modern contraceptive use was 26 per cent and ranged from 6 per cent in Guinea to 62 per cent in Zimbabwe (Apanga et al., 2020). There was an overall increase in proportion of women who are sexually active and not wanting to conceive in some countries in sub-Sahara Africa (Benin, Burkina Faso, Cote d'Ivoire, Guinea, Mozambique and Nigeria) (Slaymaker et al., 2020). The report further showed that there was increase in unmet need for contraception despite increases in modern contraceptive method use in Benin, Burkina Faso, Chad, Mozambique, and Nigeria. Contraceptive use among married/in-union women in sub-Saharan Africa increased from 13 - 33 per cent over the same period, though it remains the region with lowest use (Dasgupta et al., 2022). Dasgupta et al. further averred those countries of sub-Saharan Africa tend towards higher fertility compared to other regions at all levels of contraceptive use.

In Nigeria, despite huge resources committed to family planning programmes by stakeholders, contraceptive use has been low. The leading contributory factor to unwanted pregnancy in Nigeria is low contraceptive usage (Fayehun, 2017; Wang & Cao 2019). In Nigeria, Africa's most populous nation, the modern contraceptive prevalence rate for all women stands at only 16.6 per cent in 2018 (National Population Commission -NPC [Nigeria] & ICF, 2019) and has further reduced to 14.2 percent in 2021 (Ekholuenetale et al., 2021). By implication, more than one in four women aged 15-49 still have an unmet need for modern contraception. This further indicates that about 15.7 million sexually active women, especially young women in Nigeria who want to avoid pregnancy, as well as sexually transmitted diseases, will still find it very difficult to do so because of these factors

Adebowale et al. (2013) explored the determinants of non-acceptance of contraceptive use among women of reproductive age to include both demographic and socioeconomic factors. The author further listed age, religion, residence, couples educational level, ethnicity, and media exposure to family planning as significant determinants of non-acceptance of any contraceptive method. The present study assessed age, gender and marital status as determinants of contraceptive use among undergraduates.

Age is a potential determinant of undergraduate students' contraceptive use. A study confirmed that the older a person, the higher the likelihood of him or her to use a modern contraceptive method (Oseni, et al., 2021). This may be due to the ability to negotiate sex with maturity, and are able to overcome their partner's insistence on not using contraceptive. More so, past ugly experiences that emanated from unsafe sexual behaviours tends to increase the chances of insistence on contraceptive use. Conversely, undergraduate students may engage in sexual practices without the use of contraceptives based on their infatuations, perceived commitments to relationships, shyness, and psychological dispositions when unplanned sexual opportunities beckon, irrespective of age.

Gender tends to be implicated as a determinant of contraceptive use. Studies have shown that contraceptive use is affected by non-cooperation of the male partner (Munakampe et al., 2018; Peter-Kio, 2020). Male undergraduate students preferred male condoms; perhaps due to its availability, cheap price, and ease of over-the-counter purchase (Oseni, 2021). The fact remains that some other contraceptive methods, mostly used by females require an expert input in their use. More so, scarcity of adolescent friendly clinics and judgmental attitudes of health workers sometimes discourage the female students from accessing health facilities for other contraceptive methods (Oseni, 2021). Thus, the inclusion of this variable will help to

establish the association between gender and contraceptive use among undergraduates in Enugu State.

Marital status will be considered as a possible determinant for contraceptive use among undergraduates in this study. Married, single, divorced, separated, and widowed are examples of marital status. In this study, marital status simply refers to state of either being and staying married (married), once married but no longer staying married (separated or divorced), and never married (single). Odo et al. (2018) opined that many young people were of the view that contraceptive use is exclusively for the married. Conversely, the Nigerian Demography Health Survey found out a contraceptive use prevalence of 28 per cent among unmarried women compared to 12 per cent among married women (NPC & ICF, 2019). The findings of the study are beneficial to undergraduates, health educators, family planning service providers, governmental and non-governmental organisations -NGOs, researchers, parents, health extension workers, policymakers and legislators.

The purpose of the study was to investigate the determinants of modern contraceptive use among undergraduates in public universities in Enugu State, Nigeria. Specifically, the study determined the proportion of modern contraceptives use among undergraduates in universities in Enugu State based on age, gender, and marital status.

Research Questions

The following research questions guided the study.

1. What is the proportion of modern contraceptives use among undergraduates in universities in Enugu State?
2. What is the proportion of modern contraceptives use among undergraduates in universities in Enugu State based on age?
3. What is the proportion of modern contraceptives use among undergraduates in universities in Enugu State based on gender?
4. What is the proportion of modern contraceptives use among undergraduates in universities in Enugu State based on marital status?

Hypotheses

The following null hypotheses were postulated to guide the study and were tested at 0.05 level of significance.

1. Age is not a significant determinant of modern contraceptive use among undergraduates in universities in Enugu State.
2. Gender is not a significant determinant of modern contraceptive use among undergraduates in universities in Enugu State.
3. Marital status is not a significant determinant of modern contraceptive use among undergraduates in universities in Enugu State.

Methods and Materials

Design of the Study: A cross-sectional research design was employed to accomplish the purpose of this study. A cross-sectional research design is one that produces a snap shot of a population at a particular point in time.

Area of the Study: The study was carried out in Enugu State. The State is located in the South-Eastern zone of the country with 17 Local Government Areas and seven (three public and four private) universities. The public universities are University of Nigeria, Nsukka and Enugu Campuses (UNN & UNEC) and Enugu State University of Science and Technology (ESUT). Both public universities have two major campuses and teaching hospitals each. University of Nigeria has two of her campuses at Nsukka and Enugu with her teaching

hospital situated at Ituku-Ozalla. Similarly, ESUT has Enugu and Agbani campuses with her teaching hospital at Parklane, GRA, Enugu.

Population of the Study: The population for the study comprised of all undergraduates in public universities in Enugu State (University of Nigeria: 41,107 and Enugu State University of Science and technology: 50,000). (Academic Planning Unit, Office of the Registrar, University of Nigeria, Nsukka, 2022 and Enugu State University of Science and Technology, 2022). This gave rise to a population of 91,107.

Sample and Sampling Techniques: The sample size for this study was 792 undergraduates; comprising 396 undergraduates from each of the public university. This is in line with the suggestion of Cohen et al. (2018), that when a population size is 40,000 and above and 50,000 and above at 95 per cent confidence level (5% interval), the minimum sample size should be 381 and above. Therefore, 396 respondents were selected from each university. Seven hundred and ninety-two (792) undergraduates in overall were drawn from the two public universities in Enugu State using multi-stage sampling procedure. The first stage involved the use of purposive sampling technique to select the two campuses that have larger number of students. This means that for UNN, Nsukka and Enugu campuses were selected while Enugu and Agbani campuses were selected for ESUT. The second stage involved the use of simple random sampling technique of balloting without replacement to select three faculties from each of the selected campuses. This gave rise to twelve faculties in all. The third stage involved drawing two departments each from the drawn faculties using simple random sampling technique of balloting without replacement. This yielded twenty-four departments in all. The fourth stage involved the use of convenience sampling technique to select 33 undergraduates from each of the drawn department. At the end of the sampling procedures, a total of 792 undergraduates were sampled and used for the study.

Instrument for Data Collection: The instrument for data collection was a validated researchers' structured questionnaire titled "Socio-demographic Determinants of Modern Contraceptive Use Questionnaire" (SDOMCUQ). The questionnaire consisted of three sections: A and B. Section A comprised of three items requesting the socio-demographic details of the respondents. Section B comprised of two items with multiple options on modern contraceptive use among the undergraduates. The instrument was face validated by five experts from the department of Human Kinetics and Health Education, University of Nigeria, Nsukka. The internal consistency of the items was determined using Kuder-Richardson-20 formula and reliability coefficients of .745 was obtained. The instrument was adjudged reliable for the study based on Cohen et al. (2018) assertion that an instrument is reliable if the correlation co-efficient of a scale or instrument attains 0.70 and above.

Method of Data Collection: The researchers utilised the services of four research assistants, one research assistant at each campus. The copies of SDOMCUQ were administered to the undergraduates using direct method and collected on the spot. Respondents were requested to read the informed consent letters and give their consent before filling the questionnaire. All the respondents that failed to consent were not part of the study. The returned copies of the questionnaire were properly scrutinised and sifted for completeness of responses and the return rate calculated (95.58%). Only duly completed questionnaires were used for data analysis.

Method of Data Analysis: The information from copies of the questionnaire that were deemed valid were coded and analysed using Internal Business Machine Statistical Package for Social Sciences (IBM SPSS) version 25 for windows. The descriptive and logistic regression statistics were used to analyse the data. The results were expressed as crude odds ratio (OR) with their 95 per cent confidence interval (CI). All the hypotheses were tested at 0.05 level of significance and appropriate degrees of freedom.

Results

Table 1: **Proportion of Modern Contraceptives Use among Undergraduates in Universities in Enugu State (n= 757)**

S/N	Item Statement	Yes	
		f	%
1.	Currently using any modern contraceptive(s)	239	31.6
2.	Ever used any modern contraceptive(s)	361	47.7
	Commonly used modern contraceptives:		
3.	Condoms (male or female)	331	43.7
4.	Cervical cap	42	5.5
5.	Spermicides	13	1.7
6.	Combined oral contraceptives	127	16.8
7.	Progestin-only contraceptive pills	46	6.1
8.	Injectables	70	9.2
9.	Implants	22	2.9
10.	Intrauterine devices	25	3.3
11.	Postinor 2	259	34.2
12.	Post pill	82	10.8

Data in Table 1 show that about one-third (31.6%) of the undergraduates in universities in Enugu State are currently using modern contraceptives while almost half (47.7%) of the respondents have ever used any modern contraceptive. This implies that there is a decrease in the use of modern contraceptives among the respondents. The table further shows that condoms (43.7%) and postinor 2 (34.2%) are the most common modern contraceptives used by undergraduates in universities in Enugu State.

Table 2: **Proportion of Modern Contraceptives Use among Undergraduates in Universities in Enugu State based on Age (N= 757)**

S/N	Item Statement	16-19 years (n= 128)		20-24 years (n= 423)		25-29 years (n= 157)		30+ years (n= 49)	
		f	**%**	**f**	**%**	**f**	**%**	**f**	**%**
1.	Currently using any modern contraceptive(s)	34	26.6	110	26.0	63	40.1	32	65.3
2.	Ever used any modern contraceptive(s)	54	42.2	188	44.4	84	53.5	35	71.4
	Commonly used modern contraceptives:								
3.	Condoms (male or female)	52	40.6	168	39.7	78	49.7	33	67.3
4.	Cervical cap	5	3.9	17	4.0	18	11.5	2	4.1
5.	Spermicides	1	0.8	4	0.9	5	3.2	3	6.1
6.	Combined oral contraceptives	31	24.2	67	15.8	24	15.3	5	10.2
7.	Progestin-only contraceptive pills	13	10.2	17	4.0	13	8.3	3	6.1
8.	Injectables	10	7.8	29	6.9	26	16.6	5	10.2

9.	Implants	3	2.3	5	1.2	7	4.5	7	14.3
10.	Intrauterine devices	4	3.1	10	2.4	7	4.5	4	8.2
11.	Postinor 2	40	31.3	140	33.1	58	36.9	21	42.9
12.	Post pill	17	13.3	30	7.1	28	17.8	7	14.3

Data in Table 2 show that undergraduates aged 30 years and above (65.3%) currently use and ever used (71.4%) modern contraceptives more than other age groups. The table further reveals that condom is the most commonly used modern contraceptive (30 years and above = 67.3% > 25-29 years = 49.7% > 16-19 years = 40.6% > 20-24 years = 39.7%) among undergraduates in universities in Enugu State.

Table 3**: Proportion of Modern Contraceptives Use among Undergraduates in Universities in Enugu State based on Gender (n= 757)**

S/N	**Item Statement**	**Male*** **(n= 242)**		**Female (n= 515)**	
		f	**%**	**f**	**%**
1.	Currently using any modern contraceptive(s)	94	38.8	145	28.2
2.	Ever used any modern contraceptive(s)	129	53.3	232	45.0
	Commonly used modern contraceptives:				
3.	Condoms (male or female)	123	50.8	208	40.4
4.	Cervical cap	14	5.8	28	5.4
5.	Spermicides	6	2.5	7	1.4
6.	Combined oral contraceptives	44	18.2	83	16.1
7.	Progestin-only contraceptive pills	10	4.1	36	7.0
8.	Injectables	17	7.0	53	10.3
9.	Implants	3	1.2	19	3.7
10.	Intrauterine devices	5	2.1	20	3.9
11.	Postinor 2	80	33.1	179	34.8
12.	Post pill	26	10.7	56	10.9

** = Males represent those who use as well as procure the methods for their partners.*

Data in Table 3 show that more males are currently using (male = 38.8% > female = 28.2%) and have ever used (male = 53.3% > female = 45.0%) modern contraceptives than females. Males use condoms, spermicides, and combined oral contraceptives more compared to females. Females on the other hand use progestin-only contraceptive pills, injectables, implants, intrauterine devices, Postinor 2, and post pills more when compared to males.

Table 4: **Proportion of Modern Contraceptives Use among Undergraduates in Universities in Enugu State based on Marital Status (N= 757)**

S/N	**Item Statement**	**Single (n= 603)**		**Married (n= 133)**		**Separated/ Divorced (n= 21)**	
		F	**%**	**f**	**%**	**f**	**%**
1.	Currently using any modern contraceptive(s)	160	26.5	73	54.9	6	28.6
2.	Ever used any modern contraceptive(s)	271	44.9	80	60.2	10	47.6

	Which of the modern contraceptives are you using or have you used?						
3.	Condoms (male or female)	248	41.1	74	55.6	9	42.9
4.	Cervical cap	28	4.6	10	7.5	4	19.0
5.	Spermicides	8	1.3	5	3.8	0	0.0
6.	Combined oral contraceptives	101	16.7	23	17.3	3	14.3
7.	Progestin-only contraceptive pills	33	5.5	11	8.3	2	9.5
8.	Injectables	48	8.0	19	14.3	3	14.3
9.	Implants	8	1.3	13	9.8	1	4.8
10.	Intrauterine devices	17	2.8	7	5.3	1	4.8
11.	Postinor 2	198	32.8	56	42.1	5	23.8
12.	Post pill	57	9.5	20	15.0	5	23.8

Data in Table 4 show that the married undergraduates are currently using (54.9%) and have ever used (60.2%) modern contraceptives more than other groups. Married undergraduates have used or are using all the modern contraceptives the most, except post pill where undergraduates who are either separated or divorced got the highest percentage scores.

Table 5: **Summary of Multivariate Regression Analysis Testing the Null Hypothesis that Age is not a Significant Determinant of Current Modern Contraceptive Use among Undergraduates in Universities in Enugu State (N = 757)**

S/n	Variables	B	S.E.	Wald	df	Sig.	Exp(B) (OR)	95% C.I. for Exp(B)	
								Lower	Upper
1	Age (16-19 yrs)			13.865	3	.003*			
	Age (20-24 yrs)	1.426	.485	8.652	1	.003*	4.163	1.610	10.769
	Age (25-29 yrs)	1.436	.427	11.306	1	.001*	4.203	1.820	9.705
	Age (30+ yrs)	.877	.449	3.815	1	.051	2.404	.997	5.799
2	Contraceptive use	1.976	.501	15.568	1	.000*	7.214	2.703	19.252
3	Condoms (male or female)	1.210	.474	6.530	1	.011*	3.355	1.326	8.489
4	Cervical cap	1.183	.469	6.371	1	.012*	3.263	1.303	8.176
5	Spermicides	1.663	.775	4.607	1	.032*	5.277	1.155	24.105
6	Combined oral contraceptives	-.615	.294	4.368	1	.037*	.541	.304	.962
7	Progestin-only contraceptive pills	.161	.390	.172	1	.679	1.175	.547	2.523
8	Injectables	-.695	.342	4.134	1	.042*	.499	.255	.975
9	Implants	.364	.540	.454	1	.500	1.439	.499	4.150
10	Intrauterine devices	-.986	.495	3.970	1	.046*	.373	.141	.984
11	Postinor 2	1.232	.278	19.621	1	.000*	3.429	1.988	5.914
12	Post pill	1.364	.358	14.545	1	.000*	3.911	1.940	7.883
	Constant	-9.64	2.417	15.905	1	.000*	.000		

*. Significant ($p < .05$)

Table 5 shows that age is a significant determinant of contraceptive use (p = .000; OR = 7.214; CI = 2.703-19.252), since its p-value is less than .05 level of significance at one degree of freedom. The null hypothesis that age is not a significant determinant of modern contraceptive use among undergraduates is, therefore rejected. This implies that age can determine the undergraduates' use of modern contraceptives.

Table 6: **Summary of Bivariate Regression Analysis Testing the Null Hypothesis that Gender is not a Significant Determinant of Current Modern Contraceptive Use among Undergraduates in Universities in Enugu State (N = 757)**

S/n	Variables	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for Exp (B)	
								Lower	Upper
1	Gender (1)	-.515	.233	4.879	1	.027*	.598	.379	.944
2	Contraceptive use	1.903	.497	14.676	1	.000*	6.708	2.533	17.764
3	Condoms (male or female)	1.294	.475	7.428	1	.006*	3.648	1.438	9.254
4	Cervical cap	1.226	.474	6.679	1	.010*	3.406	1.345	8.629
5	Spermicides	1.835	.764	5.767	1	.016*	6.265	1.401	28.012
6	Combined oral contraceptives	-.720	.291	6.137	1	.013*	.487	.275	.860
7	Progestin-only contraceptive pills	.176	.385	.209	1	.648	1.192	.561	2.536
8	Injectables	-.629	.339	3.439	1	.064	.533	.274	1.036
9	Implants	.771	.513	2.261	1	.133	2.163	.791	5.910
10	Intrauterine devices	-.872	.491	3.157	1	.076	.418	.160	1.094
11	Postinor 2	1.237	.277	19.930	1	.000*	3.447	2.002	5.934
12	Post pill	1.415	.351	16.215	1	.000*	4.118	2.068	8.201
	Constant	-9.798	2.343	17.489	1	.000*	.000		

*. Significant ($p < .05$)

Table 6 reveals that gender is a significant determinant of contraceptive use ($p = .000$; OR = 6.708; CI = 2.533-17.764) since its p-value is less than .05 level of significance at one degree of freedom. The null hypothesis that gender is not a significant determinant of modern contraceptive use among undergraduates is therefore rejected. This implies that gender can determine the undergraduates' use of modern contraceptives

Table 7: **Summary of Multivariate Regression Analysis Testing the Null Hypothesis that Marital Status is not a Significant Determinant of Current Modern Contraceptive Use among Undergraduates in Universities in Enugu State (N = 757)**

S/n	Variables	B	S.E.	Wald	df	Sig.	Exp (B) (OR)	95% C.I. for Exp(B)	
								Lower	Upper
	Marital			22.381	2	.000			
	Marital(1)	-.043	.607	.005	1	.943	.958	.292	3.144
	Marital(2)	-1.331	.641	4.308	1	.038	.264	.075	.929
2	Contraceptive use	2.059	.508	16.466	1	.000*	7.842	2.900	21.204
3	Condoms (male or female)	1.259	.477	6.956	1	.008*	3.521	1.382	8.973
4	Cervical cap	1.299	.479	7.352	1	.007*	3.665	1.433	9.371
5	Spermicides	1.697	.795	4.556	1	.033*	5.456	1.149	25.909
6	Combined oral contraceptives	-.719	.292	6.048	1	.014*	.487	.275	.864
7	Progestin-only contraceptive pills	.143	.390	.134	1	.714	1.154	.537	2.476
8	Injectables	-.794	.348	5.215	1	.022*	.452	.229	.894
9	Implants	.143	.541	.070	1	.792	1.154	.400	3.329
10	Intrauterine devices	-.967	.496	3.792	1	.051	.380	.144	1.006

11	Postinor 2	1.182	.278	18.036	1	.000*	3.262	1.890	5.631
12	Post pill	1.410	.363	15.081	1	.000*	4.095	2.010	8.342
	Constant	-8.073	2.475	10.637	1	.001	.000		

*. Significant ($p < .05$)

Table 7 shows that marital status is a significant determinant of contraceptive use (p = .000; OR = 7.842; CI = 2.900-21.204) since its p-value is less than .05 level of significance at one degree of freedom. The null hypothesis that marital status is not a significant determinant of modern contraceptive use among undergraduates is therefore rejected. This implies that marital status can determine the undergraduates' use of modern contraceptives.

Discussion

The findings of the study in Table 1 showed that almost one third and a half of the undergraduates in Enugu State are currently using or have used one or more modern contraceptives respectively. The results were not expected because the undergraduates are sexually active and at a stage of freedom when sexually experimentation is met with none or minimal restraints. This implies that the modern contraceptive use prevalence retrogressed despite the improved awareness, millennium development goal targets and other efforts by relevant stakeholders. Dibia and Dibia (2019) reported increasing misconceptions and misinformation among undergraduates. This could affect adoption of contraceptive use among students' population. In a related study, only 18 per cent of the respondents were current users of contraceptives (Agbeno et al., 2021). This is at variance with the findings of Kantorova et al., (2020) which reported an increase in the prevalence of modern contraception. This is of great concern, and the reasons given for not being on contraceptives include lack of knowledge, partners' opposition, cost, and fear of side effects. It is imperative to address these issues especially because undergraduate students share ideas virally and their opinions and views about contraceptive use issues can modern contraceptive use.

The findings of the study in Table 2 revealed that undergraduates aged 30 years and above currently use and ever used modern contraceptives more than other age groups. The findings of the study in Table 5 showed that age was a significant determinant of current modern contraceptive use. These findings were anticipated because use of modern contraceptives is closely linked with sexual maturity which is attained as one ages. The findings are in tandem with the findings of Oseni, et al. (2021) that the older a person, the higher the likelihood of him or her to use a modern contraceptive method. This may be due to the ability to negotiate sex with maturity, and are able to overcome their partner's insistence on not using contraceptive. More so, past ugly experiences that emanated from unsafe sexual behaviours tends to increase the chances of insistence on contraceptive use.

The findings of the study in Table 3 showed that more males are currently using and have ever used modern contraceptives than females. Table 6 also revealed that gender was a significant determinant of current modern contraceptive use. This finding was surprising and not expected because most of the modern contraceptives are designed to be used by females only. The finding is at variance with the submission of Ba et al. (2019) that women were more likely to use a method of contraception if they were sexually active. The finding is in consonance with the submissions of Akinsoji et al. (2015) that girls tend to use contraceptives less when compared to boys, especially when they are younger. Studies have shown that contraceptive use is affected by non-cooperation of the male partner (Munakampe et al., 2018; Peter-Kio, 2020). Male undergraduate students preferred male condoms; perhaps due to its availability, cheap price, and ease of over-the-counter purchase (Oseni, 2021). The fact that some other contraceptive methods, mostly used by females require an expert input in

their use, in addition to scarcity of adolescent friendly clinics, coupled with judgmental attitudes of health workers, the female students are sometimes discouraged from accessing health facilities for other contraceptive methods (Oseni, 2021). These call for redress because the consequences of having more females that are not using modern contraceptives while being sexually active could be devastating.

The findings of the study in Table 4 indicated that married undergraduates are currently using and have ever used modern contraceptives more than other groups. The findings of the study in Table 7 further showed that marital status was a significant determinant of current modern contraceptive use. This finding was expected because marriage confers legitimate sexual privileges on people. More so, culture has a way of disapproving the use of modern contraceptives among people who are single. Contraceptive use among married/in-union women in sub-Saharan Africa increased from 13 to 33 per cent over the same period, and remains the region with lowest use (Dasgupta et al., 2022). The finding is in consonance with the assertions of Apanga et al. (2020) that women who were never married were less likely to use modern contraceptives than married women.

Conclusion

Contraceptive use remains a vital aspect of reproductive health, youth-friendly initiatives, and maternal and adolescents' health care. Notwithstanding increases in both knowledge about modern contraception and desire to delay or space child births, many undergraduates in universities in Enugu State are not currently using modern contraceptives. This widens the unmet need gap which sustainable development goals are set to reduce. Though national reports on modern contraceptive use remains low in Nigeria, it was expected that undergraduates, being literate should record high contraceptive use. Age, gender, marital status, were significant determinants of current modern contraceptive use among undergraduates in universities.

Recommendations

Based on the findings of the study the following recommendations were made:

1. Public enlightenment on contraception should start from the classrooms by public health experts before extending to the communities, workplaces, markets and clinics to reduce the magnitude of misconception/misinformation on contraception to a minimum level and increase modern contraceptive use.
2. Improvement of modern contraceptive use among undergraduates can be done by providing youth-friendly sexual education as well as reproductive and contraceptive services.
3. Government should provide more Family Planning clinic to make access to health facilities easier specifically in the universities and its environs.

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