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Determinants of Contraceptive Behaviours of Female Students in South-South, Nigerian Universities

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Abstract

The study is aimed to find out the determinants of contraceptive behaviours of female undergraduate students in South-South, Nigerian Universities using demographic variables of age, place of residence, year of study in the university and pattern of drug use. Four research questions and four hypotheses were raised to guide the study. Descriptive survey design was used for the study. The population for the study comprised 40,800 female undergraduate student studying in the ten government owned universities. A simple random sampling technique was used to draw 2,040 female students from the six universities. A questionnaire tagged "Determinants of Contraceptive Behaviours of Female Student Questionnaire" (DCBFSQ) was used for the collection of data. The reliability coefficient index of the instrument was 0.72. Frequencies, ANOVA, t-test and Multiple Regressions were used to analyse data obtained. Decisions were taken at a 0.05 level of significance. The results showed that the contraceptive behaviours of female students in the South-South Nigerian universities were significantly determined by age, place of residence, year of study in the university and pattern of drug use. Based on the findings, the following recommendations were made: reproductive health education should be made part of general course study for all years I and II students in Nigeria universities. This would help provide contraceptive knowledge that would help influence positive contraceptive behaviours. Counseling units should be established in the Student Affairs Department of all universities to offer counseling services on women reproductive health with emphasis on contraception. Health centres in the universities should provide family planning services to female students.

BACKGROUND

The introduction to sexual activities during adolescent stage of development, according to Skolnik (2012), is an experience common to all youths. Frost, Henshaw and Sonfields (2010) attributed the rise in sexual activities to early maturation, social civilization and greater awareness of sexuality among the youths.

Further, World Health Organization (WHO, 2012) reported that the assault on sexual morality starts in life with availability of television, books, magazines, movies and music that feature sex and the use of contraceptives. Low rate of contraceptive use among female youths had resulted in about two million adolescent girls in developing countries undergoing unsafe abortion each year (Schneider, 2011).

In Nigeria, the rate of contraceptive use among female youths is low (Okonofua, 2010). Arowojolu and Adekunle (2004) reported that in Western and Southern Nigeria, the rate of contraceptive use by sexually active females still remained at 30 per cent. This was

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considerably lower than the 80 per cent contraceptive use rate reported for youths in developed countries (Okpani & Okpani, 2002).

More than 610,000 Nigerian women obtained abortion each year, and about one-third of them remained students in tertiary institutions (Odebede, 2004), Falola (2005) reported of a baby being abandoned in female hostel in Federal Polytechnic, Bida, Niger State, Nigeria. Given the ills associated with unprotected sex, one would conclude that young women, including female students in Nigerian Universities would make effective use of contraceptive measures to protect themselves against the hazard of sexual intercourse.

At all levels, Nigerian government established family planning units in hospitals, and universities, trained workers and provided the required facilities and equipment to ensure effective provision of contraceptive services to women. Despite the effort by government, young women including female students in South-South Nigerian Universities may tend to have poor contraceptive use behaviours. Their behaviours toward contraceptive use are seemingly influenced by certain factors such as age, residential location, year of study in the university, and pattern of drug use and the likes. To ascertain the influence of these factors, empirical evidence was required.

PURPOSE OF STUDY

The purpose of the study was to find out the determinants of contraceptive behaviours of female undergraduate students in South-South Nigerian Universities based on:

1. their different age groups
2. their place of residence
3. their years of study in the University
4. their pattern of drug use.

In considering the perceived determinants of contraceptive behaviours of female undergraduate students in South-South Nigerian Universities four research questions and four research hypotheses were formulated to guide the study.

RESEARCH METHODS

The descriptive survey research design was used for the study. This design was appropriate because the researcher has no control over the independent variables (age, place of residence, years of study in the university and pattern of drug use).

Area of the Study

The area of the study was the South-South geo-political zone of Nigeria which comprises six states (Akwa Ibom, Bayelsa, Cross River, Delta, Edo and Rivers States). The South-South zone of Nigeria accounts for main economic base of the country which is crude oil and gas.

Population of the Study

There were about 40,800 undergraduate female students studying in the ten government-owned universities in South-South geo-political zone in 2011/2012 academic session (NUC, 2011). The age range of students was between 17-32 years.

A total sample size of 2040 female students participated in the study. The sample size represented about five per cent of the study population of 40,800.

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Instrument for Data Collection

The instrument for data collection was a questionnaire tagged "Determinants of Contraceptive Behaviours of Female Students (DCBFS)". The instrument had two sections (A and B). Section A had four items which sought information from the respondents about their demographic variables (age, place of residence, years of study in the university and pattern of drug use). Section B had 18 items to elicit, information on respondents' contraceptive behaviours. The items had four responses options: Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD).

Reliability of the Instrument

The split-half method of reliability testing was used, and the reliability on co-efficient was calculated using Pearson Product Moment Correlation (R) statistics. The result yielded an index of 0.72.

Method of Data Analysis

Data collected were analysed using frequencies and percentages, ANOVA and t-test. Scheffe post-hoc test was used to test significant mean difference. Decisions were taken at a 0.05 level of significance.

RESULTS

Research Questions One to Four

Data answering research questions one to four contained in Table 1.

Table 1: Means Responses of the Subjects About Their Contraceptive Behaviours in Relation to The Different Demographic Variables of The Study (N = 2040)

Variable	F	X	Decision
Age in Years			
17-21	615	1.03	N
22-26	803	3.00	P
27-31	214	3.16	P
32 and above	408	3.40	P
Place of Residence			
On campus	442	2.84	P
Off campus	699	3.10	P
Year of Study			
Part I	408	1.20	N
Part II	408	1.53	N
Part III	408	3.50	P
Part IV	408	3.62	P
Part V	408	3.62	P

Variable	F	X	Decision
Pattern of Drug Use			
Use drug very often	120	3.87	P
Use drug often	406	2.79	P
Use drug occasionally	710	1.40	N
Drug not used at all	804	1.02	N

P = positive contraceptive behaviour – those using contraceptives
N = negative contraceptive behaviour – those not using contraceptives
Mean of 2.75 and above = positive behaviour
Mean score below 2.75 represent negative contraceptive behaviour

Table 1 presents the mean responses of the subjects about their contraceptive behaviours based on the demographic variables of the study. The mean score of 2.75 and above represent positive contraceptive behavior and mean score below 2.75 represent negative contraceptive behaviours.

Hypothesis 1

Age of the female students in South-South Nigerian Universities has no significant influence on their contraceptive behaviours.

Table 2: ANOVA Summary of the Influence of Ages of Female Students in South-South Nigerian Universities on Their Contraceptive Behaviours (N = 2040)

Source of variation	Sum of squares	df	Mean square	f-cal	Table value
Between groups	1073.03	3	357.68	11.67	8.53
Within Groups	62419.688	2036	30.658		
Total	62526.99	2039			

As shown in Table 2, the calculated F-value of 11.67 was greater than the critical F value of 8.53 at .05 level of significant. The result was statistically significant. This meant that ages of female students in South-South Nigerian universities had significant influence on their contraceptive behaviours. Hence, hypothesis 1 was rejected. However, to identify the independent age groups between which the significant difference existed, the Scheffé test analysis was done.

Table 3: Scheffé post-hoc test of the Age of Female Students in South-South Nigerian Universities on Their Contraceptive Behaviours N = 2040

Age		Mean Difference	Std. Error	Sig.
17-21	21-26	.028*	1.113	.000
	27-31	-2.414*	1.320	.000
	32 and above	-2.28*	1.024	.000
21-26	17-21	-028*	1.113	.000
	27-31	-2.442	1.555	.000
	32 and above	-2.55	1.313	.000

27-31	17-21	2.414*	1.320	.000
	21-26	2.442	1.555	.483
	32 and above	2.186	1.492	.544
32 and above	17-21	.228*	1.024	.000
	21-26	.256	1.313	.998
	27-31	-2.186	1.492	.544

The mean difference is significant at the .05 level

As shown in Table 3, the post-hoc analysis using Scheffe procedure showed that there was a significant influence at a level of 0.05 between the 17 – 21 years age group to other age groups.

Hypothesis 2

Places of Residence of the Female Students in South-South Nigerian Universities do not significantly influence their contraceptive behaviours

Table 4: t-test comparison of respondents mean scores on place of Residence of Female Students in South-South Nigerian Universities and Their Contraceptive Behaviours (N = 2040)

Place of residence	N	$\bar{X}$	SD	Df	t.cal.	t.crit.
On campus	883	56.04	11.41	2038	38.73*	1.96
Off campus	1157	43.49	9.16			

* Significant at .05 Alpha level

As indicated in Table 4, the calculated t-test value of 38.73 was greater than the critical t-value of 1.96 at 0.05 level of significance and df of 2038.

The result was therefore statistically significant. This meant that places of residence (on-campus/off-campus) of female students in Nigerian Universities did significantly influence their contraceptive behaviours. Hence, the null hypothesis 2 stated above was rejected.

Hypothesis 3

Years of study of the female students in South-South Nigerian universities do not significantly influence their contraceptive behaviours

Table 5: ANOVA Summary of Influence of Year of Study of Female Students in South-South Nigerian Universities on Their Contraceptive Behaviours (N = 2040)

Source of variation	Sum of squares	Df	Mean square	f-cal	Table value
Between groups	4637.525	4	1159.381	29.443	5.63
Within Groups	80132.195	2035	38.377		
Total	84769.72	2039			

The summary of one-way analysis of variance as shown in Table 5, indicate a calculated F-value of 29.443, which was greater than the critical F value of 5.63 at a 0.05 level of significance. The result was statistically significant. This result meant that year of study of the female students in South-South Nigerian Universities did significantly influence their contraceptive behaviours. Hypothesis 3 therefore, was rejected.

However, Scheffé test was applied to determine the specific year of study groups between which the difference existed. This is shown in Table 6.

Table 6: Scheffé post-hoc test of the Year of Study of Female Students in South-South Nigerian Universities on Their Contraceptive Behaviours (N = 2040)

Year of study		Mean Difference	Std. Error	Sig.
Part I	Part II	-1.415	1.386	.903
	Part III	-11.341*	1.386	.000
	Part IV	-7.610*	1.386	.000
	Part V	-11.095*	1.395	.000
Part II	Part I	1.415	1.386	.903
	Part III	-9.927*	1.386	.000
	Part IV	-6.195*	1.386	.001
	Part V	-9.680*	1.395	.000
Part III	Part I	11.341*	1.386	.000
	Part II	9.927*	1.386	.000
	Part IV	3.732	1.386	.128
	Part V	.247	1.395	1.000
Part IV	Part I	7.610*	1.386	.000
	Part II	6.195*	1.386	.001
	Part III	-3.732	1.386	.128
	Part V	-3.485	1.395	.186
Part V	Part I	11.095*	1.395	.000
	Part II	9.680*	1.395	.000
	Part III	-247	1.395	1.000
	Part IV	3.485	1.395	.186

* The mean difference is significant at the 0.05 level

Scheffé post-hoc test in Table 6 indicate that the significant differences existed among all the year of study groups on their contraceptive behaviours, except Part I and Part II that differ from Part III, Part IV and Part V.

Hypothesis 4

Pattern of drug use by female students in Nigerian universities do not significantly influence their contraceptive behaviours.

Table 7: ANOVA Summary of Influence of Pattern of Drug Use of Female Students in South-South Nigerian Universities on Their Contraceptive Behaviours (N = 2040)

Source of variation	Sum of squares	df	Mean square	f-cal	Table value
Between groups	5257.079	3	1752.36	65.732	8.63
Within Groups	54277.724	2036	26.656		
Total	69534.803	2039			

As in Table 7, the calculated F-value of 65.732 was greater than the critical F value of 8.63 at a 0.05 level of significance. The result was statistically significant. This therefore meant that

pattern of drug use of the female students in South-South Nigerian Universities did significantly influence their contraceptive behaviours. Hypothesis 4 was therefore rejected.

Scheffé's test was used to determine the specific groups in pattern of drug use where the significant difference occurred. This is shown in Table 7.

Table 8: Scheffé post-hoc test of the Pattern of Drug Use of Female Students in South-South Nigerian Universities on Their Contraceptive Behaviours (N = 2040)

Pattern of Drug Use		Mean Difference	Std. Error	Sig.
Use drug very often	Use drug often	3.350	1.695	.275
	Use drug occasionally	8.385*	1.612	.000
	Drug not used at all	15.129*	1.598	.000
Use drug often	Use drug very often	-3.350	1.695	.275
	Use drug occasionally	5.035*	1.013	.000
	Drug not used at all	11.780	.992	.000
Use drug occasionally	Use drug very often	-8.385*	1.612	.000
	Use drug often	-5.035*	1.013	.000
	Drug not used at all	6.744*	.842	.000
Drug not used at all	Use drug very often	-15.129*	1.598	.000
	Use drug often	-11.780	.992	.000
	Use drug occasionally	-6.744*	.842	.000

* The mean difference is significant at the 0.05 level

Data in Table 8 indicate that the significant difference occurred among all the groups except the groups that use drug very often and the group that use drug often. This showed that these groups did not differ in their contraceptive behaviours based on their pattern of drug use.

DISCUSSION OF FINDINGS

The discussion of findings was done based on the outcome of data analysis for each of the hypotheses.

Ages of Female Students in South-South Nigerian Universities and their Contraceptive Behaviours

The descriptive analysis in Table 1 clearly showed that the university female students within the ages of 22 – 26 years, 27 – 31 years and 32+ years had positive contraceptive behaviours, while those in the 17 – 21 years age bracket had negative contraceptive behaviours. This implied that age of university female students had influence on their contraceptive behaviours. The reason for the observed results might be that young female students (17-21 years) lacked knowledge about contraception. This result did not occur by chance. Further analysis with ANOVA confirmed that age of the female students in South-South Nigerian Universities had significant influence on their contraceptive behaviours. This showed that age was a major determinant of contraceptive behaviours of female students in South-South Nigerian universities. This finding came out as observed by Kaye, Suellentron and Sloup (2011) that the sexually active young women (age 15 – 19 years) were less likely to use contraception than adults (20 – 30 years), even with marriage. The present finding was further collaborated by Briggs and Peter-Kuo (2011) who reported that in Rivers State, Nigeria, the proportion of new acceptors of contraceptives in the 15 – 19 years age group was low. Islam and Mahmud (1995)

stated that studies in developing countries demonstrated that the behavioural patterns of contraceptive acceptance and use differ significantly between female adolescents (10 – 19 years of age) and adult women (20 – 40 years). This suggested less contraceptive practices and negative contraceptive behaviours among these sexually active age groups. This might be because these 17 – 21 years were not yet exposed and might still be under their parents watch eye.

Place of Residence and Contraceptive Behaviours of Female Students in South-South Nigerian Universities

Based on the result, the second hypothesis, which stated that the place of residence of female students in South-South Nigerian Universities had no significant influence on their contraceptive behaviours, was rejected, as the calculated t-test value of 38.73 was significant at 0.05 level of significance. The descriptive data in Table 1 showed that the off-campus female students had a higher mean score of 3.1 on contraceptive behaviours than the on-campus female students with mean score of 2.84. Both groups however, expressed positive behaviours towards contraceptive use.

From the analysis of data, it became evident that place of residence of female students in South-South Nigerian Universities had significant influence on their contraceptive behaviours. The result could be explained based on the fact that the female students, irrespective of their place of residences were exposed to a number of sexual partners. Hence, they were likely to get prepared at all times for unplanned, unexpected and forced sexual intercourse by using contraceptives, particularly the condom. Many of the students also were frequently involved in sexual activities as a result, used contraceptive to prevent pregnancy and sexually transmitted infections. Previous investigation had reported of female students being involved in coercive sexual intercourse (Moreno, 2012).

The present finding further suggested that the off-campus female university students used contraceptive more than the on-campus students. The reason might rest on the fact that off-campus female students were more exposed to opportunities for sexual intercourse than did the on-campus female students. Leaving off-campus also gave female students an unrestricted freedom from parents and close relations to do what they wanted. According to Magadi and Curtis (2003), contraceptives provided female students the opportunity to get involved in sexual relations without fear of conception. In order words, having sex without fear. In this respect, Adhikari and Tamana (2009) opined that the differences in levels of contraceptive use by women based on location of residence vary among countries. In 59 out of 60 surveyed developing countries, the rates of contraceptive use among women in rural areas were lower than in urban areas (Moreno, 2012).

In contrast, Curtis and Neilzel (2006) reported that in countries in Eastern and Central Asia, differences in contraceptive behaviours among sexually active women were quite small. In Jamaica, the behaviours of urban and rural women towards contraceptive use were same according to the authors.

Year of Study and Contraceptive Behaviours of Female Students in South-South Nigerian Universities

From the result in Table 10, it was evident that year of study of female students in South-South Nigerian Universities had significant influence on their contraceptive behaviours. Descriptive data indicated that the female students in part I and part II had negative contraceptive

behaviours whereas those in part III, IV and V had positive behaviours towards contraceptive use. The reason for the observed results might be that the female students in part I and part II were not fully exposed or knowledgeable about contraceptives. Moreover, they might rarely cultivate desire for sexual intercourse, and besides, they might lack access to family planning information and services. They might also be trying to adjust to the new university environment. This result agreed with Resmick (2010) that the more years of school that a woman had completed, the higher their contraceptives use, and the lower their fertility. In Malawi, for example, Gupta and Mahy (2011) obtained the result that further corroborated with the present finding. The authors reported that women with no education and those in their early years in post-secondary institutions had lower contraceptive use rate than did those in their third and fourth year of studies.

Patterns of Drug Use and Contraceptive Behaviours of Female Students in South-South Nigerian Universities

The result obtained indicated that the patterns of drug use by female students in South-South Nigerian Universities had significant influence on their contraceptive behaviours. The descriptive analysis using mean clearly showed that the female students in the subset of "use drug very often" had a mean score of 3.87, and those who "use drug often" had a mean score of 2.79, which showed that they had positive contraceptive behaviours. Whereas, those that did not use drug at all had mean score of 1.02, and those that use drug occasionally with a mean score of 1.4 had negative contraceptive behaviours. The Scheffé analysis revealed that the rate of influence of drug use on the students' contraceptive behaviours did differ. The observed difference laid specifically in the subsets or groups of female students tagged "drug not used at all" and "use drug occasionally". The result might be attributed to the fact that drug use promoted sexual urge and involvement in sexual activity. For this reason, the sexually active female students who use drugs, particularly alcohol, used contraceptives to prevent unwanted pregnancy and sexually transmitted infections for their frequent engagements in sexual intercourse.

Fryar, et al. (2010) found that the contraceptive behaviours of female prostitutes (sex workers) were commonly influenced by their stimulated sexual drive induced by drugs and alcohol agreed with the present result. The current finding was further collaborated by Uba, Nwosu and Tahir (2003) who found that many self-sponsored female students relied on having sex with men for money and they usually deaden their minds with drugs (cigarettes, marijuana, alcohol) and prepared themselves with various forms of contraceptives before setting out for their sexual activities.

CONCLUSIONS

Based on the findings of this study, it was concluded that age, place of residence, year of study and pattern of drug use of the female students in South-South Nigerian universities were the major determinants of the female students' contraceptive behaviour.

RECOMMENDATIONS

Based on the findings, the following recommendations were made:

1. Women reproductive health education should be introduced as a general course of study for all Part I and Part II students in Nigerian universities in order to provide contraceptive knowledge, which may lead to students acquiring positive influence on contraceptive behaviours.

2. Guidance and counselling units should be established in the Students Affairs Departments of every university to render counselling services on women reproductive health with particular emphasis on contraception.
3. Family planning unit should be established in health centres of universities to provide family planning services to female students.

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