

IN A DECADE OF SEXUAL LIBERALISM: EVIDENCE OF CONTRACEPTIVE ACCESSIBILITY AND UTILIZATION PREVALENCE AMONG FEMALE UNDERGRADUATE STUDENTS IN SOUTHWESTERN NIGERIA

BY

Makanju, A.O. *, Uriri, A.E. and Oniya, M.O.

Department of Geography and Planning, University of Lagos
*Corresponding Author's Email: adebayomakanju@gmail.com

ABSTRACT

The proliferation of cultural norms and standards in Nigeria, has led to drastic societal change and perceptions in the sphere of sexuality, these are most evident among adolescents and young adults who are at an exploratory stage in the continuum of physical and psychological changes associated with dynamic social interactions, relationships and risks. This study assessed the contemporary sexual behaviour, contraceptive accessibility and prevalence among undergraduate students in South-Western, Nigeria. A cross sectional descriptive study design was carried out among 600 Female undergraduate students from two tertiary institutions in the Southwest geopolitical zone. Respondents were selected using multi-stage random sampling technique and information was collected using a pretested semi-structured questionnaire. The mean age of the participants studied was 21.4 years, 505 (84.2%) of them had experienced sexual intercourse prior to the study, out of which 464 (91.1%) were currently sexually active, median debut age at first sexual intercourse was 16.4 years, awareness about contraceptives (100%) was found to be widespread although the utilisation rate of contraceptive (62.6%) was relatively lower. Furthermore, analysis of the current and projected interplay between Contraceptive Prevalence Rate (CPR), Unwanted Pregnancy Rate (UPFR) and Sexually Transmitted Disease Prevalence Rate (STDPR) revealed poor health outcomes such as the incidence of a 63.9% abortion rate and a Sexually Transmitted Infection Prevalence Rate of 38.4%, these issues can be attributed to high prevalence of risky sexual activity, contraceptive demand and utilisation deficits and poor reproductive health care seeking behavior leading to poor health outcomes. The study recommends the need to strengthen University health care systems, a further subsidization of contraceptives and the formulation of a National population policy, since abstinence is increasingly becoming difficult among the study cohort.

Key words: Accessibility, Contraceptive prevalence rate, Sexual behavior, Undergraduates

INTRODUCTION

Sexual reproduction education being a universal nomenclature, one would expect a great deal of knowledgeable especially among literate Nigerian youths. But the reverse is the case in reality; partly due to the prevalence of moral conservatism in most Nigerian societies which regulate sexual activities to varying degrees. These control systems regulate both the observation of sexual behaviour and access to information about it. Sexual behaviour is considerably influenced to a great extent in most countries by culture and this is also applicable in the case of Nigeria. This situation perhaps explains why few decades ago, virginity of a lady until she got married was rewarded, while various taboos were institutionalized to govern the climate of pre-marital sex

(Omoteso, 2006). This trend is gradually changing and the incidence of young adults engaging in pre-marital sexual intercourse is on the rise.

The absence of a cohesive national population policy in Nigeria has for decades had profound effects on a cross section of issues ranging from reproductive health to economic planning and environmental proliferations. Nigeria is currently experiencing population explosion, testament to its annual growth rate (3.09%), and to this effect world population experts and bodies like the United Nations and World bank have projected that the national population would surpass the two hundred (200) million persons benchmark in the near future, given that the present growth rate persists and its demographic structure is not drastically altered in the next few years (National Population Commission [NPC], 2004; 2009; 2014). Despite these prevailing scenarios, the National Demographic and Health Survey report of 2013 revealed that knowledge of contraception is widespread in Nigeria; 85% of women and 95% of men reported knowing about a contraceptive method.

In Nigeria, women aged 15-49 years obtain approximately 610,000 cases of abortion annually, occurring at a rate of 25 abortions per 1,000 women, with adolescents and young adults being disproportionately affected by the consequences of unsafe abortion (Duru et al., 2015). In addition, there exists a differential in abortion rate prevalence between the predominantly conservative North (31/1000 women) and the more educated and liberal Southern part (44/1000 women) of Nigeria (Henshaw et al., 1998).

Studies conducted by Omoteso (2003; 2006) revealed that various sexual activities are widely practiced among the undergraduate students in Southwestern Nigeria; such activities are kissing, breast/genital fondling and sexual intercourse. Furthermore, several other attitudinal studies conducted revealed that undergraduate students are sexually active and more liberal in comparison with adults (Owuamanam, 1995; Odewole, 2000; Luke, 2001; Eniojukan et al., 2014). According to studies conducted by Abiodun et al. (2009) and Alike (2012), it was revealed that in Nigeria, sexual activity among undergraduates is high and has created a host of prevailing social and health problems. Other previous studies like those conducted by Odewole (2000), Ejembi and Otu (2004) and Omoteso (2006) reported risky nature of sexual behavior among youths, particularly undergraduate students, indicating the higher likelihood of unwanted pregnancy outcome, early childbearing and unsafe abortion. Furthermore, the works by Ejembi and Otu (2004), Isa et al. (2016) and Ahmed et al. (2017) showed that undergraduate students had wide spread knowledge of contraceptives but had a very low utilization rate.

In the past few decades, the impact of globalization in Nigeria has been significant, as evidenced in most Southwestern States (Omoteso, 2006), a geo-political zone that has witnessed an upward socio-cultural demonstrational effect shift among its teaming youth sub-population which constitutes a significant proportion of its entire population. This phenomenon has been aided by increased information flow, technological transfer, increased international mobility and widespread literacy rate leading to the proliferation of long standing cultural and behavioural norms. This increasing liberal tendency in sexual behavioural perception has led to the emergence of reproductive health problems. For instance Human Immunodeficiency Virus (HIV) infections in the region are fuelled by low perceptions of personal risk, multiple and concurrent sexual partnerships, intense transactional and intra-generational sex, ineffective and inefficient treatment services for sexually transmitted infections (STIs), and inadequate access to and poor

quality of health care services. These prevailing issues are further exacerbated by widespread institutionalized problems like gender inequalities and inequities, chronic and debilitating poverty, and the persistence of HIV/AIDS-related stigma and discrimination (National Agency for the Control of AIDS, 2010).

There is a greater need to understand these changing sexual behavioural trends, accessibility and contraceptive usage among this high reproductive risk population sub-group in order to contribute to the development and implementation of reproductive health strategies to promote appropriate contraceptive practice amongst the undergraduates. There seems to be a persistent gap between high sexual activity and contraceptive use in the presence of high contraceptive awareness. Thus, the objectives of this study are to assess changing sexual behavior patterns, the rate of contraceptive accessibility and utilization rate among female undergraduate students in tertiary institutions of Southwestern Nigeria.

MATERIALS AND METHODS

The scope of this study is limited to undergraduate students in two purposively selected Federal Universities in Southwestern Nigeria. The two federal universities selected for this study were namely; The University of Lagos and University of Ibadan, while both institutions can be classified among the first generation universities in Nigeria, they are also situated within highly urbanized centre which has led to their heterogeneous cultural composition.

The University of Lagos was established in 1962, it is located in north-eastern part of Lagos Mainland Local Government Area (LGA) (See Figure 1a), the population of undergraduate students stand at 44,602 while that of postgraduate students stand at 12,581 (University of Lagos Pocket Statistics, 2017). The University of Lagos has one of the largest student populations of any university in the country.

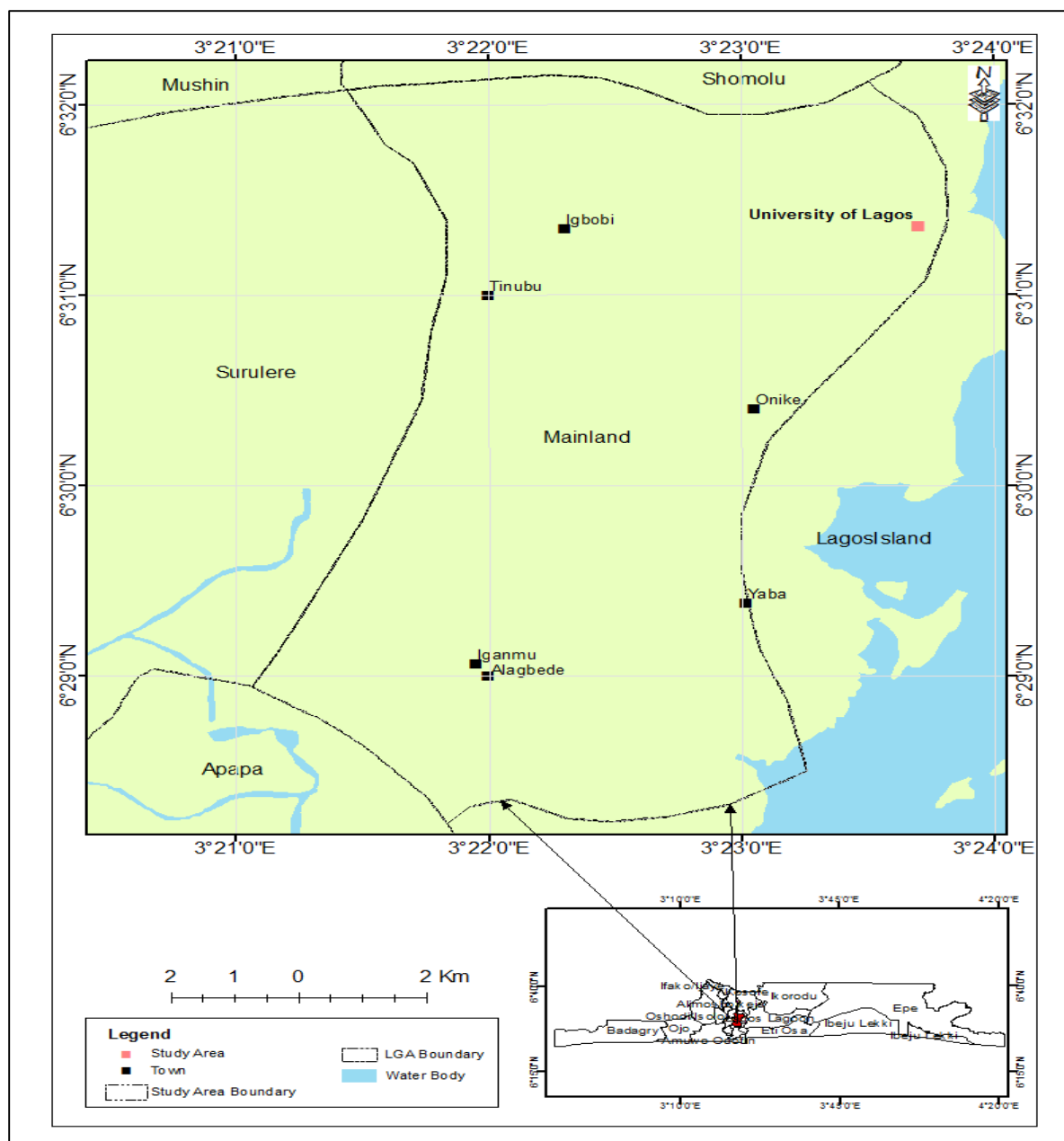


Figure 1a: University of Lagos

Source: Adapted from the Administrative Map of Lagos State

The University of Ibadan (UI) was founded on its own site on the 17th November 1948. The University is the oldest and one of the most prestigious institutions in Nigeria; it is located 8 kilometers from the centre of the major city of Ibadan, Oyo State (See Figure 1b). The population of undergraduate students stand at 15,401 while that of postgraduate students stand at 18,079 (UI Directorate of Public Communication, 2017).

This is a descriptive cross-sectional study based on contextual practice of contraceptive accessibility and utilization prevalence among sexually active female undergraduate students in Southwestern, Nigeria. Respondents were randomly drawn from the female undergraduate student's population, within the ages of 16 and above. The minimum age of respondents in the study was set in lieu with stipulated institutional acceptable baseline age for admission; secondly, this was set with ethical consideration and in conformity with female reproductive age as outlined in successive National Demographic and Health Survey (NDHS) reports.

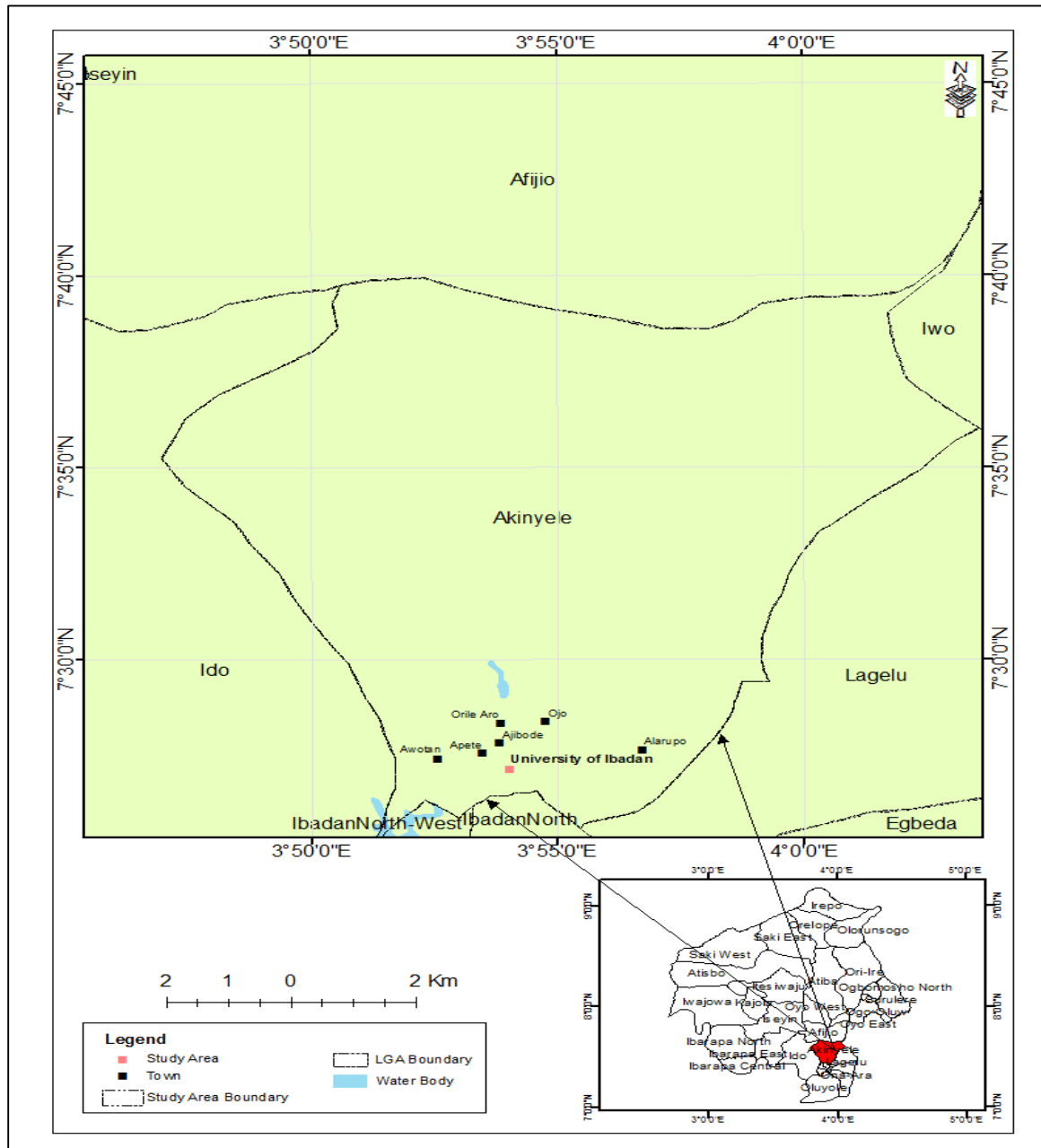


Figure 1b: University of Ibadan
Source: Adapted from the Administrative Map of Oyo State

The power analysis technique was employed to determine the study sample size. Given the inaccessibility to obtain the actual population size from the studied institutions. Cochran (1977) in his work postulated that a minimum of 384 responses is sufficient, given a 5% margin of error and a 95% confidence level.

A sample size of 600 undergraduate students was adopted in this study and this was extrapolated using Cochran formula (as stated above) for categorical data in populations greater than 10,000 people. Given the fact that the actual population size of the study cohort is unknown, this thus justifies the application of the sampling technique for the female undergraduate student population in this study (Cochran, 1977). A stratified random sampling technique was employed using studentship, age and gender (female) as strata.

An instrument labeled “Undergraduate Sexual Behaviour Inventory” adapted from Oladepo and Brieger (1994) and Omoteso (2006) was used to elicit information from the subjects of this study. The inventory is made up of two sections. The first section consisted items such as the students’ age, gender, religion affiliation. The second section comprised parameters on different sexual activities practiced by university undergraduate students such as occurrence of sexual intercourse, number of sexual partners, contraceptive awareness and utilization.

Anonymous self-completed questionnaires were administered to those who granted us their informed consent. The survey was conducted at a given timeframe when both institutions were in academic session, completed questionnaires were diagnosed for errors and analysed using SPSS version 23 (IBM, New-York, USA).

Forecasting Undergraduate Students Contraceptive Needs

Population data-based forecasting methodology was utilized, this study made use of undergraduate student’s demographic data, to estimate future contraceptive demand. Numbers of contraceptive users were then converted into estimates of consumption using the *couple-years of protection* (CYP) conversion factors (Used month as a proxy for year in this study), which are simply the estimated quantities of contraceptives required to protect an undergraduate female student from unwanted pregnancy for one academic session.

The existing literature on the subject makes it clear that contraceptive prevalence is the single most important proximate determinant of total fertility, a fact that can be demonstrated using empirical evidence (Shah, 2006).

$$CPR = \frac{\text{Number of Undergraduate aged 16 and above using Contraceptive}}{\text{Total Number of Undergraduate 16-34}} \times 100 \dots \dots \dots (1)$$

Percentages relative to all female sexually active undergraduate students who are using any method of contraception express the method mix. This percentage can be obtained by dividing the study population based figures for female students aged 16 and above using each method by the percentage of women using any method (Family Planning Logistics Management [FPLM], 2000). According to Measure Evaluation (2017), method mix can signal: (i) provider bias in the system, if one method is strongly favored to the exclusion of others; (ii) user preferences; or (iii) both.

$$\text{Method Mix} = \frac{\text{Percentage of Undergraduate using a contraceptive Method}}{\text{Percentage of Undergraduate using any Contraceptive Method}} \dots\dots\dots [2]$$

Limitation: Method mix often changes in response to the introduction of a new method in-country, to non-availability of methods due to stock-out, and the increased need for a method that also protects against STIs (i.e., condoms), and to user preferences. Data on method mix can signal these changes, but do not provide insight into the reasons for the change. Evaluators can use qualitative methods to better understand the clients' motivations for switching methods (Measure Evaluation, 2017).

RESULTS AND DISCUSSION

The rate of globalization and cultural diffusion in the past few decades has been unprecedented to say the least; this phenomenon has led to the liberalization of sexual perception and attitudes even within the most conservative of societies as obtained in many sub-Saharan African nations like Nigeria. Given this backdrop, this study assessed the changing sexual attitudes, contraceptive prevalence and sexually related outcomes among female undergraduate students in the South-Western Nigeria. Response rate was 100% (600/600), extra resources and time had to be employed in order to obtain this level of response outcome.

Sexual History, Contraceptive Knowledge and Utilization

Table 1 presents distribution of respondents according to sexual history, contraceptive awareness and utilization prevalence. The percentage analysis of the data on patterns of the students' sexual behavior shows that majority (505/600) of undergraduate students were already involved in sexual activities, most of whom indicated that they had heard of or read about information pertaining to contraceptives (reproductive health), in addition to this all the interviewed students (100%) were aware and properly informed about at least one type of contraceptive and its application. Majority of the respondents utilized contraceptives (62.6%).

Table 1: Distribution of Respondents according to Sexual History, Contraceptive Awareness and Utilization Prevalence

Variable	University of Lagos		University of Ibadan		Combined	
	Frequency	Percent (%)	Frequency	Percent (%)	Frequency	Percent (%)
Had sex before						
-Yes	342	87.7	163	77.6	505	84.2
-No	48	13.3	47	22.4	95	15.8
Total	390	100	210	100	600	100
Commenced having sex (debut age-16.4yrs)						
-Secondary school	271	79.1	111	68.1	382	75.6
-University	342	100	163	100	505	100
Total						
Have knowledge of contraceptive usage						
-Yes	390	100	210	100	600	100
-No	-	-	-	-	-	-
Total	390	100	210	100	600	100
Currently Sexually Active Student-N=464(91.1%)						
Use contraceptive						
-Yes	193	56.4	123	75.5	316	62.6
-No	149	44.6	40	24.5	189	37.4
Total	342	100	163	100	505	100
Contraceptive method						
-Traditional	53	27.5	49	27.5	102	32.7
-Modern	140	72.5	74	72.5	214	67.3
Total	193	100	123	100	316	100
Have you ever aborted before						
-Yes	112	67.3	76	46.7	323	64.0
-No	230	32.7	93	67.3	188	36.0
Total	342	100	163	100	505	100

Source: Authors computation based on fieldwork, 2017

Table 2 shows the socio-demographic inferential statistics of respondents based on contraceptive use.

Table 2: Socio-demographic Inferential Statistics of Respondent based Contraceptive use

Variable	University of Lagos Contraceptive Use			χ^2	p-value
	Yes (%) N=316(62.5%)	No (%) N=189(37.5%)	Total (%) N=342		
Age					
16-18	132(41.8)	98(51.9)	230(45.5)	52.070	0.003*
19-23	139(43.9)	64(33.8)	203(40.2)	df=2	
24 and above	45(14.3)	27(14.3)	72(14.3)		
Religious Affiliation					
Christianity	205(64.9)	103(54.5)	308(61)	19.8545	0.000*
Islam	110(34.8)	86(45.5)	196(38.8)	df=2	
Traditionalist	1(0.3)	-	1(0.2)		
Marital Status					
Single	285(90.2)	182(96.3)	467(92.5)	24.165	0.000*
Married	31(9.8)	7(3.7)	38(7.5)	df=1	
Ethnicity					
Yoruba	151(47.8)	86(45.5)	237(46.9)	41.443	0.000*
Ibo	64(20.2)	43(22.8)	107(21.2)	df=3	
Hausa	5(1.6)	-	5(0.9)		
Others	96(30.4)	60(31.7)	156(30.9)		
Level of Study					
100 _{level}	79(25)	51(27)	130(2.7)	14.095	0.001*
200 _{level}	42(13.3)	42(22.2)	84(16.6)	df=4	
300 _{level}	71(22.5)	38(20.1)	109(21.6)		
400 _{level}	70(22.2)	35(18.5)	105(20.8)		
500 _{level}	54(17)	23(12.2)	77(15.2)		
Location of Secondary School Attended					
Urban	298(94.3)	163(86.2)	461(91.3)	4.021	0.0003*
Rural	18(5.7)	26(13.8)	44(8.7)	df=1	

*=Significant: Not significant ($p > 0.05$)

Source: Authors computation based on fieldwork, 2017

From Table 2, most of the undergraduate students using contraceptives were Yoruba (47.8%), Christians (64.9%) and single (90.2%) within the ages of 19-23years (43.9%), while the least contraceptive use was observed among those aged 24years and above, in addition to this findings, majority of undergraduate contraceptive users where in their first year of study (25%). Ethnicity ($\chi^2=14.443$, $p=0.000$), religious affiliation, ($\chi^2=19.854$, $p=0.000$), age ($\chi^2=5.070$, $p=0.003$) and marital status ($\chi^2=20.165$, $p=0.000$) given that all outlined variables were significant and associated with contraceptive use, contraceptive use was significantly higher in participants that attended urban secondary schools (94.3%) in comparison to their counterparts who attended secondary schools located in rural settings ($\chi^2= 4.021$, $df=1$, $p = 0.003$).

Figure 2 presents the undergraduate contraceptive method prevalence in the institutions of study.

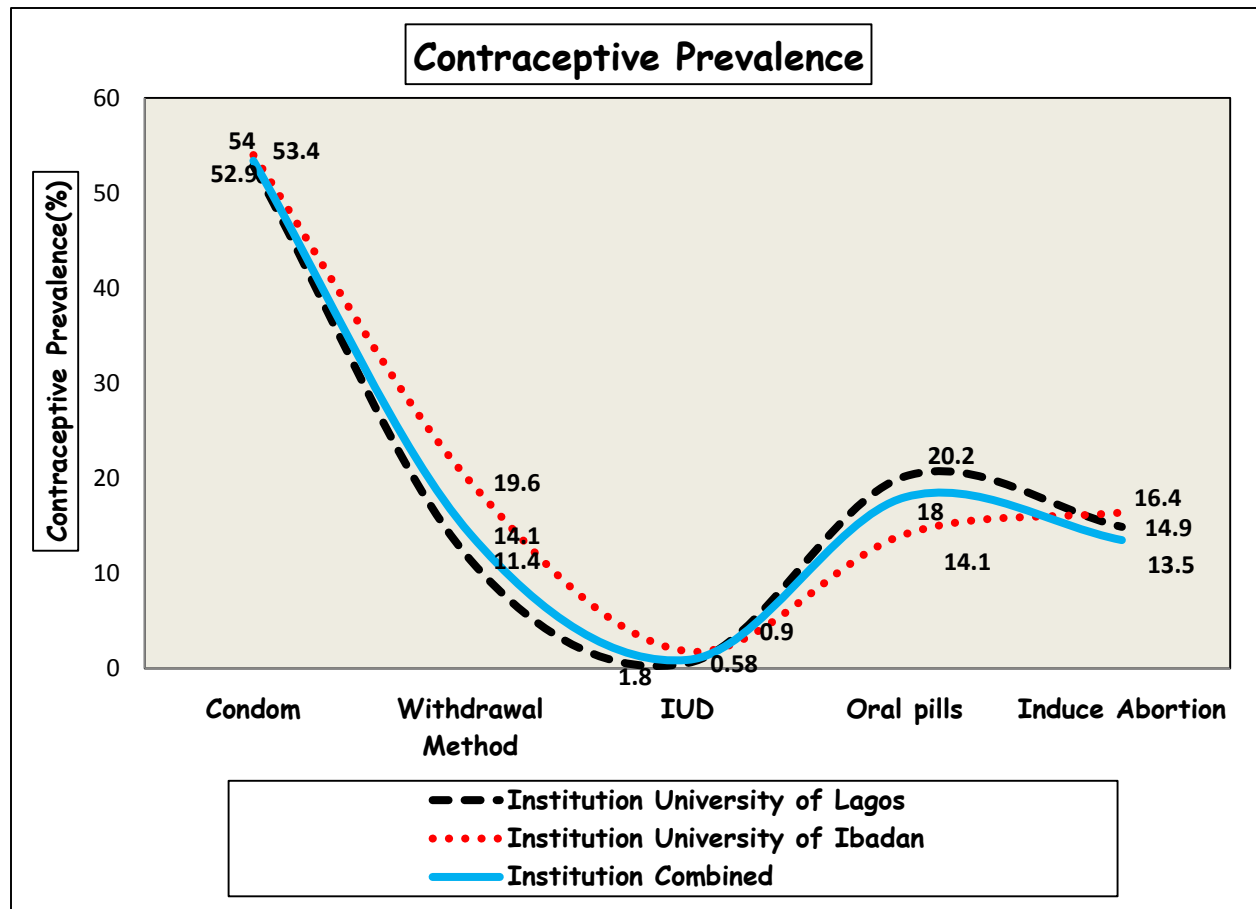


Figure 2: Undergraduate Contraceptive Method Prevalence

Source: Authors computation based on fieldwork, 2017

Figure 2 shows that a significant proportion of the respondents (53.3%) utilized male/female condom (Modern method), Oral pills (18%), followed by the withdrawal method (14.1%) which was the commonest form of traditional contraceptive method utilized (See Figure 2), induced abortion (13.5%) and the least patronized type of contraceptive among the respondents was the Intrauterine devices (0.9%).

Findings in this study were in conformity with the contemporary contraceptive method trend in Nigeria. This correlates with finding from previous related studies conducted within the same geo-political zone by Odewole (2000), Omoteso (2006) and Uriri et al (2016) which all reported similar outcomes of above 75.5% contraceptive awareness, these findings were also comparable with figures reported in other studies conducted in other zones in Nigeria where awareness ranged between 70% to 100% (Alabi 2014; Eniojukan et al., 2014; Isa et al., 2016).

Students Accessibility to Contraceptive

Table 3 presents the distribution of respondents based on barriers that limit the utilization of contraceptive.

Table 3: Distribution of Respondents based on barriers that limit the Utilization of Contraceptive

Variable Barriers to Contraceptive usage	University of Lagos		University of Ibadan		Combined	
	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)
Lack of knowledge of contraceptive	-	342(100)	-	163 (100)	-	505(100)
Short on money	212(61.9)	130(38.1)	87(53.4)	76(46.6)	299(59.3)	206(40.7)
Long waiting time at health centres	304(88.9)	38(11)	141(86.5)	22(13.5)	445(88.1)	60(11.9)
Disapproval by parents	311(90.9)	31(9.1)	132(81)	31(19)	443(87.7)	62(12.3)
Disapproval by partner/s	13(3.8)	329(96.2)	5(3.1)	158(96.9)	18(3.6)	487(96.4)
Lack of information where to get contraceptive	-	342(100)	-	163 (100)	-	505(100)
Bad health workers attitude	4(1.2)	338(98.8)	6(3.7)	157(96.3)	10(2.0)	495(98)
Fear of side effect	69(20.2)	273(79.8)	23(14.1)	140(85.9)	92(18.2)	413(81.8)
Embarrassment to buy	242(70.7)	100(29.3)	151(92.6)	12(7.4)	393(77.8)	112(22.2)
Locational Accessibility						
-On campus	98(28.7)	244(71.3)	83(50.9)	80(49.1)	181(35.8)	324(64.2)
-Off campus	244(71.3)	98(28.7)	80(49.1)	83(50.9)	324(64.2)	181(35.8)
Purchase Place Accessibility						
-Pharmacy	83(24.3)		107(65.6)		190(36.7)	
-Supermarket	168(49.1)		22(13.5)		190(36.7)	
-Others	91(26.6)		34(20.9)		125(24.6)	
Total	342		163		505	

Source: Authors computation based on fieldwork, 2017

Knowledge (reproductive health) is a determining factor that shapes attitudes (sexual) which in turn influences behaviour. Knowledge of contraceptive use (100%) among students was high, this is reflected in the amount of sexually active respondents who utilized contraceptives (62.6%), findings further revealed that certain factors limiting undergraduate student's uptake of contraceptives included factors such as financial inaccessibility (59.3%), time wastage at health

centers (88.1%), the fear of side effects (18.2%) and health workers sub-professionalism (2%). Moreover, high level of knowledge did not translate into positive decision making in terms sexual attitudes, the general permissive attitude towards premarital sexual relationship among undergraduate students might have informed the high level of sexual exposure.

Conversely, a vast amount of students access their contraceptives needs off-campus (64.2%) in stark comparison to the population of those who access their contraceptive needs on-campus (35.8%). In addition, pharmacy and supermarkets (36.7%) were the joint preferred place of contraceptive acquisition.

Undergraduate Sexual Behaviour and its effect on Sexually Transmitted Diseases (STD's) Outcomes

Undergraduate sexual behaviour and its effect on sexually transmitted diseases (STD's) outcomes are presented in Table 4.

Table 4: Distribution of Respondents by Higher Risk Sexual Behaviours

Sexual Background	University of Lagos Frequency (%)	University of Ibadan Frequency (%)	Combined Frequency (%)
Multiple and Con- current Sexual partnership			
1	263(76.9)	113(68.7)	376(74.5)
2-3	64(18.7)	39(23.9)	103(20.4)
4 and above	15(4.4)	11(6.7)	26(5.1)
Point Prevalence of concurrent Sexual Partners	(23.1)	(30.7)	(25.5)
Transactional Sex			
Yes	61(17.8)	42(25.8)	103(20.4)
No	281(82.2)	121(74.2)	402(79.6)
Intergeneration Sex			
5-10 years older	82(24)	63(38.7)	145(28.7)
10 years and above	63(18.4)	38(23.3)	101(20)
Less than 5 years	197(57.6)	62(38.0)	259(51.3)
Total	342(100)	163(100)	505(100)

Note: Two sexual partners are considered to be concurrent if the date of the most recent sexual intercourse with the earlier partner is after the date of the first sexual intercourse with the later partner.

¹The percentage of respondents who had 2 (or more) sexual partners that was concurrent at the point in time 6 months before the survey.

Source: Authors computation based on fieldwork, 2017

One fourth of the respondents had at least two or more concurrent sexual partners, meaning that one out of every four female students had multiple concurrent sexual partners, while 79.6% had previously not consented to any form of transactional sex before, 48.7% of respondents had inter-generation sexual partners and 20.4% had at least once been involved in transaction sexual activity popularly known as “Aristo syndrome”, this high risk sexual phenomenon has become a main stay within higher institution campuses in Nigeria.

Level of Contraceptive usage and its effect on Unplanned Pregnancy and Sexually Transmitted Infections (STI’s)

A significant amount of the respondents had very liberal sexual tendencies as exhibited by the amount of students actively involved in higher risk sexual activities. Result from the trend analysis investigating the interplay between female undergraduate students Contraceptive Prevalence Rate (CPR) and Unwanted Pregnancy Rate (UPR) over time, as shown in Figure 3, indicates a downward trend in CPR among undergraduate students; inversely the UPR had an opposing upper trajectory.

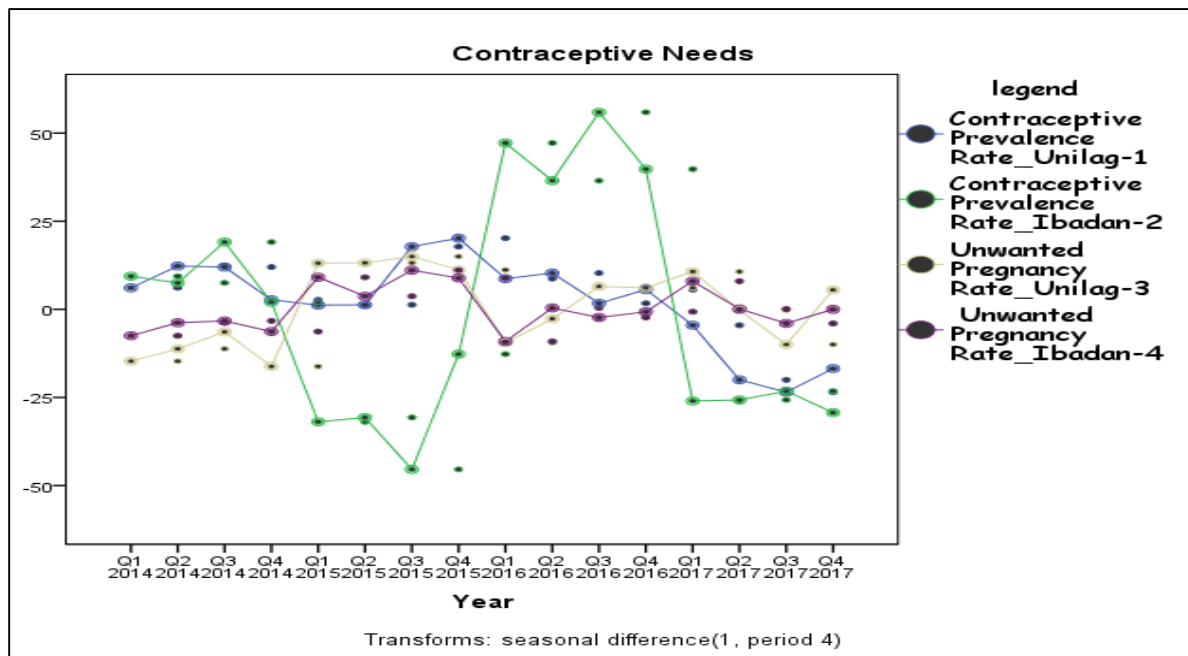


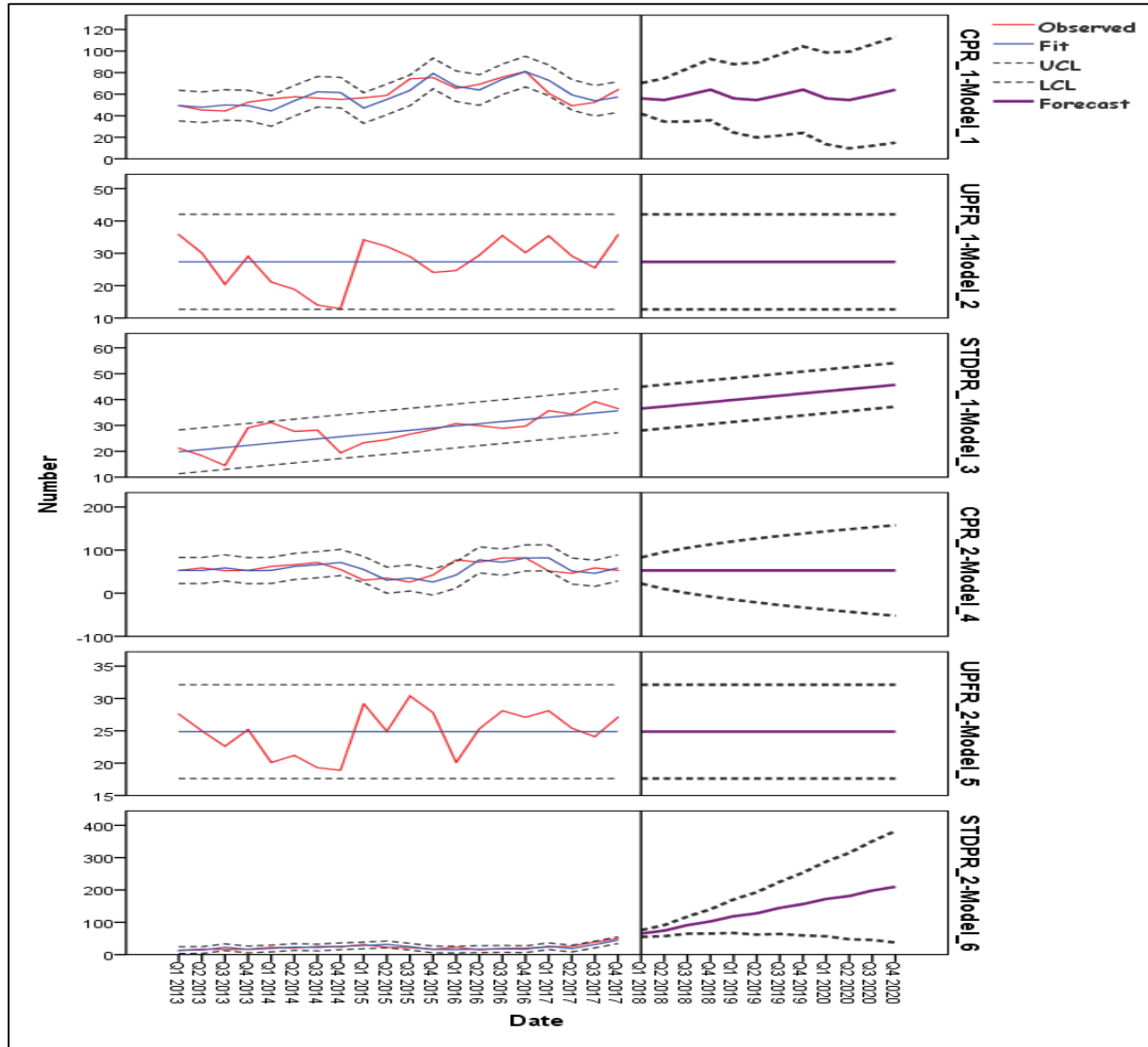
Figure 3: Trends in Contraceptive use and Fertility Differentials

Source: Authors’ computation based on fieldwork, 2017

These high risk sexual actions may both in the short-run and long-run lead to resultant negative reproductive outcomes such as unwanted pregnancy and the spread of Sexually Transmitted Infections (STI’s) as evident among the studied cohort, the sexually transmitted infection prevalence rate of 38.4% indicate explicitly that one out of every thirty-eight undergraduate student had already contacted one type of sexually transmitted infection, which indicates either the absence of informed choice or better still maybe a case of widespread contraceptive failure the studied cohort.

Evidence suggests it is permeated by this newly found neo-sexual ideology. These findings made for poor reading but were in fact consistent with results of previous studies such as Bongaarts and Charles (2000), Omotoso (2006), Abiodun et al. (2009), Oguntona et al. (2013), Hogue et al. (2013) and Somba et al. (2014) elucidating more on the differentials existing between contraceptive prevalence and sexual outcomes among diverse cohorts and other associated problems like unwanted pregnancy.

Figure 4 shows the projected Contraceptive Prevalence Rate (CPR), Unwanted Pregnancy Fertility Rate (UPFR) and Sexually Transmitted Disease Prevalence Rate (STDPR).



Note: UCL –Upper Confidence Limit, LCL-Lower Confidence Limit

Figure 4: Projected Contraceptive Prevalence Rate (CPR), Unwanted Pregnancy Fertility Rate (UPFR) and Sexually Transmitted Disease Prevalence Rate (STDPR)

Source: Authors’ computation based on fieldwork, 2017

The forecast model had zero (0) outliers with stationary $R^2=0.89$, explaining 89% of variance. Results from the analysis revealed that the rate of contraceptive use among respondents at the University of Lagos (CPR_{Lagos}-Model_1=forecast 2018_{Q1}[56.1 → 64.2]2020_{Q4}) is projected to increase in subsequent years while in the same temporal frame, the Rate of Unwanted Pregnancy (UPFR_{Lagos}-Model_2=forecast 2018_{Q1}[27.4 ↔ 27.4]2020_{Q4}) is projected to maintain a static rate over time, while the rate of Sexually Transmitted Disease Prevalence (STDPR_{Lagos}-Model_3=forecast 2018_{Q1}[36.5 → 45.7]2020_{Q4}) is projected to grow at an increasing rate in the coming years. Furthermore, results of the forecast analysis on respondents at the University of Ibadan is projected to remain static in terms demand of contraceptive, likewise is the unwanted pregnancy rate expected to outgrow the prevailing rate (CPR_{Ibadan}-Model_4=forecast2018_{Q1}[52.7 ↔ 52.7]2020_{Q4}) CPR&UPFR (UPFR_{Ibadan}-Model_5=forecast 2018_{Q1}[24.9 ↔ 24.9]2020_{Q4}), while STDPR among undergraduate students is projected to grow exponentially in subsequent years ((STDPR_{Ibadan}-Model_6=forecast 2018_{Q1}[75.7 → 209.8]2020_{Q4}) as depicted in Figure 4.

Thus, a forecast of future scenario based the interplay between Contraceptive Prevalence Rate (CPR) on potential outcomes such as Unwanted Pregnancy Rate (UPFR) and the Rate of Sexually Transmitted Prevalence Rate (STDPR). The result revealed that CPR use among undergraduate students is projected to grow but at a decreasing rate in comparison with STDPR, cases are expected to grow exponentially among undergraduate students in subsequent years. Interestingly, UPFR is expected to persist on the current prevailing rates, given all the foregoing outlays the problems associated with unsafe sexual behavior, unmet contraceptive needs and gross contraceptive failures.

CONCLUSION

There has been a paradigm shift in societal norms towards sexual behaviour; the high prevalence of sexual activities among female undergraduate students in universities in South-western part of Nigeria is fast becoming endemic, with the persistent differential among the undergraduates between their high sexual activity and contraceptive prevalence rate despite wide spread contraceptive awareness. The bridging of this gap especially among the undergraduates is critical to reducing unwanted pregnancies, unsafe abortions and spread of sexually transmitted diseases.

Based on the findings derived from this study, it is hereby recommended that in order to bridge this gap, one of the strategies should be the strengthening University health provision system for undergraduates by enforcing reproductive education and services during the orientation programme of new undergraduates. This is expected to guarantee effective contact and communication with the undergraduates thus ensuring an increase in their level of contraceptive knowledge and changed perception that may lead to behavioural modification with an associated increase in contraceptive use. The issue of failing moral standards and value system among university students need to be addressed via a well-articulated action plan that involves the religious bodies, parents, guardians, institutional authorities and civil societies. Policies should be put in place to check-mate anti-social excesses such as student prostitution, wearing of illicit dresses in public spaces and sexual exploitations both on and off campuses.

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