

Use of Logistics Regression Analysis to Determine Significant Factors That Affect Contraceptive Use Among Females' Students in Federal University of Oye Ekiti

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ABSTRACT

The aim of this study is to examine the factors that determine contraceptive use among female students in Federal University Oye-Ekiti, using logistic regression analysis. Data was collected through structured questionnaire to female students designed to capture information on contraceptive use and various explanatory variables required for logistic regression analysis. Findings revealed that a large proportion of respondents had used contraceptive previously, current use was relatively low. Respondents who had multiple sexual partners were significantly associated with contraceptive use, The results of logistic regression analysis revealed that educational level and employment category were stronger predictors than age, religion, marital status, or income. This implies that lifestyle, awareness and daily exposure influence contraceptive decisions more than traditional demographic factors. This study indicates that contraceptive use among female students is influenced more by educational exposure, reproductive experiences, and behavioural factors than by basic demographic characteristics.

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INTRODUCTION

Contraceptive use is a critical component of reproductive health, particularly among women of reproductive age, as it contributes significantly to the reduction of unintended pregnancies, maternal mortality, and unsafe abortions, while also promoting women's autonomy and educational attainment (Cahill et al., 2018). Globally, the adoption of modern contraceptive methods has improved over the years; however, this improvement remains uneven across regions, with sub-Saharan Africa recording persistently low utilisation rates compared to other parts of the world (Haakenstad et al., 2022).

In Nigeria, modern contraceptive use remains notably low despite decades of policy interventions and public health campaigns aimed at improving family planning uptake. Evidence from the Nigeria Demographic and Health Survey indicates that only a small proportion of women of reproductive age use modern contraceptive methods, while unmet need for family planning remains high (National Population Commission & ICF, 2019). This low uptake has been linked to Oadverse reproductive health outcomes such as high fertility rates, maternal morbidity, and preventable maternal deaths (Bolarinwa et al., 2021). Recent empirical studies have identified several socio-demographic, economic, and contextual factors influencing contraceptive use in Nigeria. These include age, marital status, educational attainment, household wealth, access to media, parity, place of residence, and cultural or belief systems, (Alo et al., 2020; Fadeyibi et al., 2022). Women with higher levels of education and better socioeconomic status are consistently found to be more likely to adopt modern contraceptive methods, as education improves awareness, decision-making capacity, and access to reproductive health information, (Ekholuenetale et al., 2021; Woldeamanuel et al., 2023). Despite the growing literature on contraceptive use in

Nigeria, most studies have focused on married women or women of reproductive age at the national or regional level, with limited emphasis on female students in tertiary institutions. Female students constitute a unique and vulnerable subgroup, as they are often sexually active, face risks of unintended pregnancies, and may experience barriers such as stigma, inadequate youth-friendly services, and misinformation regarding contraceptive methods, (Oluwasanu et al., 2019). Among this group, unintended pregnancy can result in school dropout, psychological distress, unsafe abortion, and long-term socioeconomic consequences. Lawal et al (2024) in their study emphasizes the importance of cultural norms and socioeconomic conditions in shaping reproductive choices.

Empirical evidence from Nigeria suggests that contraceptive use among young women and adolescents is influenced not only by individual characteristics but also by institutional and environmental factors such as access to health facilities, exposure to mass media, and prevailing social norms, (Ononokpono et al., 2020; Negash et al., 2022). Media exposure, in particular, has been shown to significantly increase awareness and utilisation of modern contraceptives by disseminating accurate reproductive health information (Boah et al., 2023). The North-Central Nigerian study by Adejumo et al. (2025) provides strong evidence that age, education, parity, access to media, and place of residence are significant predictors of modern contraceptive use. The study employed logistic regression analysis using data from the 2021 Multiple Indicator Cluster Survey (MICS) and revealed that women with higher education and media exposure were significantly more likely to use modern contraceptives. These findings underscore the suitability of logistic regression as a robust analytical tool for identifying determinants of contraceptive use.

The Federal University Oye-Ekiti, hosts a population of female students from diverse socioeconomic, cultural, and religious backgrounds. This diversity makes it an important setting for examining contraceptive behaviour among young women in tertiary institutions. Given the academic demands and career aspirations of female students, understanding the factors that influence contraceptive use within this population is essential for developing targeted interventions that promote safe reproductive health practices. Applying logistic regression analysis allows for the estimation of the probability of contraceptive use based on multiple explanatory variables simultaneously. This method has been widely adopted in reproductive health research to model binary outcomes such as contraceptive use versus non-use (Alo et al., 2020; Adejumo et al., 2025). By identifying significant determinants, logistic regression provides evidence-based insights that can inform institutional health policies and student-focused reproductive health programs.

This study seeks to examine the factors that determine the use of contraceptives among female students of the Federal University Oye- Ekiti using logistic regression analysis. By focusing on this specific population, the study contributes to existing literature and provides empirical evidence to guide policymakers, health educators, and institutional administrators in improving contraceptive uptake and reproductive health outcomes among female students.

Contraceptive use remains a critical component of reproductive health, particularly among women of reproductive age, due to its role in reducing unintended pregnancies, maternal mortality, and promoting women's autonomy in fertility decisions (Cahill et al., 2018). Despite global improvements in modern contraceptive uptake, usage in Nigeria is still relatively low, with substantial variations across age, education, marital status, and place of residence (Bolarinwa et al., 2021; Alo et al., 2020). Recent Nigerian studies highlighted that socio-demographic and socio-economic factors such as educational attainment, wealth status, access to media, and fertility preferences significantly influence contraceptive behaviour (Ekholuenetale et al., 2021; Ononokpono et al., 2020). Evidence from national and regional analyses further shows that education and exposure to family planning information increase the likelihood of adopting modern contraceptive methods (Alo et al., 2020; Adegboyega, 2019). More recently, Adejumo et al. (2025) emphasized that age, education, parity, and media access are key determinants of modern contraceptive use among Nigerian women. However, limited empirical attention has been given to student populations, particularly female students in tertiary institutions. This study situates itself within this gap by examining the determinants of contraceptive use among female students in the Federal University Oye- Ekiti using logistic regression analysis.

The aim of this study is to examine the determinants of contraceptive use among female students in Federal University Oye- Ekiti using logistic regression analysis.

The specific objectives are to:

- i. Determine the prevalence of contraceptive use among female students of the Federal University Oye- Ekiti.
- ii. Examine the socio-demographic factors (such as age, marital status, level of study, and religion) influencing contraceptive use among female students.
- iii. Assess the influence of reproductive and sexual health factors (including sexual activity status, number of sexual partners, and prior pregnancy experience) on contraceptive use among female students.

- iv. Identify the key predictors of contraceptive use among female students of the Federal University Oye- Ekiti using a logistic regression model.

MATERIALS AND METHODS

Research Design

The study adopted a quantitative research design using logistic regression analysis to examine the determinants of contraceptive use among female students in FUOYE. This design was selected to facilitate the assessment of the relationship between contraceptive use as a categorical outcome variable and multiple explanatory variables such as socio-demographic characteristics, socio-economic factors, and access to reproductive health information.

Justification for Using Binary Logistic Regression

Logistic regression is appropriate for this study because it enables the examination of contraceptive use as a categorical outcome based on several predictor variables. This technique does not require the assumption of a linear relationship between the dependent variable and the independent variables, making it suitable for analysing complex behavioural and social determinants related to reproductive health decisions (Alo et al., 2020).

Population and Sample

Population

The target population for this study comprises female students in FUOYE enrolled in various academic programmes. This population was selected because studies have shown that contraceptive use among female students is influenced by educational environment, socio-demographic characteristics, and access to reproductive health information, making them suitable for analysis using logistic regression techniques.

Sampling Technique and Sample Size Determination

Simple Random Sampling was used to select four (4) Faculties out of twelve (12). Faculty of Science and Medicine; Faculty of Agriculture and Environmental Sciences; Faculty of Engineering and Technology and Faculty of Arts, Social and Management Sciences. The researcher adopts convenience sampling as the procedure for sampling within these selected faculties. The sample size for this study is determined using the formula proposed by Taro Yamane's formula for finite population size. In our case population is 200. The sample size is determined based on the formula for estimating proportions in large populations, with a 5% margin of error.

$$n = \frac{N}{1 + N(e^2)}$$

Where:

(n) Is the sample size,
N is the total population,
e is the margin of error.

$$n = \frac{200}{1 + 200(0.05^2)} = 133$$

The required sample size for the research work is approximately 133.

Method of Data Collection

Data collection involved the administration of structured questionnaires to female students, designed to capture information on contraceptive use and the various explanatory variables required for logistic regression analysis. The questionnaire included items measuring socio-demographic characteristics, socio-economic factors, and access to

reproductive health information, consistent with established survey approaches used in contraceptive and reproductive health studies (National Population Commission & ICF, 2019).

Instrumentation

Data Collated using a structured questionnaire included three main sections:

Section A: Socio-demographic Characteristics

(age, school/faculty, religion, educational level, ethnicity, employment status, and academic performance indicators).

Section B: (Contraceptive Use Measurement)

This section captures respondents' contraceptive use status and related behaviours using structured items commonly applied in studies on contraceptive utilisation among women of reproductive age (National Population Commission [NPC] & ICF, 2019).

Section C: (Determinant Variables)

This section includes items measuring socio-economic factors, access to reproductive health information, and personal factors influencing contraceptive use, adapted from established survey instruments with demonstrated validity in contraceptive research (Alo et al., 2020; Ononokpono et al., 2020).

Measurement of Variables:

Dependent Variable

The dependent variable is contraceptive use, measured categorically as either "Yes" or "No."

Independent Variables

Socio-demographic Factors: Measured using variables such as age, religion, ethnicity, school/faculty, and educational level, which have been identified as important determinants of contraceptive behaviour among young women (Solanke, 2017; Ononokpono, Odimegwu, & Usoro, 2020).

Socio-economic Status: Assessed through employment status and academic performance (CGPA), reflecting students' financial independence and educational standing, which influence access to and consistent use of contraceptives (Alo et al., 2020).

Reproductive Health Information Exposure: Measured by respondents' access to contraceptive information through health facilities, media, and educational programs, as access to accurate information has been shown to significantly affect contraceptive uptake (Oluwasanu et al., 2019).

Cultural and Religious Influences: Assessed through items examining belief systems and religious norms that may support or discourage contraceptive use among female students (Atama et al., 2020).

Data Analysis Procedures

Data analysis will be conducted using the Statistical Package for the Social Sciences (SPSS) software version 29.0. The procedures include:

Descriptive Statistics

To summarize the demographic characteristics and distribution of variables.

Reliability Analysis

Using Cronbach's alpha to assess the internal consistency of the scales.

Binary Logistic Regression Analysis

To identify significant determinants of contraceptive use among female students. The logistic regression model is employed to estimate the effect of selected explanatory variables on the likelihood of contraceptive use, consistent with established applications of logistic regression in social and health research.

Model Fit and Diagnostics

The goodness-of-fit of the logistic regression model will be assessed using the Hosmer-Lemeshow test. Multicollinearity will be checked using the Variance Inflation Factor (VIF), and the significance of the predictors will be evaluated using Wald chi-square statistics (Hosmer, Lemeshow, & Sturdivant, 2013).

Logistics Regression

This study employed logistic regression analysis to examine the determinants of contraceptive use among female students in FUOYE. Logistic regression is a statistical modeling technique used when the dependent variable is categorical, allowing for the estimation of the probability of different outcomes based on multiple independent variables. In this study, the dependent variable is contraceptive use, measured categorically as either "Yes" or "No." The independent variables included age, level of education, marital status, access to contraceptives, awareness of contraceptive methods, and partner involvement, among others, which were selected based on existing literature on contraceptive behavior in Nigeria. The logistic regression model transforms the linear combination of predictors into probabilities using the logistic function, expressed mathematically as:

$$P_y = \frac{1}{1 + e^{-(\beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k)}}$$

Where:

P_y = the probability of contraceptive use among female students

β_0 = the coefficients of the independent variables or predictors

$\beta_1, \beta_2, \dots, \beta_k$ = Coefficients of the independent variables

$\beta_1, \beta_2, \dots, \beta_k$ = Independent variables or predictors

Assumptions of Binary Logistic Regression: While logistic regression does not require strict assumptions such as homoscedasticity, linearity between dependent and independent variables, or normally distributed error terms, certain conditions must be met for the results to be reliable.

These assumptions are:

The dependent variable must be categorical (dichotomous).

Independent variables should not exhibit high multicollinearity.

Observations must be independent.

Sufficient sample size is required to ensure stability of parameter estimates.

RESULTS AND DISCUSSION

Demographic Data of the Respondents

Table 1: Demographic Characteristics of Respondents

Characteristics	Response	Frequency	Percentage
Age of Respondents	20–24 years	18	13.6
	25–29 years	76	57.1
	30 years and above	39	29.3
Marital status	Single	90	67.7
	Married	43	32.3
Level of Study	300 level	72	54.14
	400 level	61	45.86
Religion	Christianity	94	70.7
	Islam	39	29.3
Monthly allowance/income	Below ₦20,000	10	7.5
	₦20,000–₦39,999	8	6.0
	₦40,000–₦59,999	13	9.8
	₦60,000 and above	102	76.7
Employment status	Not employed	19	14.3
	Part-time employed	12	9.0
	Self-employed	25	18.8
	Full-time employed	77	57.9

Interpretations

The Demographic characteristics of the respondents, as presented in Table 1, provide a comprehensive overview of their background and socio-economic profile. In terms of age distribution, the majority of respondents fall within the 25–29, age group, accounting for 57.1% of the total population. This is followed by respondents aged 30 years and above, who constitute 29.3%, while those within the 20–24, age bracket, represent the smallest proportion at 13.6%. This suggests that most of the respondents are relatively mature students, likely with more academic and life experience. Regarding marital status, a significant proportion of the respondents are single, making up 67.7% of the sample, while 32.3% are married. This indicates that the study population is predominantly composed of unmarried individuals, which may influence their financial responsibilities and lifestyle patterns.

In terms of level of study, more than half of the respondents (54.14%) are in 300 level, while 45.86% are in 400 level. This relatively balanced distribution suggests that the data captures perspectives from students who are in the advanced stages of their academic programs, thereby providing reliable insights

into the study. Religious affiliation shows that Christianity is the dominant religion among respondents, accounting for 70.7%, while 29.3% practice Islam. This reflects the common religious distribution pattern in many parts of Nigeria, particularly in the southwestern region. With respect to monthly allowance or income, a large majority of respondents (76.7%) earn ₦60,000 and above, indicating a relatively strong financial standing among the participants. Smaller proportions fall within the lower income brackets, with 9.8% earning between ₦40,000–₦59,999, 7.5% earning below ₦20,000, and 6.0% earning between ₦20,000–₦39,999. This distribution suggests that most respondents have access to moderate to high financial resources.

Finally, employment status reveals that more than half of the respondents (57.9%) are fully employed, while 18.8% are self-employed. A smaller proportion are not employed (14.3%), and 9.0% are engaged in part-time employment. This indicates that a considerable number of respondents combine academic pursuits with employment, which may have implications for their academic performance and overall well-being.

Table 2: Sexual and Reproductive Health Factors

Variables	Yes	No
Are you currently sexually active?	92 (69.2)	41 (30.8)
Have you ever had sexual intercourse?	123 (92.5)	10 (7.5)
Have you had more than one sexual partner in your lifetime?	66 (49.6)	67 (50.4)
Have you had more than one sexual partner in the last 12 months?	36 (27.1)	97 (72.9)
Have you ever been pregnant?	48 (36.1)	85 (63.9)
Have you ever experienced an unplanned pregnancy?	52 (39.1)	81 (60.9)
Have you ever received sexual and reproductive health education?	112 (84.2)	21 (15.8)

Interpretations

The sexual and reproductive health characteristics of the respondents, as presented in Table 2, provide important insights into their sexual behavior and exposure to reproductive health experiences. A majority of the respondents (69.2%) reported that they are currently sexually active, while 30.8% indicated that they are not. Similarly, a very high proportion (92.5%) affirmed that they have had sexual intercourse at some point in their lives, with only 7.5%

reporting otherwise. This suggests that sexual experience is quite prevalent among the surveyed population. Regarding the number of sexual partners, the distribution appears fairly balanced, with 49.6% of respondents indicating that they have had more than one sexual partner in their lifetime, while 50.4% reported having only one partner. However, when considering more recent sexual behavior within the last 12 months, a larger proportion (72.9%) reported having only one sexual partner, whereas 27.1% indicated having multiple

partners. This may suggest a tendency toward more stable or reduced multiple-partner relationships in recent times.

In terms of reproductive health outcomes, 36.1% of respondents reported having experienced pregnancy, while a majority of 63.9% had not. Furthermore, 39.1% indicated that they had experienced an unplanned pregnancy, whereas 60.9% had not encountered such an experience. These findings highlight the presence of reproductive health risks among a notable proportion of the respondents.

Lastly, awareness and education on sexual and reproductive health appear to be relatively high, with 84.2% of respondents reporting that they have received some form of sexual and reproductive health education, compared to 15.8% who have not. Overall, this table provides valuable insight into the sexual practices, reproductive experiences, and level of health education among the respondents, which is essential for understanding their reproductive health behavior and potential risk exposure within the study population.

Table 3: Contraceptive Use

Variables	Yes	No
Have you ever used any contraceptive method?	66(64.7)	47(35.3)
Are you currently using any contraceptive method?	26(19.5)	107(80.5)
Have you ever used a contraceptive consistently?	21(15.8)	112(84.2)
Have you used contraceptives during your last sexual intercourse?	31(23.3)	102(76.7)
Have you ever discontinued contraceptive use?	63(47.4)	70(52.6)
Have you ever experienced side effects from contraceptive use?	43(32.3)	90(67.7)
Would you recommend contraceptive use to others?	64 (48.1)	69 (51.9)

Interpretations

The characteristics of the respondents, as presented in Table 3, provide important insights into their reproductive health behaviors and experiences. With respect to awareness and prior engagement, a majority of respondents (64.7%) reported that they have used a contraceptive method at some point in time, while 35.3% indicated that they have never used any contraceptive method. However, current usage appears to be relatively low, as only 19.5% of respondents reported that they are currently using a contraceptive method, whereas a substantial proportion (80.5%) are not currently using any form of contraception. Consistency in contraceptive use is also notably low among the respondents. Only 15.8% reported that they have ever used contraceptives consistently, while a large majority (84.2%) admitted to inconsistent use. Similarly, when considering contraceptive use during the most recent sexual intercourse, just 23.3% of respondents reported usage, compared to 76.7% who did not use any contraceptive method during their last sexual encounter. This suggests a gap between awareness or past use and actual consistent practice.

Furthermore, nearly half of the respondents (47.4%) indicated that they have discontinued contraceptive use at some point, while 52.6% reported that they have not discontinued use. In terms of health experiences, 32.3% of respondents reported having experienced side effects from contraceptive use, whereas a majority (67.7%) have not encountered any side effects. Respondents' perception towards contraceptive advocacy appears to be divided. About 48.1% expressed willingness to recommend contraceptive use to others, while a slightly higher proportion (51.9%) indicated that they would not recommend it.

Overall, the findings reveal that although a considerable proportion of respondents have had prior exposure to contraceptive methods, current usage, consistency, and practical application remain low. Additionally, experiences such as discontinuation and side effects, as well as mixed perceptions about recommending contraceptives, may play a role in shaping contraceptive behaviors among the study population.

Table 4: Access, Knowledge, and Perception Factors

Variables	Agree	Neutral	Disagree
Contraceptives are easily accessible to me.	94(70.7)	21(15.8)	18(13.5)
Contraceptive use helps prevent unwanted pregnancy.	101(75.9)	23(17.3)	9(6.8)
Fear of side effects discourages contraceptive use.	93(69.9)	29(21.8)	11(8.3)
Religious beliefs influence contraceptive use.	55(41.4)	44(33.1)	34(25.6)
Social stigma affects contraceptive use among students.	74(55.6)	39(29.3)	20(15.0)
Social stigma affects contraceptive use among students.	64(48.1)	45(33.8)	24(18.0)
I intend to use contraceptives in the future.	73 (54.9)	34 (25.6)	26(19.5)

Interpretations

The distribution of respondents' views on access, knowledge, and perception factors, as presented in Table 4, reveals varying levels of agreement, neutrality, and disagreement across the measured statements.

On accessibility, a majority of respondents (70.7%) agreed that contraceptives are easily accessible to them, while 15.8% were neutral and 13.5% disagreed. In terms of knowledge, a substantial proportion (75.9%) agreed that contraceptive use helps prevent unwanted pregnancy, with 17.3% remaining neutral and only 6.8% disagreeing, indicating a generally high level of awareness of its benefits. Regarding concerns about use, 69.9% of respondents agreed that fear of side effects

discourages contraceptive use, while 21.8% were neutral and 8.3% disagreed, showing that perceived health concerns play a significant role in usage decisions. On perceptual influences, 41.4% agreed that religious beliefs influence contraceptive use, 33.1% were neutral, and 25.6% disagreed, suggesting a mixed influence of religion among respondents. Similarly, 55.6% agreed that social stigma affects contraceptive use among students, while 29.3% were neutral and 15.0% disagreed, indicating that stigma is a notable barrier for many respondents. In another related assessment of stigma, 48.1% agreed, 33.8% were neutral, and 18.0% disagreed, further reinforcing its influence, though with slightly lower intensity.

Finally, on future intentions, 54.9% of respondents indicated that they intend to use contraceptives in the future, 25.6% were neutral, and 19.5% disagreed, suggesting a generally positive inclination toward future use despite existing

concerns. Overall, the findings reflect a combination of good awareness, moderate accessibility, and notable socio-cultural and psychological influences shaping contraceptive-related behaviors among respondents.

Table 5: Test of Relationship between Socio-Demographic Characteristics and Contraceptive Use among Female Students in FUOYE Chi-Square Test

Variables	χ^2	p-Value	Decision
Age	1.846 ^a	.605	NS
Marital status	2.823 ^a	.093	NS
Level of study	6.007 ^a	.014	S
Religion	2.629 ^a	.105	NS
Monthly allowance/income	4.282 ^a	.233	NS
Employment status	4.406 ^a	.221	NS

Interpretations

p-Value is significant at 0.05 level (2 tailed) Table 5 presents the results of the analysis examining the relationship between selected socio-demographic characteristics and contraceptive use among female students in FUOYE using chi-square test. The socio-demographic variables considered in this analysis include age, marital status, level of study, religion, monthly allowance or income, and employment status. Each variable was tested to determine whether it has a statistically significant relationship with contraceptive use at the 0.05 level of significance.

The findings reveal that age does not have a statistically significant relationship with contraceptive use ($\chi^2 = 1.846$, $p = 0.605$). This implies that variations in the age of the respondents do not significantly influence their likelihood of using contraceptives. In a similar vein, marital status also does not show a significant relationship with contraceptive use ($\chi^2 = 2.823$, $p = 0.093$), indicating that whether a respondent is single, married, or in another category does not significantly determine contraceptive behavior among the sampled students.

However, level of study is found to have a statistically significant relationship with contraceptive use ($\chi^2 = 6.007$, $p = 0.014$). Since the p-value is less than the 0.05 threshold, the null hypothesis is rejected for this variable. This suggests that a student's academic level plays an important role in influencing contraceptive use. It may imply that students at

higher levels of study are more informed, experienced, or exposed to reproductive health education, thereby increasing their likelihood of using contraceptives compared to those at lower levels.

Furthermore, religion does not exhibit a statistically significant relationship with contraceptive use ($\chi^2 = 2.629$, $p = 0.105$). This indicates that differences in religious affiliation among respondents do not significantly impact their contraceptive practices within the study population. Similarly, monthly allowance or income is not significantly related to contraceptive use ($\chi^2 = 4.282$, $p = 0.233$), suggesting that financial capacity does not play a decisive role in determining whether female students use contraceptives.

Lastly, employment status also shows no statistically significant relationship with contraceptive use ($\chi^2 = 4.406$, $p = 0.221$). This means that whether a student is employed or not does not significantly influence her contraceptive behavior.

Overall, the analysis indicates that among all the socio-demographic factors examined, only level of study has a statistically significant relationship with contraceptive use among female students in FUOYE. The remaining variables, age, marital status, religion, monthly allowance, and employment status, do not show significant associations. This suggests that educational exposure and academic progression may be more critical determinants of contraceptive use than other socio-demographic characteristics in this context.

Table 6: Test of Relationship between Reproductive and Sexual Health Factors and Contraceptive Use among Female Students in FUOYE Using Chi-Square Test

Variables	χ^2	p-Value	Decision
Are you currently sexually active?	3.614 ^a	.057	NS
Have you ever had sexual intercourse?	.001 ^a	.970	NS
Have you had more than one sexual partner in your lifetime?	4.970 ^a	.028	S
Have you had more than one sexual partner in the last 12 months?	5.964 ^a	.015	S
Have you ever been pregnant?	12.024 ^a	.001	S
Have you ever experienced an unplanned pregnancy?	15.670 ^a	.000	S
Have you ever received sexual and reproductive health education?	.439 ^a	.507	NS

Interpretations

p-Value is significant at 0.05 level (2 tailed)

Table 6 examines the relationship between reproductive and sexual health factors and contraceptive use among female students in FUOYE using the Chi-square test. The reproductive and sexual health variables considered include sexual activity status, history of sexual intercourse, number of sexual partners (lifetime and within the last 12 months), pregnancy history, experience of unplanned pregnancy, and exposure to sexual and reproductive health education. The Chi-square (χ^2) values, corresponding p-values, and decisions

on statistical significance are presented for each variable. The results show that being currently sexually active does not have a statistically significant relationship with contraceptive use ($\chi^2 = 3.614$, $p = 0.057$), although the p-value is close to the conventional level of significance (0.05), suggesting a marginal association. Similarly, having ever had sexual intercourse shows no significant association with contraceptive use ($\chi^2 = 0.001$, $p = 0.970$), indicating that merely having sexual experience does not influence contraceptive behavior among the respondents.

In terms of sexual partnerships, having more than one sexual partner in a lifetime shows a statistically significant relationship based on the p-value ($p = 0.028$). Likewise, having more than one sexual partner within the last 12 months demonstrates a statistically significant association with contraceptive use ($\chi^2 = 5.964$, $p = 0.015$), implying that recent sexual behaviour patterns may influence the likelihood of contraceptive use among the students. Reproductive history variables exhibit strong associations with contraceptive use. Having ever been pregnant shows a highly significant relationship ($\chi^2 = 12.024$, $p = 0.001$), indicating that students with a history of pregnancy are more likely to use contraceptives. Similarly, experiencing an unplanned pregnancy is significantly associated with contraceptive use ($\chi^2 = 15.670$, $p = 0.000$), suggesting that such experiences

may increase awareness and adoption of contraceptive methods.

Also, exposure to sexual and reproductive health education does not show a statistically significant relationship with contraceptive use ($\chi^2 = 0.439$, $p = 0.507$), indicating that receiving such education alone may not directly translate into contraceptive practice among the respondents. The findings reveal that while some reproductive and sexual health factors, particularly pregnancy history and recent sexual behavior, have significant associations with contraceptive use, others such as sexual activity status and health education do not demonstrate statistically significant relationships. This suggests that personal reproductive experiences may play a more critical role in influencing contraceptive use than general awareness or exposure to education alone.

Table 7: Summary of Binary Logistic Regression Parameter Estimate

Predictors		β	S.E(β)	Wald	Df	Odds ratio (OR)	p-value	OR 95% C.I.	
								Lower	Upper
Step 1	Age			.054	3		.997		
	20-25 years	-.258	1.148	.051	1	.773	.822	.081	7.332
	26-30 years	20.665	14353.729	.000	1	943128018.607	.999	.000	.
	31-35 years	-.128	.870	.022	1	.880	.883	.160	4.843
	36 years and above (Reference)								
Marital Status									
Single		.129	.612	.044	1	1.138	.833	.343	3.777
Married (Reference)									
Religion									
Christianity		.986	.695	2.014	1	2.680	.156	.687	10.460
Islam (Reference)									
Level of study									
300 Level		2.498	.983	6.451	1	12.155	.011	1.769	83.527
400 Level (Reference)									
Monthly Allowance/ Income				3.126	3		.373		
Below ₦20,000		17.267	12572.533	.000	1	31557588.133	.999	.000	.
₦20,000–₦39,999		-2.024	1.448	1.954	1	.132	.162	.008	2.256
₦40,000–₦59,999		-1.083	1.032	1.101	1	.339	.294	.045	2.559
₦60,000 and above									
Employment status				6.508	3		.089		
Not employed		-.240	1.345	.032	1	.787	.859	.056	10.993
Part-time employed		.337	1.189	.080	1	1.401	.777	.136	14.404
Self-employed		-2.280	.901	6.406	1	.102	.011	.017	.598
Full-time employed (Reference)									
Constant		.852	.989	.741	1	2.344	.389		

Interpretations

The overall effect of age on contraceptive use was not statistically significant ($p = .997$), indicating that age does not predict contraceptive use among respondents.

Students aged 20–25 years were 22.7% less likely to use contraceptives (OR = 0.773) compared to those aged 36 years and above, but this relationship was not statistically significant.

Students aged 31–35 years were 12.0% less likely to use contraceptives (OR = 0.880) compared to the reference group, and this effect was also not statistically significant.

The overall effect of marital status on contraceptive use was not statistically significant ($p > .05$), although single students were slightly more likely (OR = 1.138) to use contraceptives than married students.

Religion did not significantly influence contraceptive use ($p = .156$), though Christian students showed higher odds (OR = 2.680) of contraceptive use compared to Muslim students.

Level of study had a statistically significant effect on contraceptive use ($p = .011$). Students in 300 level were about 12 times more likely (OR = 12.155) to use contraceptives compared to those in 400 level.

Monthly income/allowance did not significantly influence contraceptive use ($p = .373$), although students earning ₦20,000–₦39,999 were less likely ($OR = 0.132$) to use contraceptives than those earning ₦60,000 and above.

Employment status had a borderline overall effect ($p = .089$), but self-employed students were significantly less likely ($OR = 0.102$, $p = .011$) to use contraceptives compared to full-time employed students.

Summary of Findings

This study examined the determinants of contraceptive use among female students in FUOYE using descriptive statistics, Chi-square analysis, and Binary Logistic Regression. The study focused on socio-demographic characteristics, reproductive and sexual health factors, access, knowledge, and perception factors influencing contraceptive use. The major findings of the study are summarized below:

Demographic Characteristics

Majority of the respondents were within the age group of 25–29 years (57.1%), single (67.7%), in 300 level (54.1%), Christians (70.7%), and earning ₦60,000 and above monthly (76.7%). More than half (57.9%) were fully employed.

Sexual and Reproductive Health Factors

Most respondents were currently sexually active (69.2%), while 92.5% had engaged in sexual intercourse before. About 49.6% had more than one sexual partner in their lifetime, 36.1% had ever been pregnant, and 39.1% had experienced unplanned pregnancy. A large proportion (84.2%) had received sexual and reproductive health education.

Contraceptive Use Pattern

About 64.7% had used contraceptives before, but only 19.5% were current users. Consistent use was low (15.8%), while only 23.3% used contraceptives during their last sexual intercourse. Also, 47.4% had discontinued contraceptive use, while 32.3% had experienced side effects.

Access, Knowledge, and Perception Factors

Majority agreed that contraceptives were accessible (70.7%) and that contraceptives prevent unwanted pregnancy (75.9%). However, 69.9% agreed that fear of side effects discourages use, while 55.6% believed that social stigma affects contraceptive use among students.

The Chi-square analysis showed that:

Level of study had a significant relationship with contraceptive use ($p = 0.014$).

More than one sexual partner in the last 12 months had a significant association with contraceptive use ($p = 0.015$).

History of pregnancy had a significant relationship with contraceptive use ($p = 0.001$).

Experience of unplanned pregnancy had a significant relationship with contraceptive use ($p = 0.000$).

The Binary Logistic Regression results revealed that:

300 level students were about 12 times more likely to use contraceptives compared with 400 level students ($OR = 12.155$, $p = 0.011$).

Self-employed students were significantly less likely to use contraceptives compared with full-time employed students ($OR = 0.102$, $p = 0.011$).

Other socio-demographic variables such as age, marital status, religion, and income were not statistically significant predictors of contraceptive use.

Discussion

The findings of this study revealed that although a large proportion of respondents had used contraceptives

previously, current use was relatively low. This suggests that awareness alone does not guarantee continuous or consistent use of contraceptive methods. Many respondents may discontinue use due to fear of side effects, partner influence, inconvenience, or misconceptions.

The significant influence of the level of study indicates that academic exposure may play an important role in contraceptive behavior. Students in 300 level were more likely to use contraceptives than those in 400 level. This may be due to greater social interaction, increased sexual activity, or better exposure to reproductive health information among mid-level students.

The study also found that respondents who had multiple sexual partners in the last 12 months were significantly associated with contraceptive use. This suggests that individuals with greater sexual risk exposure may be more likely to adopt protective reproductive health measures.

Similarly, respondents who had experienced pregnancy or unplanned pregnancy were significantly more likely to use contraceptives. This may indicate that prior reproductive experiences motivate students to prevent future unintended pregnancies.

Fear of side effects and social stigma were identified as major barriers to contraceptive use. This supports previous studies which show that negative perceptions, misinformation, and societal judgment often discourage young women from using family planning methods.

The logistic regression analysis further confirmed that educational level and employment category were stronger predictors than age, religion, marital status, or income. This implies that lifestyle, awareness, and daily exposure may influence contraceptive decisions more than traditional demographic factors.

CONCLUSION

This study provides useful insight into the determinants of contraceptive use among female students in FUOYE. Based on the findings, the following conclusions were made:

Contraceptive awareness and previous use were relatively high, but current and consistent use remained low.

Level of study significantly associated with contraceptive use, with 300 level students showing higher likelihood of usage.

Recent sexual behavior, pregnancy history, and unplanned pregnancy significantly affected contraceptive use.

Fear of side effects, stigma, and negative perceptions remain important barriers to contraceptive uptake.

Age, marital status, religion, and income were not strong predictors of contraceptive use in this study.

Overall, contraceptive use among female students is associated with educational exposure, reproductive experiences, and behavioral factors than by basic demographic characteristics.

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