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Sexual and reproductive health practices among fresh female graduates in Iseyin, Oyo State, Nigeria

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Abstract:

Background: Fresh graduates of tertiary institutions are at a stage in their lives characterized by searching, discovery, and sexual experimentation. They engage in high-risk sexual behaviours and poor reproductive health practices. The objective of this study is to assess the sexual and reproductive health practices of young female graduates and to highlight the factors associated with these practices.

Methodology: A cross-sectional study was conducted among 413 fresh female graduates from Nigerian tertiary institutions who were on the one-year National Youth Service Corps (NYSC) orientation camp at Iseyin, Oyo state. Data on sociodemographic characteristics, and sexual and reproductive health practices were collected using a semi-structured, self-administered pretested questionnaire. The data were analysed using SPSS version 22. Association between variables was determined using Chi square and Fisher Exact tests, with level of significance at $p < 0.05$.

Results: The mean age of the 413 respondents was 25 ± 2.2 years. More than half of the respondents (63.7%, $n=263$) had ever had sexual intercourse, with the youngest age at sexual debut being 14 years. About half of those who are sexually active (48.3%, $n=127$) did not use contraceptives. Condom was the commonest type of contraceptive used (79.4%, $n=108/136$). Multiple sexual partners (42%, $n=110/263$), poor contraceptive use (49%, $n=129/263$), early sexual debut (18.6%, $n=49/263$), pregnancy (34.6%, $n=91/263$), unwanted pregnancy (11.0%, $n=29/263$), history of abortion (17.1%, $n=45/263$) and induced abortion (14.8%, $n=39/263$) were recorded among sexually active respondents. Multiple sexual partners ($OR=4.2$, 95% $CI=1.503-11.469$, $p=0.006$) and age at sexual debut ($OR=2.2$, 95% $CI=1.065-4.601$, $p=0.033$) were significantly associated with history of abortion among the respondents, and multiple sexual partners was significantly associated with pregnancy ($OR=7.2$, 95% $CI=2.743-20.118$, $p=0.000$).

Conclusion: In this study, a high proportion of the study participants had risky sexual and poor reproductive health practices. Targeted reproductive health promotion and education interventions for this population set would be highly beneficial.

Keywords: Sexual health, behaviour, practices, fresh female graduates, abortions, multiple sexual partners

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Pratiques de santé sexuelle et reproductive chez les jeunes diplômées d'Iseyin, État d'Oyo, Nigéria

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Résumé:

Contexte: Les jeunes diplômées de l'enseignement supérieur traversent une période de recherche, de découverte et d'expérimentation sexuelle. Elles adoptent des comportements sexuels à risque et de mauvaises pratiques en matière de santé reproductive. L'objectif de cette étude est d'évaluer les pratiques en matière de santé sexuelle et reproductive de jeunes femmes diplômées et d'identifier les facteurs associés à ces pratiques.

Méthodologie: Une étude transversale a été menée auprès de 413 jeunes femmes fraîchement diplômées d'établissements d'enseignement supérieur nigériens, participant au camp d'orientation d'un an du Corps national de la jeunesse (NYSC) à Iseyin, dans l'État d'Oyo. Les données relatives aux caractéristiques sociodémographiques et aux pratiques en matière de santé sexuelle et reproductive ont été recueillies à l'aide d'un questionnaire semi-structuré, auto-administré et prétesté. Les données ont été analysées avec le logiciel SPSS version 22. L'association entre les variables a été déterminée par les tests du χ^2 et de Fisher, avec un seuil de signification fixé à $p < 0,05$.

Résultats: L'âge moyen des 413 participantes était de $25 \pm 2,2$ ans. Plus de la moitié d'entre elles (63,7%, $n=263$) avaient déjà eu des rapports sexuels, l'âge le plus jeune au premier rapport étant de 14 ans. Environ la moitié des personnes sexuellement actives (48,3%, $n=127$) n'utilisaient pas de contraception. Le préservatif était le moyen de contraception le plus fréquemment utilisé (79,4%, $n=108/136$). Parmi les répondants sexuellement actifs, on a relevé les facteurs suivants : partenaires sexuels multiples (42,0%, $n=110/263$), utilisation insuffisante de la contraception (49,0%, $n=129/263$), début précoce de l'activité sexuelle (18,6%, $n=49/263$), grossesse (34,6%, $n=91/263$), grossesse non désirée (11,0%, $n=29/263$), antécédents d'avortement (17,1%, $n=45/263$) et d'avortement provoqué (14,8%, $n=39/263$). Le fait d'avoir eu plusieurs partenaires sexuels ($OR=4,2$, IC à 95%=1,503-11,469, $p=0,006$) et l'âge au premier rapport sexuel ($OR=2,2$, IC à 95%=1,065-4,601, $p=0,033$) étaient significativement associés aux antécédents d'avortement chez les participantes. De plus, le fait d'avoir eu plusieurs partenaires sexuels était significativement associé à la grossesse ($OR=7,2$, IC à 95%=2,743-20,118, $p=0,000$).

Conclusion: Dans cette étude, une forte proportion des participantes présentaient des comportements sexuels à risque et de mauvaises pratiques en matière de santé reproductive. Des interventions ciblées de promotion et d'éducation à la santé reproductive auprès de cette population seraient très bénéfiques.

Mots-clés: Santé sexuelle, comportements, pratiques, jeunes diplômées, avortements, partenaires sexuels multiples

Introduction:

Sexual behaviour is a core aspect of human life shaped by cultural, social, and personal factors (1,2). Poverty, urbanization, conflicting sexual values, and premarital sexual activity contribute to early sexual initiation among youths (3,4). Media glamorization of sex, globalization of communication, and declining traditional norms influence adolescent lifestyle, leading to earlier sexual debut and increased sexual activities, including multiple partners and short-term unions (5).

Tertiary students, free from parental and school restrictions, often engage in risky sexual behaviours (6). These include unprotected sex, early sexual debut, substance use before sex, multiple partners, and transactional sex, which increase the risk of contracting sexually transmitted infections including HIV (7). Many youths lack awareness of the consequences while their sexual and reproductive health needs remain largely unmet (8).

Fresh graduates of tertiary institutions are at a stage in their lives characterized by searching, discovery, and sexual experimentation (9). They live and socialize with large numbers of other young adults, which encourages sexual activities that are not mutually monogamous. Despite differences by age or loca-

tion, contraceptive use in sub-Saharan Africa remains low due to concerns about side effects, lack of resources, opposition, poor awareness, and gender power issues (10,11).

Poor condom use is often linked to lack of sexual communication, requiring more research on partner dialogue (12,13). In Ethiopia, only 4.9% of university students used contraceptives, mainly pills (44%) and injectables (13%) (14). Unplanned pregnancies are widespread and often result in unsafe abortions due to restrictive laws (15-17), contributing to 13% of global maternal deaths (16). Most women who abort are under 30 years of age and post-secondary educated (14). Unplanned pregnancy is the main reason for abortion, with nearly half opting for unsafe methods (18), while youth aged 15-24 years account for over 50% of abortion-related deaths in Africa (19).

One-fifth of the Nigeria's 200 million population is made of youth within the age group 15-24 years. The growing numbers and poor reproductive health are serious concerns. Limited access to services leads to high rates of unwanted pregnancies, abortions, HIV/AIDS, and related issues. This study examined sexual and reproductive health practices and associated factors among fresh female graduates during NYSC orientation in Iseyin, Oyo State, Nigeria.

Materials and method:

Study area:

The study was conducted at the NYSC camp in Iseyin, Oyo State, southwest zone, Nigeria. The NYSC scheme promotes youth development, nation-building, and self-reliance, admitting two batches ("A" and "B") yearly at the time of data collection. The three-week orientation camp offers opportunities for research and counselling.

Ethical consideration:

Ethical approval was obtained from the Oyo State Ministry of Health. Permission was granted by the NYSC State Coordinator and Camp Commandant. Informed consent was obtained from each participant. A free seminar on using Reproductive Life Plan (RLP) to set reproductive goals followed the survey, with investigators addressing questions.

Study population:

The study population consisted of fresh female graduates from Nigerian universities (degree holders) and polytechnics (HND holders) who were attending the NYSC orientation program scheme.

Study design:

This cross-sectional study was part of larger research on reproductive life plans, perception of preconception care, and sexual and reproductive health practices among fresh female NYSC graduates in Southwest Nigeria.

Sampling technique:

A simple random sampling technique was used to select eligible female graduates at the NYSC orientation camp. A sampling frame comprising all eligible female graduates present at the camp was obtained, and participants were selected randomly from the sampling frame. The study was explained to the selected participants, and those who provided informed consent were recruited into the study.

Study instrument:

A semi-structured, self-administered questionnaire pretested on a previous batch of Corp members was used to collect data on

respondents' socio-demographics, age at sexual debut, history of multiple sexual partners, pregnancy history, abortion, and contraceptive use. It was administered in English.

Data collection:

Two resident doctors were trained in research ethics and recruited to distribute and collect questionnaires. After obtaining informed consent, they administered the surveys to female corps members. The investigators supervised all aspects of data collection at the orientation camp.

Data analysis:

Data were analyzed using SPSS version 22 (Chicago, Illinois). Results were presented in tables, charts, and graphs. Chi-square test was used to determine associations between categorical variables at a 5% significance level. Logistic regression was used to calculate odds ratios and confidence intervals.

Results:

Sociodemographic characteristics of the study participants:

A total of 413 female graduates were selected for the study. The mean age of the respondents who participated in this study was 25 ± 2.2 years, with about 60.0% being 25 years and above, while 40.0% were within the age range of 18-24 years. The majority of the respondents (74.1%) had a university degree. About 54.5% of the respondents hailed from the Yoruba ethnicity group, with the majority (80.6%) being single.

Sexual health behaviour and practices of the respondents:

Table 2 shows that 63.7% ($n=263$) of the participants had ever had sex, and 78.7% ($n=207$) within the past year. Most (71.5%, $n=188$) had their first intercourse at 19-24 years, 51.0% ($n=134$) used contraceptives at debut. The youngest age of sexual debut was 14 years. Fig 1 above shows the frequency distribution of contraceptive types used by the 263 female respondents at 1st sexual intercourse.

Table1: Sociodemographic characteristics of fresh university graduate respondents in Iseyin, Oyo State, Nigeria

Characteristics	Frequency	Percentage (%)
Type of tertiary institution attended		
University	306	74.1
Polytechnic	105	25.4
Others	2	0.5
Degree attained		
B.Sc.	243	58.8
B.A.	39	9.4
HND	105	25.4
Others	26	6.3
Age at last birthday (in years)		
18-24	165	40.0
≥25	248	60.0
Religion		
Christianity	351	85.0
Islam	62	15.0
Ethnicity		
Yoruba	225	54.5
Igbo	104	25.2
Hausa	15	3.6
Others	69	16.7
Marital status		
Single	333	80.6
Married	80	19.4

B.Sc. = Bachelor of Science; B.A. = Bachelor of Arts; HND = Higher National Diploma; Others = College of Education and School of Nursing.

Table 2: Sexual health practices of fresh female university graduate respondents in Iseyin, Oyo State, Nigeria

Sexual practices	Frequency	Percentage
Ever had sexual intercourse (n=413)		
Yes	263	63.7
No	150	36.3
Had sexual intercourse in the last one year (n=263)		
Yes	207	78.7
No	56	21.3
Age at first sexual intercourse (in years) (n=263)		
≤18	49	18.6
19-24	188	71.5
≥25	26	9.9
Use of contraceptive at first sexual intercourse (n=263)		
Yes	134	51.0
No	129	49.0
Number of sexual partners (n=263)		
1	153	58.0
>1	110	42.0
History of pregnancy (n=263)		
Yes	91	34.6
No	172	65.4

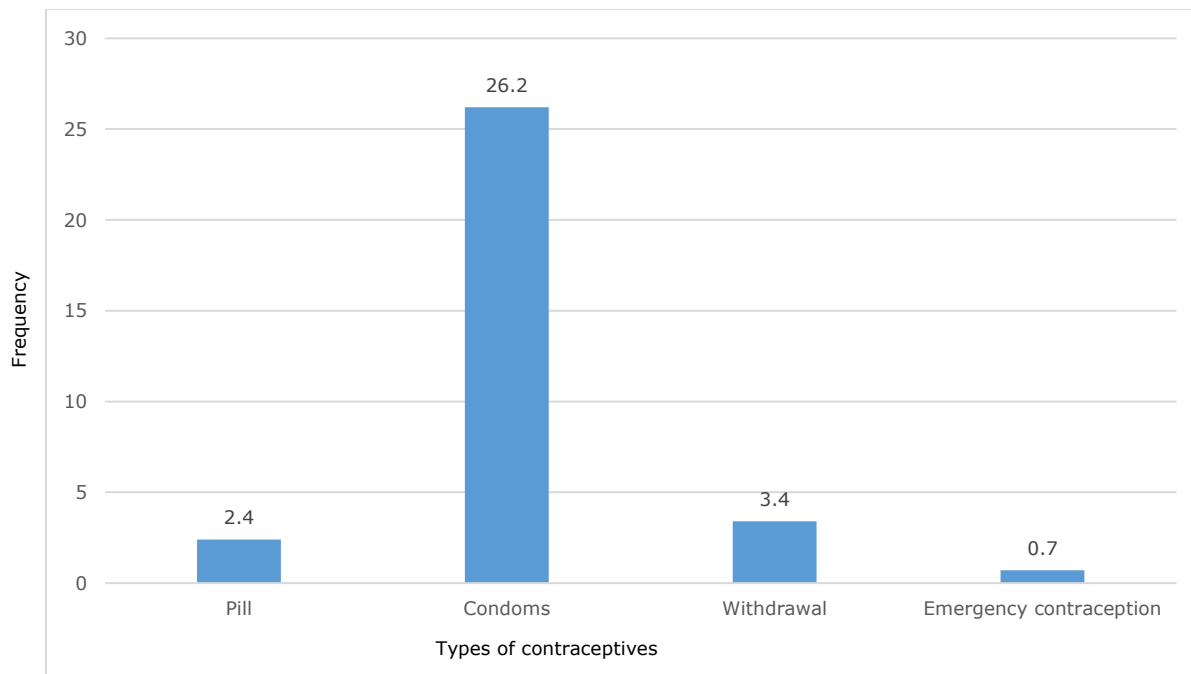


Fig 1: Types of contraceptives used among female fresh university graduates in Iseyin, Oyo State, Nigeria

Table 3 shows that a few respondents (n=45) had experienced abortion. Among these, 86.7% (n=39) were induced abortions and 22.3% (n=6) were spontaneous abortions. Of the 45 cases, 64.4% cited unpreparedness for

pregnancy or motherhood as the reason for procuring abortion, 17.8% feared consequences of pregnancy, 4.4% expected parental rejection, and 2.2% gave no reason for procuring abortion.

Table 3: Frequency distribution of fresh female university graduate respondents in Iseyin, Nigeria, with respect to history and experience of abortion

Variables	Frequency	Percentage
Ever aborted a pregnancy (n=263)		
Yes	45	17.1
No	218	82.9
Number of induced abortion (n=39)		
1	26	57.8
2	11	24.4
3	2	4.4
	6	13.3
Number of spontaneous abortion (n=6)		
1	4	8.8
2	2	4.4
Reasons for abortion (n=45)		
Unprepared (not ready) for responsibility	29	64.4
Afraid of the consequences of keeping the baby	8	17.8
Parental refusal of marriage	2	4.4
Health reason	1	2.2
Rape	1	2.2
No reason	1	2.2
Others	3	6.7

Factors associated with sexual risk behaviours among the respondents:

Age at sexual debut was significantly associated with only abortion ($\chi^2=7.940$, $p=0.0189$), with respondents with age of sexual debut ≤ 18 years having significantly higher frequency of abortion (28.6%) while respondents with age of sexual debut >25 years had significantly lower frequency of abortion (3.8%) (Table 4). However, age at sexual debut was not significantly associated with contraceptive use ($\chi^2=2.591$, $p=0.6284$) or history of pregnancy

($\chi^2=2.510$, $p=0.2850$).

Table 5 shows that respondents who had been pregnant were four times more likely to have more than one (multiple) sexual partners, while those with abortion history were seven times more likely to have multiple sexual partners than those without abortion history. Table 6 shows that respondents who are 18 years and below are twice likely to have history of abortion (28.6%) compared to those 18 years and above (15.5%) (OR=2.2, 95% CI=1.065-4.601, $p=0.033$).

Table 4: Bivariate analysis of age at sexual debut with contraceptives usage, history of pregnancy and abortion among fresh female graduate respondents in Iseyin, Oyo State, Nigeria

Variables	Age at sexual debut (years)			Total (n=263)	χ^2	p-value
	≤ 18 (n=49)	19-24 (n=188)	≥ 25 (n=26)			
Contraceptives use						
Condoms	18 (36.7)	82 (43.6)	8 (30.8)	108 (41.1)	2.591	0.6284
Others	7 (14.3)	18 (9.6)	3 (11.5)	28 (10.6)		
No contraceptive use	24 (49.0)	88 (46.8)	15 (57.7)	127 (48.3)		
Ever been pregnant						
Yes	19 (38.8)	60 (31.9)	12 (46.2)	91 (34.6)	2.510	0.2850
No	30 (61.2)	128 (68.1)	14 (53.8)	172 (65.4)		
Ever had abortion						
Yes	14 (28.6)	30 (16.0)	1 (3.8)	45 (17.1)	7.940	0.0189*
No	35 (71.4)	158 (84.0)	25 (96.2)	218 (82.9)		

*Statistically significant at $p<0.05$

Table 5: Bivariate analysis of number of sexual partners with history of pregnancy and abortion among fresh female university graduate respondents in Iseyin, Oyo State, Nigeria

Variable	No of sexual partners		p-value (OR) CI
	One (n, %)	More than one (n, %)	
Ever been pregnant			
Yes	79 (32.5)	12 (66.7)	0.006* (4.2) 1.503-11.469
No (ref)	164 (67.5)	8 (33.3)	
Ever aborted			
Yes	35 (14.3)	10 (55.6)	0.000* (7.4) 2.743-20.118
No (ref)	210 (85.7)	8 (44.4)	

Table 6: Bivariate analysis of age at sexual debut and history of abortion among fresh female university graduate respondents in Iseyin, Oyo State, Nigeria

Variable	Ever aborted		p-value (OR) CI
	Yes (n, %)	No (n, %)	
Age of sexual debut			
18 years and younger (ref)	15 (33.3)	52 (23.9)	0.033* (2.2) 1.065-4.601
Above 18 years	30 (77.7)	166 (76.1)	
Total	45	218	

Discussion:

This study assessed the sexual and reproductive health practices of fresh female graduates. The mean respondent age was 25 ± 2.2 years, with 40% aged 18–24 years and this agrees with the study by Obembe et al., in 2017 (20), who reported a similar mean age of 18.26 ± 3.45 among students. A review by Cooper et al., in 2007 (7) found a sexual debut age of 17 years and a median of two partners, while another review by Hoque et al., in 2011 (21) found debut at 19 years with 2–4 partners, comparable to the youngest debut age of 14 years in our study. Findings from our study show that most respondents were Yoruba and single, similar to findings of previous studies (20,22).

Sexual activity was reported by 63.7% of the respondents, with 42% having multiple partners. A survey of female undergraduate students in two Nigerian universities reported that 47.6% were sexually active, with the same percentage having had sex in the past year, and 61.4% engaging in unprotected sex (18). Over half of the participants (51.7%) in this study reported contraceptive use, primarily condoms (41.1%). A previous study reported that 44.6% of participants were confident in the use of female condoms (20). Another study reported 38.6% of participants used condoms, 26.1% emergency contraception, and 63.1% were aware of prevention drugs (18). A study from Ethiopia reported 10% contraceptive use, while 30.1% usage was reported by Oyedokun et al., in 2007 (23).

Our finding of 48.3% respondents with practice of unprotected sex (49%) is comparatively lower than those from South Africa (18, 24) which reported 60.7% among female undergraduates, and far lower than 86.3% reported in Ethiopia (14). About 17% of the respondents in our study had ever had an abortion, which is lower than 24.1% reported among hairdressers, and 33% among female undergraduates in Benin (25), while findings from Cadmus and Owoaje in 2011 (19) reported 93.3% among 30 sexually active students.

Abortion is common among young unmarried women due to stigma of unwanted pregnancy (26). A study reported that over half of respondents would consider abortion if faced with an unwanted pregnancy (22). Among those who had abortions in our study, 86.7% were induced and 13.3% were spontaneous abortions which is comparably higher than 66.7% induced, and 33.5% multiple abortions in the study by Olukoya et al., (27). In our study, reasons for abortions included unpreparedness, fear of academic disruption, and age, which is in line

with findings of Cadmus and Owoaje in 2011 (19).

Bivariate analysis showed that respondents with multiple sexual partners had fourfold likelihood of being pregnant ($OR=4.2$, 95% $CI=1.503-11.469$, $p=0.006$) which contrasts the finding of Omokhodion and Balogun (28). The likelihood for abortion history for respondents with multiple sexual partners increased sevenfold ($OR=7.4$, 95% $CI=2.743-20.118$, $p=0.000$) consistent with report of Alemayehu et al., in 2017 (29). Respondents who are 18 years and below are twice likely to have history of abortion (28.6%) compared to those 18 years and above (15.5%) ($OR=2.2$, 95% $CI=1.065-4.601$, $p=0.033$), which contradicts what was reported by Onukwugha in his review of the NDHS 2003-2018, where he reported that higher rates were found in women aged 20–24 are more likely to have aborted compared to the younger age group Onukwugha et al., in 2020 (30).

Our study has some limitations. First, the cross-sectional design limits the ability to establish causal relationships between the identified factors and sexual and reproductive health outcomes. Secondly, data on sexual behaviours, contraceptive use, pregnancy, and abortion were self-reported and involved sensitive issues; therefore, recall and social desirability biases may have resulted in underreporting or inaccurate reporting of some practices. Nevertheless, our study showed that many of the fresh female graduates engaged in risky sexual behaviours marked by early sexual debut, multiple sexual partners, poor contraceptive use, and relatively high abortion rate.

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Contributions of authors:

FOO conceived and designed the study, developed the study protocol and data collection instrument, contributed and supervised data collection, reviewed the analysis and interpretation of findings. OCO drafted the manuscript, contributed to the study design and methodology, participated in data collection and data management, analyzed and interpreted the data. AMA contributed to the study design and methodology, participated in data collection, reviewed the analysis and interpretation of findings. All authors reviewed and approved the

final draft of the manuscript and agreed to be accountable for all aspects of the work.

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Conflict of interests:

Authors report no financial and non-financial conflicting interests in the reporting and writing of this research.

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