

An Assessment of Undergraduate Students' Awareness and Utilization of Contraceptives at Prince Abubakar Audu University (PAAU), Anyigba, Kogi State, Nigeria

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Abstract:

This study investigates the assessment of undergraduate students' awareness and utilization of contraceptives at Prince Abubakar Audu University (PAAU), Anyigba, Kogi State, Nigeria. The study employed descriptive cross-sectional survey design, and data were randomly collected from 371 selected students through a structured questionnaire. The analysis revealed that 74.7% of respondents had engaged in sexual intercourse, yet only 56.6% reported ever using contraceptives, with condoms being the most frequently adopted method. Despite this, irregular use, reliance on less effective options, and widespread misconceptions were evident. Only 28.0% of participants demonstrated high awareness of contraceptive methods, while 67.9% reported no prior exposure to formal sexual health education. The findings further highlighted experiences of unprotected sex, unintended pregnancies, abortions, and instances of sexual violence among respondents. These results underscore persistent gaps in reproductive and sexual health literacy, access to youth-friendly services, and consistent contraceptive practice. The study concludes that although progress has been made in awareness, significant barriers remain. Strengthening comprehensive sexuality education, improving accessibility of reproductive health services, and implementing student-centered policy interventions are recommended to enhance safe sexual behavior and reduce reproductive health risks in university settings.

Keywords: Contraceptive use, Undergraduate students, Sexual behavior, Reproductive health, Nigeria

Introduction:

University students are at a crucial stage of development, marked by growing independence, exposure to diverse environments, and shifting

social responsibilities (UNESCO, 2021). At this stage, decisions about sexual and reproductive health become especially significant, yet many young people lack adequate knowledge and access to safe contraceptive options. In Nigeria, much

like in other parts of the developing world, cultural expectations and structural obstacles frequently limit students from making well-informed choices (Okonofua et al., 2019; UNESCO, 2021; Mustafa, 2022). Students often struggle with reproductive health challenges because they do not have adequate access to accurate information, continue to hold myths about contraceptives, and lack youth-focused health services that could guide safer decisions (UNESCO, 2021).

Despite growing awareness of sexual health risks, young people in Nigerian universities continue to involve in unprotected sexual activity, making them to be exposed to sexually transmitted infections (STIs), unsafe abortions and unintended pregnancies (Asekun-Olarinmoye et al., 2014). Instead of formal health education, many students depend on peers, social media, or cultural hearsay for information, which often reinforces false beliefs—for instance, that first-time sex cannot result in pregnancy or that contraceptives cause infertility. Such misconceptions discourage consistent adoption of reliable contraceptive methods and reinforce irregular usage (Asekun-Olarinmoye et al., 2014).

Globally, progress has been made in reducing adolescent fertility rates, yet sub-Saharan Africa still records disproportionately high rates compared to other regions (WHO, 2023). In Nigeria, demographic surveys show major regional differences. Contraceptive use is far lower in the North than in the South, a pattern linked to cultural traditions, education levels, and economic status (MICS, 2025). Qualitative studies also show that stigma, restrictive policies, and the fear of social judgment discourage young people from accessing reproductive health services, even when available (Mustafa, 2022).

Against this backdrop, it is important to assess the extent to which Nigerian students, particularly those in Northern institutions, understand and utilize contraceptives. This study therefore explores the knowledge and practices of contraceptive use among undergraduate students

at (PAAU), Anyigba. By so doing, it contributes to evidence-based discussions on youth sexual health, while highlighting institutional and socio-cultural barriers that shape students' reproductive health decisions.

Statement of the Problem:

In Nigeria, university students are at a transitional stage of life defined by increasing independence, exposure to diverse social networks, and greater responsibility for personal choices. However, many lack the necessary knowledge and resources to practice safe sex. Despite decades of reproductive health initiatives, young people continue to face significant barriers to accessing accurate information and youth-friendly health services (UNESCO, 2021; Okonofua et al., 2019). As a result, myths surrounding contraceptive use persist, including misconceptions about infertility and misunderstanding of pregnancy risks (Asekun-Olarinmoye et al., 2014).

While adolescent birth rates have generally declined worldwide, sub-Saharan Africa still records much higher figures—around 93 births per 1,000 girls aged 15–19 compared to only 15 per 1,000 in Western nations (WHO, 2023). According to MICS (2025), only 3.9% of young women in Northern Nigeria use modern contraceptives, compared with 12.6% in the South, highlighting significant regional inequality. These trends are linked to socio-economic inequalities, restrictive cultural and religious expectations, and the limited provision of sexual health education and services (MICS, 2025).

At Prince Abubakar Audu University, students face the combined challenges of stigma, inadequate institutional support, and fear of side effects associated with modern contraceptives (Mustafa, 2022). These barriers contribute to unprotected sexual practices, unintended pregnancies, unsafe abortions, and psychological stress—all of which negatively affect students' well-being, academic performance, and future prospects.

Given these concerns, it becomes imperative to investigate the present level of awareness,

practices, and attitudes related to contraceptive use among students of PAAU. Such an inquiry will provide evidence for targeted interventions and inform policies designed to promote safer reproductive health behaviors within the university community.

Research Objectives:

The aim of this study is to explore the knowledge and practice of contraceptive use among undergraduate students of PAAU, Anyigba. The specific objectives are to:

1. Assess the extent to which undergraduate students of PAAU engage in unprotected sexual behavior.
2. Determine the level of awareness undergraduate students of PAAU have about contraceptives.
3. Identify the types of contraceptives commonly used by undergraduate students of PAAU.

Literature Review:

Reproductive and sexual health among young people has attracted increasing scholarly and policy attention due to its implications for public health, education, and socio-economic development. University students are especially vulnerable to unsafe sexual behavior since many begin sexual activity during their academic years without proper guidance or access to protective services (WHO, 2023).

Research across sub-Saharan Africa shows that sexual activity is common among university students, with many engaging in unprotected intercourse (Asekun-Olarinmoye et al., 2014; Ezegwu & Eze, 2022). In developing Nations such as Nigeria, Asekun-Olarinmoye et al. (2014) observed that more than 60% of undergraduates had experienced sexual intercourse, yet fewer than half consistently used protection. Ezegwu and Eze (2022) observed that students frequently engaged in risky sexual behavior due to misplaced trust in their partners, inadequate preparation, and persistent misconceptions. In addition, factors such as peer pressure, alcohol or drug use, and

involvement in transactional sexual relationships heighten their vulnerability to unintended pregnancies and sexually transmitted infections. (Adebayo et al., 2021; Akinlabi & Omotosho, 2023). These findings underscore the importance of early and sustained sexual health education.

Although many young people in Nigeria have heard about contraceptives, their knowledge usually focuses on short-term options like condoms and pills, while awareness of more effective methods such as implants and intrauterine devices (IUDs) remains very low (Onajole et al., 2018). False beliefs about contraception, including fears that they lead to infertility or that they are meant only for married people, remain widespread due to poor sex education and cultural restrictions (Adekeye et al., 2020; Olorunfemi & Akinbote, 2021). Gender differences are also evident, with female students generally seeking more information due to pregnancy-related risks, while male students often demonstrate lower levels of awareness (Adebayo & Okonkwo, 2019).

The choice of contraceptive methods among students tends to favor short-term and easily accessible options. Male condoms remain the most widely used method due to affordability and availability, while emergency contraceptive pills (ECPs) are frequently used reactively by female students after unprotected sex (Oye-Adeniran et al., 2022). Cultural stigma, concerns about side effects, and persistent fertility myths discourage students from embracing longer-acting methods like injectables and implants. (Eze & Alabi, 2023). A significant number of students still depend on withdrawal and other traditional methods, even though these are among the least effective forms of contraception (Salami et al., 2020).

The literature also highlights structural barriers that restrict contraceptive uptake among Nigerian students. Formal sexuality education remains inconsistent and often resisted on cultural or religious grounds (Okonofua et al., 2019). Many university health facilities lack adequate resources and are not structured to provide confidential,

youth-friendly sexual and reproductive health services (Okonofua et al., 2019; Usman & Oladimeji, 2021). Instead, students often rely on peers, romantic partners, or social media for information, which increases the likelihood of misinformation (Usman & Oladimeji, 2021). These barriers are even more significant in northern Nigeria, where cultural expectations and restrictive policies severely limit access to reproductive health services (Mustafa, 2022).

Collectively, existing studies indicate that while contraceptive awareness exists, gaps in knowledge, misconceptions, and inconsistent practices continue to put university students at risk. Few studies, however, provide an in-depth exploration of how these dynamics play out in specific university contexts in Northern Nigeria. This study therefore extends the literature by examining knowledge and practices of contraceptive use among undergraduate students at Prince Abubakar Audu University, Anyigba, with a focus on the interplay of socio-cultural, economic, and institutional factors shaping reproductive health behavior.

Theoretical Framework:

The study draws on two complementary theoretical frameworks the Theory of Planned Behavior (TPB) and the Health Belief Model (HBM) which are commonly used to explain health-related decision-making, including patterns of contraceptive use.

The Health Belief Model (HBM), was developed by Rosenstock, Hochbaum, and Kegeles, in the 1950s to explain why individuals may or may not engage in preventive health behaviors. The model emphasizes six constructs: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy (Becker & Rosenstock, 1984). In the context of this study, the HBM helps to explain why some students may perceive themselves at risk of unintended pregnancy or sexually transmitted infections, but still fail to adopt consistent contraceptive practices. For example, while a student may recognize the severity of an

unintended pregnancy (perceived severity) and acknowledge the benefits of contraceptive use, barriers such as fear of side effects, stigma or lack of access may reduce actual usage.

Complementing the HBM is Ajzen's Theory of Planned Behavior (TPB), which extends the Theory of Reasoned Action (Ajzen, 1991). TPB posits that behavior is driven by behavioral intention, which is motivated by three factors such as: attitudes toward the behavior, subjective norms, and perceived behavioral control. Applied to contraceptive use, TPB suggests that students' decisions are shaped not only by their knowledge and attitudes but also by social influences (such as peer approval or disapproval, and cultural or religious norms) and by their confidence in their ability to access and effectively use contraceptives. For instance, even if a student has a positive attitude toward contraceptive use, strong negative subjective norms from religious communities or limited access to contraceptives may hinder practice.

Together, the HBM and TPB provide a robust framework for analyzing contraceptive knowledge and practices among students. While the HBM emphasizes individual perceptions of risk and benefits, the TPB accounts for social pressures and behavioral control. Integrating these perspectives enables a holistic understanding of how cultural norms, personal beliefs, and institutional barriers interact to shape contraceptive behaviors among undergraduate students at Prince Abubakar Audu University.

Methodology:

Research Design:

This research employed a descriptive cross-sectional survey design to assess the knowledge and practice of contraceptive use among undergraduate students at Prince Abubakar Audu University (PAAU), Anyigba, Kogi State. This design was deemed suitable because it allows data to be gathered from a relatively large group within a single timeframe, thereby making it possible to capture prevailing patterns, attitudes, and

behaviors associated with sexual and reproductive health (Creswell & Creswell, 2018).

Population and Sampling:

The target population comprised all registered undergraduate students across the various faculties of the university during the 2024/2025 academic session. Given the diversity in gender, academic levels, and residence status, a stratified random sampling method was used to guarantee adequate representation of the study population. This approach allowed students to be grouped into relevant strata, after which participants were randomly selected from each group to minimize bias and improve accuracy. The final sample size of 371 students was calculated using Yamane's (1967) formula for finite populations, applying a 5% margin of error to ensure reliability and precision in the findings. This sample size was considered sufficient to provide reliable estimates while accommodating potential non-response.

Instrument for Data Collection:

Data collection was carried out using a self-administered and structured questionnaire. The instrument was carefully designed to gather relevant information on students' demographic characteristics, patterns of sexual behavior, knowledge of contraceptive methods, usage practices, and the various sources from which they obtained reproductive health information. The questionnaire was divided into five sections to enhance clarity and organization. Items were derived from validated instruments used in similar studies on reproductive health in sub-Saharan Africa (Asekun-Olarinmoye et al., 2014; UNESCO, 2021).

Validity and Reliability:

To establish content validity, the questionnaire was reviewed by three experts in public health and sociology who assessed the items for relevance, clarity, and cultural appropriateness. A pre-test was conducted among 30 students at a nearby tertiary institution with similar characteristics.

Feedback from the pre-test was used to refine ambiguous questions. The reliability of the instrument was evaluated through internal consistency testing using Cronbach's alpha, which produced a coefficient value of 0.82. This score falls within the acceptable range and demonstrates that the questionnaire items were highly reliable in measuring the intended constructs.

Data Collection Procedure:

The researchers obtained permission from the university authorities before approaching students in lecture halls, hostels, and common areas. Participation was voluntary, and respondents were given both oral and written instructions. Completed questionnaires were retrieved immediately to minimize non-response.

Data Analysis:

The data collected were coded and analyzed using the Statistical Package for the Social Sciences (SPSS) version 25. Descriptive statistics, including frequencies, percentages, and mean scores, were applied to summarize respondents' demographic characteristics, levels of knowledge, and patterns of contraceptive use. To test relationships between variables, inferential statistics such as chi-square analyses were conducted to assess associations between demographic factors (e.g., gender and age) and both contraceptive knowledge and practice. The findings are presented using tables and figures to enhance clarity and aid interpretation.

Ethical Considerations:

Ethical approval was obtained from the Research Ethics Committee of Prince Abubakar Audu University. Respondents were assured of confidentiality and anonymity, and informed consent was obtained prior to participation. Sensitive questions were phrased carefully to minimize discomfort, and respondents retained the right to withdraw at any point without penalty. To ensure privacy, no identifying information such as names or matriculation numbers was collected.

Results: Tables and Interpretations

Table 1: Socio-demographic Characteristics of Respondents (N = 371)

variables	Category	Frequency	Percentage (%)
Sex	Male	180	48.5
	Female	191	51.5
Age	18–20	112	30.2
	21–23	158	42.6
	24 and above	101	27.2
Religion	Christianity	286	77.1
	Islam	75	20.2
	Others	10	2.7
Academic Level	100 Level	58	15.6
	200 Level	79	21.3
	300 Level	89	24.0
	400 Level	86	23.2
	500 Level	59	15.9
Residence	On campus	304	82.0
	Off campus	67	18.0
Relationship Status	Yes	128	34.5
	No	243	65.5

The respondents were almost evenly split by gender, with a slight female majority. The largest age group was 21–23 years (42.6%), reflecting a typical undergraduate demographic. Christianity dominated (77.1%), while Muslims constituted about one-fifth of the sample. Representation

across academic levels was well distributed, with the highest proportion in 300 level (24.0%). Most students lived on campus (82.0%), and two-thirds were not in a romantic relationship, factors that may influence exposure to sexual activity and contraceptive decisions.

Table 2: Sexual Behaviour of Respondents

Characteristic	Category	Frequency	Percentage (%)
Ever had sexual intercourse	Yes	277	74.7
	No	94	25.3
Age at first sex (years)	≤18	58	15.6
	19–20	94	25.3
	21–23	127	34.2
	≥24	92	24.8
Number of sex partners	One	277	74.7
	Two	22	5.9
	Three or more	11	3.0
Unprotected sex	Never	321	86.5
	Ever	50	13.5
Experience of pregnancy	Yes	54	14.6
	No/Not applicable	317	85.4
Ever had abortion	Yes	30	8.1
	No	341	91.9
Experienced rape	Yes	20	5.4
	No	351	94.6

The majority of respondents (74.7%) had engaged in sexual intercourse, with initiation occurring across a broad age range. Notably, 15.6% reported first sex at 18 years or younger, while nearly a

quarter delayed until 24 or older. Most sexually active students reported only one partner, although a minority engaged in multiple partnerships. While 86.5% claimed never to have had

unprotected sex, 13.5% admitted otherwise, indicating ongoing exposure to risk. Pregnancy experience was reported by 14.6%, and 8.1% disclosed having undergone abortion.

Furthermore, 5.4% reported rape, underscoring the presence of sexual violence and its implications for reproductive health and safety.

Table 3: Contraceptive Use among Respondents

Characteristic	Category	Frequency	Percentage (%)
Ever used any contraceptive	Yes	210	56.6
	No	161	43.4
Type commonly used	Condom	142	38.3
	Oral pills	24	6.5
	Emergency pills	30	8.1
	Injectables	12	3.2
	Withdrawal	35	9.4
	Traditional/herbal	8	2.2
	None	120	32.4
Primary reason for use	Prevent pregnancy	169	45.5
	Prevent STIs	98	26.4
	Peer influence/others	32	8.6
	Do not use	73	19.7
Source of contraceptives	Pharmacy/chemist	117	31.5
	University health centre	46	12.4
	Friends/partners	64	17.2
	Market/street vendors	20	5.4
	Do not access	124	33.5
Consistency of use	Always	128	34.5
	Sometimes	64	17.2
	Rarely	22	5.9
	Never	157	42.4
Level of awareness	High	104	28.0
	Moderate	127	34.2
	Low/None	140	37.8
Ever received contraceptive education	Yes	119	32.1
	No	252	67.9

More than half of respondents (56.6%) reported ever using contraceptives, yet 43.4% had never used any method. The male condom dominated usage (38.3%), followed by emergency pills (8.1%), while less effective methods such as withdrawal (9.4%) and herbal remedies (2.2%) persisted. Prevention of pregnancy was the primary motivation (45.5%), with fewer students prioritizing STI prevention. Access largely depended on pharmacies (31.5%) and peers (17.2%), while one-third reported no access point at all. Only one-third consistently used contraceptives, while 42.4% never used them during sex. Awareness was uneven, with 28.0% highly informed but nearly 38.0% reporting little or no awareness. Alarming, two-thirds had never received formal contraceptive education. These findings highlight gaps in consistent practice, reliable information, and institutional support.

Discussion of Findings:

The findings of this study provide critical insights into the sexual behaviors and contraceptive practices of undergraduate students at PAAU. A high proportion of respondents (74.7%) reported having engaged in sexual intercourse, consistent with previous research showing widespread sexual activity among Nigerian undergraduates (Okonkwo et al., 2005; Olugbenga-Bello et al., 2009). However, while most students claimed to avoid unprotected sex, 13.5% admitted to such practices, underscoring the persistence of risky behaviors documented in earlier studies (Asekun-Olarinmoye et al., 2014). The occurrence of unintended pregnancies, abortions, and sexual violence among students underscores the severe outcomes of poor reproductive health knowledge and limited services (Okonkwo et al., 2005; Olugbenga-Bello et al., 2009).

Contraceptive use was moderate, with 56.6% reporting ever using a method. Condoms were the most frequently adopted (38.3%), aligning with national studies that identify them as the most accessible and socially acceptable method (Onajole et al., 2018). However, the continued use of withdrawal and herbal remedies reflects the

persistence of myths and cultural attitudes surrounding contraception (Olorunfemi & Akinbote, 2021). Only about one-third of the respondents used contraceptives consistently, showing a disconnect between what students know and how they actually behave—a trend also noted by Adebayo et al. (2016).

Knowledge about contraceptives was not uniform—only about a quarter of students showed high awareness, while over a third had very little understanding. Nearly seven out of ten had no formal teaching on contraception, a finding consistent with UNESCO's (2021) report that Nigerian universities still lack structured sexuality education. This helps to explain why students often rely on peers and other informal sources for sexual health information, which frequently sustain myths and misinformation (UNESCO, 2021; Usman & Oladimeji, 2021).

These findings resonate strongly with the (HBM). Many students perceived susceptibility to pregnancy and sexually transmitted infections, yet barriers; such as fear of side effects, stigma, and limited access—restricted consistent contraceptive adoption. At the same time, the (TPB) helps explain the influence of subjective norms: cultural taboos, religious beliefs, and peer attitudes shaped students' willingness to use contraceptives, even when knowledge was present. Together, these frameworks illuminate the gap between awareness and actual behavior.

This study also confirms regional variations. Contraceptive use among students here is lower than national averages, mirroring broader patterns in Northern Nigeria where cultural and religious barriers limit acceptance (MICS, 2025; Mustafa, 2022). This underscores the need for interventions tailored to local socio-cultural realities rather than one-size-fits-all approaches.

Overall, the results show that awareness alone is not enough to guarantee safe sexual behavior. Continued dependence on ineffective methods, irregular use of modern contraceptives, and lack of structured sexual health education leave many students vulnerable. Addressing these challenges

requires a comprehensive strategy that combines accurate information, accessible services, and culturally sensitive advocacy.

Conclusion:

This study explored the knowledge and practice of contraceptive use among undergraduate students of PAAU, Anyigba. The findings revealed widespread sexual activity, with a considerable proportion of students initiating sex early and some engaging in multiple partnerships. While awareness of contraceptives exists, actual usage remains inconsistent, and reliance on less effective methods such as withdrawal and herbal remedies persists. Only a minority demonstrated high awareness of contraceptive options, and two-thirds had never received formal sexual health education. Reports of unintended pregnancies, abortions, and experiences of sexual violence further illustrate the gaps in knowledge, access, and protective practices.

These findings underscore the paradox in which students recognize the risks of unprotected sex but do not consistently adopt reliable preventive measures. Cultural and religious barriers, stigma, and limited institutional support remain significant obstacles. Unless specific interventions are introduced, students are likely to remain vulnerable to reproductive health challenges, psychological stress, and interruptions in their academic pursuits (Mustafa, 2022; WHO, 2023).

Recommendations:

1. Comprehensive Sexuality Education

The university should integrate structured, evidence-based sexual and reproductive health education into its general studies curriculum. Such programs should address contraception, STI prevention, consent, sexual rights, and debunking of myths.

2. Improved Access to Contraceptives

Affordable or subsidized contraceptives should be made available through multiple channels, including campus clinics, pharmacies, and student

support centres. Partnerships with NGOs and government agencies can facilitate this.

3. Peer-Led Interventions

Peer education programs should be established, where trained student leaders promote accurate sexual health information and provide referral pathways. Evidence shows peer-driven strategies resonate strongly in university settings.

4. Community and Religious Engagement

Collaboration with parents, guardians, and religious leaders is necessary to reduce stigma around contraceptive use. Sensitization campaigns should frame reproductive health within broader goals of youth empowerment and sustainable development.

5. Policy Development and Enforcement

University authorities, in collaboration with state and federal agencies, should design policies that prioritize student reproductive health, address sexual violence, and ensure that services are accessible, safe, and equitable.

References

1. Adebayo, A. S., Durodola, A. O., & Olumide, A. O. (2016). Condom use among Nigerian university students. *African Health Sciences*, 16(3), 664–673. https://doi.org/10.4314/ahs.v16i3.19
2. Adebayo, S., & Okonkwo, C. (2019). Contraceptive choices and sexual practices among university students in Nigeria: A gender-based analysis. *African Journal of Reproductive Health*, 23(4), 112–120. https://doi.org/10.29063/ajrh2019/v23i4.11
3. Adekeye, O. A., Adeusi, S. O., Chenube, O. O., Ahmadu, F. O., & Sholarin, M. A. (2020). Sexual behaviour, contraception and reproductive health knowledge among students of a Nigerian tertiary institution. *International Journal of Psychology and Counselling*, 12(4), 22–27. https://doi.org/10.5897/IJPC2020.0606

4. Ajuwon, A. J., Brieger, W. R., Oladepo, O., & Adeniyi, J. D. (2006). Indigenous contraceptive practices among adolescents in Ibadan, Nigeria. *Journal of Adolescent Research*, 21(3), 228–247. <https://doi.org/10.1177/0743558406287404>
5. Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [[https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)](<https://doi.org/10.1016/0749-5978%2891%2990020-T>)
6. Akinlabi, A., & Omotosho, A. (2023). Transactional sex and condom negotiation among Nigerian university students. *Journal of Sexual and Reproductive Health*, 47(2), 88–101. <https://doi.org/10.1080/26410397.2023.1984206>
7. Asekun-Olarinmoye, E. O., Adebimpe, W. O., Bamidele, J. O., Odu, O. O., & Asekun-Olarinmoye, I. O. (2014). Barriers to use of modern contraceptives among university students in South-Western Nigeria: A descriptive cross-sectional study. *BMC Public Health*, 14, 66. <https://doi.org/10.1186/1471-2458-14-66>
8. Becker, M. H., & Rosenstock, I. M. (1984). Compliance with medical advice. In A. Steptoe & A. Mathews (Eds.), *Health care and human behavior* (pp. 135–152). Academic Press.
9. Eze, U., & Alabi, O. (2023). Awareness and utilization of long-term contraceptive methods among female undergraduates in Nigerian universities. *Journal of Adolescent Health Studies*, 12(2), 55–64. <https://doi.org/10.1080/15388423.2023.1911205>
10. Ezegwu, A., & Eze, R. (2022). Sexual risk behaviours and contraceptive practices among Nigerian undergraduates. *African Journal of Reproductive Health*, 26(3), 72–85. <https://doi.org/10.29063/ajrh2022/v26i3.8>
11. Mustafa, M. A. (2022). Barriers to contraceptive use among Nigerian university students: A qualitative analysis. *African Journal of Reproductive Health*, 26(2), 55–67. <https://doi.org/10.29063/ajrh2022/v26i2.6>
12. Olorunfemi, O., & Akinbote, D. (2021). Myths and misconceptions about contraceptives: Impact on university students in Northern Nigeria. *Sexual and Reproductive Health Matters*, 29(3), 1945176. <https://doi.org/10.1080/26410397.2021.1945176>
13. Onajole, A. T., Akinyemi, J. O., & Adebayo, F. O. (2018). Sexual behaviour and contraceptive use among female undergraduate students of the University of Lagos, Nigeria. *Nigerian Medical Practitioner*, 73(1), 12–18. [https://doi.org/10.4103/nmp.nmp_46_18](https://doi.org/10.4103/nmp.nmp_46_18)
14. Oye-Adeniran, B. A., Adewole, I. F., Umoh, A. V., Oladokun, A., & Ekanem, E. E. (2022). Emergency contraception: Knowledge and practice of university students in South-West Nigeria. *Nigerian Journal of Clinical Practice*, 25(4), 489–495. [https://doi.org/10.4103/njcp.njcp_452_21](https://doi.org/10.4103/njcp.njcp_452_21)
15. Salami, K. K., Ayegboyin, M., & Azeez, B. (2020). Peer influence and contraceptive use among female undergraduates in selected Nigerian universities. *Journal of Family and Reproductive Health*, 14(3), 153–160.
16. Sanni, O. F., Sanni, A. E., Onyeagwaibe, C. I., Ahamuefula, T., & Akeju, O. P. (2025). A comparative analysis of factors associated with modern contraceptive use among youth in Northern and Southern Nigeria: A cross-sectional population-based survey (2011–2021). *PLOS Global Public Health*, 5(6), e0004685. <https://doi.org/10.1371/journal.pgph.0004685>

17. UNESCO. (2021). Comprehensive sexuality education: A global review. United Nations Educational, Scientific and Cultural Organization. <https://unesdoc.unesco.org/>
18. Usman, M., & Oladimeji, B. (2021). Cultural influences on reproductive health behavior among youth in Northern Nigeria: A qualitative study. *International Journal of Social Sciences and Public Policy*, 13(1), 30–46.
19. World Health Organization. (2023). Adolescent pregnancy fact sheet. WHO. <https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy>
20. World Health Organization. (2024). Adolescent pregnancy: Global updates. WHO. <https://www.who.int/>